United States Department of the Interior
Bureau of Reclamation

Tyler Creek Wasteway Stabilization

Finding of No Significant Impact and Programmatic Final Environmental Assessment

Talent Division Rogue River Basin Project
Oregon

March 2004

Lower Columbia Area Office
Portland, Oregon

MISSION STATEMENT

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

FINDING OF NO SIGNIFICANT IMPACT

Tyler Creek Wasteway Stabilization
Talent Division, Rogue River Basin Project, Oregon

Pacific Northwest Region
Lower Columbia Area Office
Portland, Oregon

PN FONSI 04-03

INTRODUCTION

In accordance with the Council on Environmental Quality's Regulations for implementing the procedural provisions of the National Environmental Policy Act of 1969, as amended, a draft and final Environmental Assessment (EA) were prepared for Tyler Creek Wasteway Stabilization. This Finding of No Significant Impact provides a brief description of the scoping process and the environmental analyses as fully documented in the EA.

PURPOSES OF AND NEED FOR ACTION

Routine powerplant maintenance, which may require the shut down of Green Springs Powerplant's single turbine, is typically conducted outside the irrigation season. When unforeseen powerplant equipment malfunctions occur during irrigation season, Reclamation has one alternate means of transferring water from Keene Creek Reservoir to Ashland Lateral and Emigrant Lake to meet water delivery obligations – that is to bypass the powerplant by diverting flows through Tyler Creek wasteway. In 1993, a powerplant generator maintenance procedure started prior to irrigation season became problematic. Reclamation notified interested parties that the powerplant would be out of service for extensive repairs and maintenance and that the wasteway would convey irrigation deliveries throughout the entire 1993 irrigation season. This led to the longest continual use of the wasteway. The water volume diverted through the wasteway was limited to meeting downstream water delivery obligations. Even so, the extended use of the wasteway eroded the channel, exceeded its capacity in some locations, and damaged property outside of Reclamation's rights-of-way. Several wasteway areas within and outside of Reclamation's acquired rights-of-way require attention to minimize or prevent further bank degradation.

The need for action is to stabilize localized areas of the wasteway channel for continued wasteway use.

The purposes of action are to:

- correct existing localized streambank damage in the wasteway
- minimize or prevent future streambank erosion and degradation in the wasteway
- provide for future maintenance of the wasteway.

The proposed action is to upgrade access to the wasteway and stabilize localized areas of the wasteway channel between the pipe outlet and the confluence of Tyler Creek on Emigrant Creek.

ALTERNATIVES CONSIDERED

The EA considered four alternatives in detail as follows:

Alternative 1 - No Action: This alternative leaves the wasteway in its current condition with unstable banks and no road access for maintenance equipment. It does not address existing environmental problems associated with use of the wasteway. No work would occur under this alternative to repair or enhance bank stability.

Alternative 2 (Preferred Alternative) – Bioengineering Combined With Standard Engineering: Alternative 2 would use a combination of bioengineering and standard engineering techniques to stabilize localized wasteway areas.

Alternative 3 – Bioengineering Only: Alternative 3 would use only bioengineering techniques to stabilize localized eroded areas of the wasteway banks and upslopes regardless of whether a standard engineering technique would be considerably more effective and reliable.

Alternative 4 – Standard Engineering Only: Alternative 4 would include treating localized eroded portions of the wasteway with liberal use of backfill, lining, and armoring of the slopes using concrete, concrete revetments, and riprap. This alternative would likely exclude the use of vegetation regardless of whether bioengineering techniques would suffice.

RECOMMENDED ALTERNATIVE

The recommended alternative is the preferred alternative (Alternative 2) as identified in the EA. The preferred alternative offers a well-rounded approach to stabilizing the wasteway. It effectively addresses existing environmental problems associated with past wasteway use and applies proactive, environmentally friendly measures to stabilize the wasteway. The preferred alternative is to:

- stabilize localized areas of the wasteway banks and immediate upslope areas using a combination of bioengineering and standard engineering techniques,
- construct an access road to the wasteway within existing Reclamation right-of-way, and
- acquire new right-of-way/flowage easements as needed in the future.

The preferred alternative most likely would be approximately 80 percent bioengineering techniques and 20 percent standard engineering techniques. Bioengineering techniques would be incorporated as much as possible except where a standard engineering method would be considerably more effective and reliable. Access to specific areas of the wasteway affects which type of engineering techniques can be implemented. Stabilization structures, including the types of vegetation, would be designed specifically for site characteristics and conditions based on channel and bank morphology, access, and consultation with the private and Federal landowners. The process of stabilizing the wasteway would likely continue for several years.

ENVIRONMENTAL COMMITMENTS

The EA identifies mitigation measures to minimize environmental impacts. Reclamation is committed to their implementation using best management practices and considers them to be part of the Federal action. Environmental commitments relative to soil, water, vegetation, fish and wildlife, historic properties, sacred sites, and Cascade Siskiyou National Monument are described in chapter 5 of the Final EA.

COORDINATION

Endangered Species Act of 1973

Reclamation has concluded the alternatives discussed in this EA would have no effects on listed species (Gentner's Mission-Bells, bald eagle, northern spotted owl, and Southern Oregon/ Northern California Coasts ESU coho salmon); therefore, no further consultation is needed. If, during the course of the stabilization efforts, NOAA Fisheries or USFWS lists new species which may occupy the work area, Reclamation would begin consultation on those species.

National Historic Preservation Act of 1966, as Amended

Reclamation notified the Confederated Tribes of the Siletz Indians, the Klamath Tribes, and the Cow Creek Band of the Umpqua Tribe of Indians prior to archeological surveys and asked whether they were aware of archeological sites or traditional cultural properties in or near the proposed work area. None of the tribes responded. Archeological investigations and consultations fulfilling the requirements of Section 106 of the National Historic Preservation Act revealed three archeological sites along the access road right-of-way. In 2002, the above tribes and the Confederated Tribes of the Grand Ronde Community of Oregon were notified of the intent to test these sites. The Grand Ronde expressed an interest in monitoring test excavations, but were unable to participate. Testing indicated prior land use had disturbed the archeological deposits and they had little potential to yield new information. A September 2002 letter from the SHPO concurred with Reclamation that the segments of all three sites lying within the right-of-way were "not eligible" to the National Register of Historic Places. In October 2002, the Grand Ronde Tribes responded that "the Tribe considers these sites culturally significant, with a high possibility of an inadvertent discovery during any ground-disturbance." They requested to be involved in future consultations if any discoveries are made. No other tribe responded.

Reclamation later completed additional archeological surveys and identified three isolated finds along the lower reach of the wasteway. The streambanks are not eroding in the vicinity of these sites; therefore, no stabilizing modifications are proposed. Reclamation assessed that continued use of the wasteway would have no impact on these sites. In August 2003, Reclamation forwarded an assessment of impact and the survey report to the SHPO. No response was received within the 30-day comment period. Under Section 106 of the NHPA, no comment indicates concurrence.

Bureau of Land Management Coordination

Reclamation included three BLM employees on the initial wasteway stabilization mailing list and has since added two more. BLM provided comments on the initial scoping document. They attended Reclamation's May 21, 2001, wasteway tour and the December 6, 2001, public workshop and provided information concerning the location of BLM property along the wasteway. BLM also provided comments on the Draft EA. Reclamation will continue cooperating with BLM to ensure its actions are in agreement with BLM land resource management practices.

Tribal Consultation and Coordination

No Indian sacred sites or Indian trust assets were identified within the work area. Reclamation notified the Coquille Indian Tribe; the Cow Creek Band of the Umpqua Tribe; and the Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Tribes about the initial scoping letter and the public workshop. None of the tribes responded.

Other Contacts

Other contacts regarding the wasteway include the local offices of Oregon Department of Environmental Quality (ODEQ), Oregon Department of Fish and Wildlife (ODFW), NOAA Fisheries, USFWS, and Talent Irrigation District (TID). Reclamation invited these agencies to the May 21, 2001, public tour, but none attended. All are included on the wasteway stabilization mailing list and were sent copies of the scoping letter and the Draft EA. ODEQ, ODFW, and TID are also on Reclamation's call list for notification prior to diverting water through the wasteway.

SCOPING AND PUBLIC REVIEW

Reclamation began working with local landowners, TID, and other stakeholders in the early 1990s concerning erosion damage in the wasteway. An ongoing and open public and agency scoping process identified the issues to be addressed in the EA. Reclamation gathered information through public outreach efforts, talking with stakeholders, and ongoing contacts with local, State, and Federal agencies. An initial scoping letter, in April 2001, requested public assistance in identifying environmental impacts and concerns or suggestions on the alternatives. Reclamation received eight response letters. Many of the comments were beyond the purposes of and need for action and outside the scope of the EA. Preliminary alternatives were discussed at a May 21, 2001, tour of the wasteway channel attended by BLM, landowners, Friends of the Greensprings (FOG), and two private consultants.

These preliminary alternatives were then presented at a public workshop on December 6, 2001, in Ashland. The workshop offered another forum for public input on the alternatives. Reclamation received three letters and comment forms before and eight letters following the meeting attended by fourteen individuals. Those comments that fell within the scope of stabilizing the wasteway and that were not already incorporated into the alternatives were given consideration. Public comments and preferences identified throughout the scoping process helped to refine the alternatives as evaluated in the EA. Public and agency comments generated from the review of the Draft EA that were within the scope were given consideration prior to selecting an alternative.

Reclamation has consulted, and will continue consulting, with individual adjacent landowners regarding the wasteway, its general use, and impacts specific to their property. Reclamation will continue negotiating with adjacent landowners to acquire rights-of-way/flowage easements and accomplish wasteway stabilization. The adjacent landowners are on Reclamation's call list for notification prior to diverting water through the wasteway. One landowner negotiated with Reclamation for a right-of-way for the proposed access road alignment.

SUMMARY OF PUBLIC REVIEW COMMENTS AND RESPONSES

The issues raised throughout the scoping process are categorized and summarized as follows:

Land Ownership and Access

Landowners are concerned about damage to their property caused by Reclamation's use of the wasteway. They want the damage to stop and expect Reclamation to repair their land. They want Reclamation to obtain easements through their property; some prefer permanent easements. They want to be involved in how their land would be repaired. They want to know how Reclamation would involve them to decide which sites need stabilized; where stabilization would occur, and how the work would be done. They want a more thorough understanding of the total impact of the stabilization efforts and state that Reclamation has yet to assess all the private property. They are concerned about losing their right to privacy.

Geologic Features

The public is concerned with the unstable soils present in the wasteway, the loss of those soils, long-term degradation of the landscape, and the effect erosion has on downstream resources. There is concern that using the wasteway could reactivate an ancient landslide. They noted that Reclamation acknowledges that during 1993, the channel wasn't capable of handling the flow. They want to know the soil/geology impacts from accessing sites where standard engineering techniques would be used. They want to know the geology impacts of alternative 4 from more access roads into the wasteway.

The public is concerned with the volume of water and the duration of the flow. They suggested a channel survey and design criteria which Reclamation has incorporated into the preferred alternative. They offered suggestions on detailed studies and developing an alternate bypass, all of which are outside the purposes of and need for action.

Water

The public is concerned about how using the wasteway affects downstream water quality. They are concerned that Ashland Lateral flows are adding pollutants to the city of Ashland's drinking water. They want further information about water quality impacts caused by the alternatives. They took exception to three particular Draft EA statements about water quality.

Vegetation

The public wants the natural vegetated state of the channel returned and maintained with native plantings, increased riparian shade, and protection of wetlands. They want further information about vegetation removal and disposal of that vegetation.

Fish, Wildlife, and Aquatic Resources

The public is concerned about what sedimentation does to the downstream aquatic environment and species. They requested analysis of special status species. They want further information concerning the impacts created by the culverts. They provided the names of fish species present in Tyler Creek.

Social Aspects

Public concerns include quality of human life, health, and safety. Landowners are concerned that the erosion is destroying the value of their investments and causing an unsightly landscape. They are concerned about the possibility of reactivating a major landslide causing the loss of their property, homes, and human life. As a result, their peace of mind is impaired. They want to know how increased population and development in the Tyler Creek drainage have somewhat increased wasteway flow and how it impacts geologic resources.

Alternatives and Study Types

The public wants thorough analysis of current conditions and the impacts using the best science available to develop a broad range of alternatives. They want the scope of work and impacts of that work determined before any action is taken. They state the Draft EA missed the very root of the problem (too much water volume and velocity) without scientific analysis of adverse effects. It also missed the basic concepts to stabilize, restore, and mitigate and that the proposed actions are shortsighted, based on convenience, and focused on least expense and greatest expediency. The analysis falls short of offering a broad range of alternatives and addresses only a short-term fix to a portion of the affected area. Standard engineering practices are vague and fail to adequately disclose the proposed actions on private property and what benefits or harms those practices would cause. The Draft EA fails to state that Sampson Creek and an unnamed tributary were historically used to transfer water from Hyatt Reservoir to Emigrant Lake prior to constructing Keene Creek Reservoir and Tyler Creek wasteway.

The public wants clarification of Reclamation's intended future use of the wasteway, its continuing impact on private land, the proposed work schedule, the locations of right-of-way acquisition and stabilization work, exactly where bioengineering structures would be used, and where the high velocity areas are that would need standard engineering techniques. They want to know whether the private bridge and middle culverts are the only locations being considered for standard engineering techniques. They want equal information and equal repairs for all land sections along the wasteway. They want to know what monitoring would be done, where, and who would do it. They want to know how equipment would move around in the work area. There are concerns that backfill and riprap may not adequately prevent further erosion. They question whether the wasteway would be engineered to handle increased flow or just repaired to be destroyed again.

Suggestions include small wasteway maintenance flows throughout summer to stabilize and maintain the channel, reexamine powerplant and wasteway designs previously eliminated, consider surfacing the entire access road or at least the stream approaches and crossings, extend the work area down to Tyler Creek and Tyler Creek Road, and restrict channel stabilization to the dry season and during ODFW's instream work period.

Clarification was requested on the grade of the proposed access road, how the access road route was determined, the rational for proposing a natural surface road rather than a rocked or paved running surface, the location of the abandoned logging road and proposed new sections of the access road, culvert sizes, the number of culverts, Reclamation's use of the road, and whether any already existing roads into the wasteway are on BLM land.

Quality of Analyses

One letter states that using the wasteway for 20-60 cfs was never an environmentally acceptable option. Others state the analysis fails to adequately address issues raised in scoping letters and at the public workshop, the assessment is incomplete and lacks substantive issues, it is not clear that Reclamation considered all the FOG environmental studies, and the public wants more analyses. They state the greatest flaw is lack of acknowledgement of adverse cumulative effects of sustained wasteway use.

Management and Infrastructure

Some of the public wants to see first-hand and discuss the wasteway damage; some offered assistance. Some want the Rogue Valley Technical Pool to review and comment on the proposed plan. Others lack trust in Reclamation's actions and analyses. One letter requested extension of the comment period.

Issues Outside the Purposes of and Need for Action

Several of the public comments and requests pertain to issues unrelated to stabilizing the wasteway. Reclamation acknowledges and has documented these issues, but considers them as being beyond the scope of this EA.

CHANGES TO THE DRAFT ENVIRONMENTAL ASSESSMENT

As a result of public and agency comments, the Final EA contains editorial changes and the following more substantive changes that clarify the stabilization approach:

1. The document is changed to a "Finding of No Significant Impact and Programmatic Final Environmental Assessment." The introduction to chapter 1 and the *Alternative 2, Proposed Work Sequence*, sections state that all necessary environmental clearances and permits will precede stabilization or major surface disturbing activities. Chapter 5 contains an expanded list of Reclamation's environmental commitments.

2. The *Future Diversions Through the Wasteway* section of chapter 2 states Reclamation will continue using the wasteway to bypass the powerplant.

3. The *Early Powerplant/Wasteway Designs* section of chapter 1 states that regardless of whether or not a bypass valve at Green Springs Powerplant may prove to be technically, economically, and environmentally viable, Reclamation will still upgrade access to the wasteway and stabilize localized areas of the wasteway channel.

4. The introductions to chapters 1 and 2 explain the basis of the alternatives and why the alternative descriptions are general in nature.

5. Reorganized text and new sections in chapter 2 clarify the alternative descriptions.

6. Text throughout the Final EA clarifies Reclamation's continuing negotiations with adjacent private and Federal landowners and cooperation with other agencies as stabilization

progresses. Chapters 1 and 2 clarify existing rights-of-way and acquiring additional rights-of-way.

7. The *Proposed Action and Scope of Work* section of chapter 1 identifies the four land Sections within the work area. Figures1-2 and 1-4 identify existing roads that access the wasteway channel. Figure 1-4 identifies property owners between the pipe outlet and the confluence of Tyler Creek with Emigrant Creek.

8. Chapters 1 (*Purposes of and Need for Action*), 2 (*Vegetation Selection* section for *Alternative 2*), and 6 (*Chapter 1 References*) state that the "Rogue River Basin Project Talent Division – Oregon, Facilities and Operations" report (Vinsonhaler 2002) is incorporated into the EA by reference.

9. The *Geology, Environmental Consequences*, section of chapter 3 includes discussion on impacts of sediment runoff during storm events, accessing standard engineering sites, and how Reclamation will restrict use of the access road. Statements about additional population increasing the wasteway flow and impacting geologic resources are removed from the EA.

10. The entire *Water Quality* section of chapter 3 is revised to reflect the 2002 ODEQ 303(d) listing, to identify the two potentially affected listed water reaches, and to clarify discussion on the city of Ashland's drinking water sources. The *Water Quality, Environmental Consequences*, section includes additional discussion on impacts.

11. The *Vegetation, Mitigation,* section of chapter 3 adds discussion on landowner negotiations, use of already downed trees, and how Reclamation will avoid cutting live trees.

12. Specific fish species are added to the *Fish and Wildlife, Affected Environment, Fish*, section of chapter 3. The *Environment Consequences* section discusses impacts on passage of aquatic species through culverts to be installed; the *Mitigation* section discusses Reclamation's consultation with ODFW regarding in-water work periods and performing stabilization work during dry periods and when flow is absent from the channel.

13. The *Coho Salmon* section of chapter 3 discusses essential fish habitat.

14. Comments on the Draft EA are also summarized in the *Scoping Process and Issues Identified* section of chapter 1. *Attachment E – Public Involvement* is incorporated into the Final EA.

FINDINGS

Reclamation analyzed, and the EA documented, the environmental and social impacts of the proposed action on potentially affected natural resources. These analyses showed that under the proposed action:

Geology: Stabilizing the channel banks would reduce erosion, minimize further degradation of the wasteway and its banks, and reduce the likelihood of reactivating an ancient landslide.

Water quality: A combination of standard engineering and bioengineering techniques would reduce erosion along the channel banks, reduce sediment and nutrients released downstream, increase vegetation and riparian shade along the wasteway, and slightly lower water temperatures.

Wetlands: The access road alignment would minimize wetland impacts and preserve the local wetland ecosystem.

Vegetation: Preserving and increasing the overall riparian vegetation along the wasteway would have a positive effect. The removal of some trees and vegetation along some reaches of the access road would be an irretrievable loss.

Fish and wildlife: Improved aquatic conditions (increased riparian vegetation, potentially lower water temperature, and improved water quality) would benefit aquatic, semi-aquatic, and upland species. Building the access road would reduce some existing habitat.

Threatened and endangered species: The preferred alternative would have no effect on Gentner's mission-bells, the bald eagle, the northern spotted owl, Southern Oregon/Northern California Coasts ESU coho salmon, or essential fish habitat because these species do not occur in the action area.

Historic properties: Three isolated finds, located near the wasteway channel on private land, are in an area without erosion and where no ground disturbing actions would take place. Therefore, wasteway bank stabilization and continued use of the wasteway would have no effect on these sites. Three other identified sites within the access road right-of-way are not eligible to the National Register. Therefore under National Historic Preservation Act, even if damage occurred to site deposits within the access corridor, there would be no effect to those sites.

Indian sacred sites: At this time, Reclamation cannot determine if sacred sites would be affected. Should any sacred sites needing stabilization be identified, Reclamation would notify tribes and ask if they have any issues.

Indian trust assets: No ITA's would be impacted.

Cascade Siskiyou National Monument: Reclamation actions would have the same environmental consequences whether within the monument or outside monument boundaries. Reclamation will consult with BLM concerning access and stabilization efforts within BLM managed lands, including the National Monument.

Environmental justice: No disproportionately adverse social, economic, or human health impacts would occur to local minority or low-income populations.

CONCLUSION

On the basis of a thorough review of the comments received, analysis of environmental impacts as presented in the Programmatic Final EA, mitigation measures, and implementation of all environmental commitments identified in the Final EA, Reclamation has concluded that implementation of the preferred alternative would have no significant impact on the quality of the human environment or the natural and cultural resources of the area. Reclamation commits to all necessary site-specific environmental clearances and permits before stabilization or major surface disturbing activities. Therefore, an environmental impact statement will not be prepared for upgrading access and stabilizing the wasteway. This Finding of No Significant Impact has been prepared to document environmental review and evaluation in compliance with the Council of Environmental Quality's regulations for implementing the National Environmental Policy Act.

Recommended:

Tanya Sommer   March 8, 2004

Tanya Sommer, Natural Resource Specialist   Date
Lower Columbia Area Office
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Concurrence:

Karen Blakney   March 8, 2004

Karen Blakney, ESA Program Manager   Date
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Approved:

Ronald Eggers   March 9, 2004

Ron Eggers, Area Manager   Date
Lower Columbia Area Office
Portland, Oregon

Programmatic Final Environmental Assessment

Tyler Creek Wasteway Stabilization
Talent Division, Rogue River Basin Project, Oregon

March 2004

U.S. Department of the Interior
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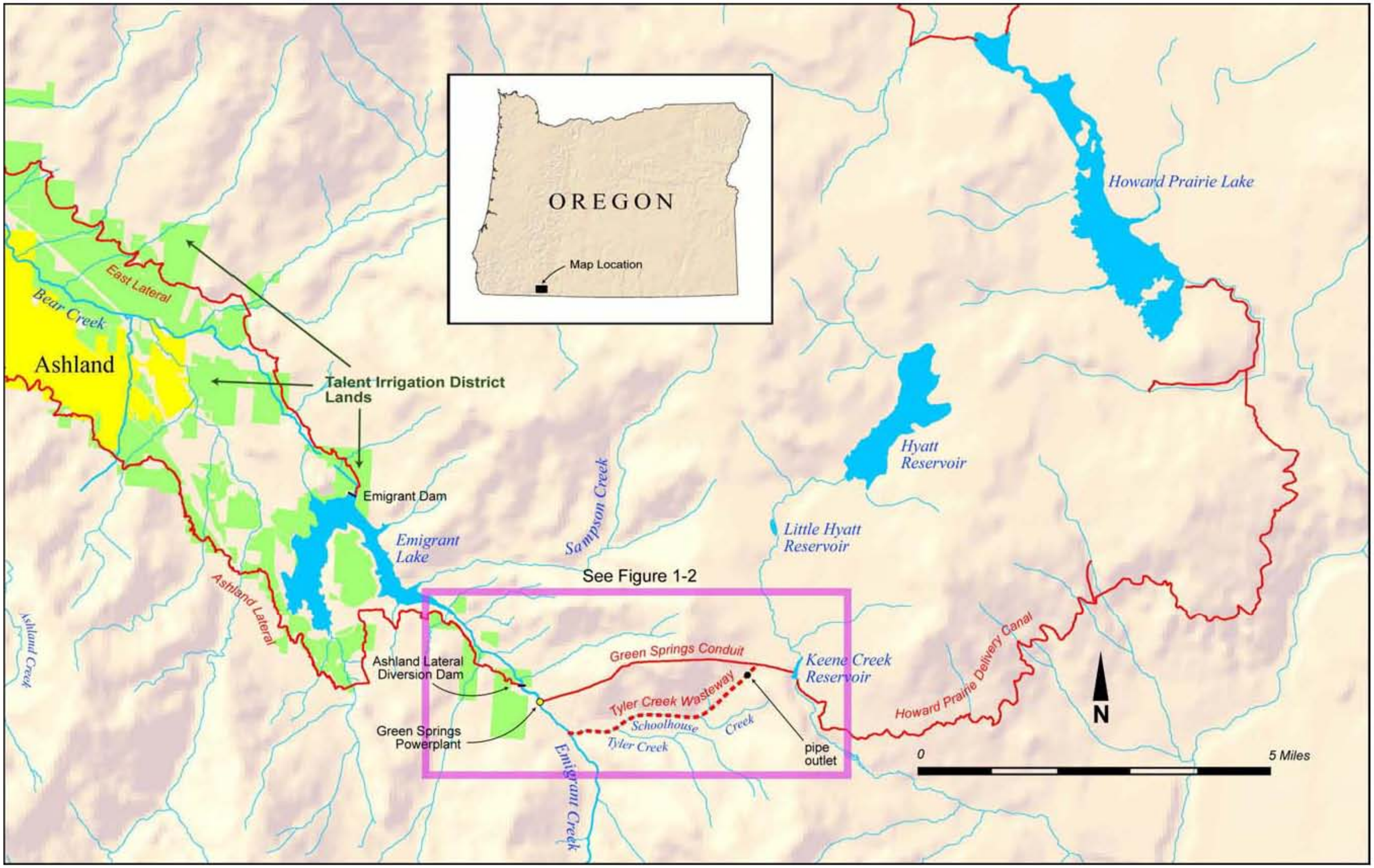

Frontispiece. Location Map

Glossary and Acronyms

1890 Canal Act right	The Canal Act of August 30, 1890, (26 Stat. 391) authorizes Reclamation to acquire lands with compensation, take possession, and exercise certain rights-of-way reserved to the United States for irrigation works and reclamation of arid lands. The 1890 Act applies to land patents issued after August 30, 1890, west of the 100th meridian.
anadromous	fish species that migrate from salt water to fresh water streams and rivers to breed
area of considerable erosion	a single section of Tyler Creek wasteway with considerable bank sloughing with loss of trees and vegetation
areas beyond the scope of this EA	with the exception of the access road right-of-way, all areas north, east, south, and west of the wasteway (as defined below), including those reaches upstream from the pipe outlet and downstream from where Tyler Creek enters Emigrant Creek
bioengineering	using live vegetation, logs, rock, and dead brush to build engineered stabilizing structures that cause minimal environmental disturbance
BLM	U.S. Department of the Interior, Bureau of Land Management
BP	before present time
breccia	rock consisting of sharp fragments imbedded in a fine matrix such as sand or clay
carrion	dead and putrefying flesh
cfs	cubic feet per second; the standard used in Western irrigation practice to measure rate of flow
cm	centimeter; 0.3937 inch
Corps	U.S. Army Corps of Engineers

cribwall	a bin-type retaining wall consisting of interlocking wood members used to stabilize slopes
CWA	Clean Water Act
debitage	debris resulting from stone tool manufacture
EA	Environmental Assessment; documents environmental effects of a proposed Federal action and mitigation efforts that would either correct adverse effects or enhance the environment
EIS	Environmental Impact Statement; documents significant environmental effects of a proposed Federal action for which Federal mitigation might not correct
environmental justice	identification of a proposed Federal Action's disproportionately high and adverse human health or environmental effects on minority populations and low-income populations (as defined by Presidential Executive Order 12898 in 1994)
EO	Presidential Executive Order
ephemeral	lasting a very short time
ESA	Endangered Species Act
fascine	a long bundle of sticks bound together and used to stabilize slopes
FISRWG	Federal Interagency Stream Restoration Working Group (made up of 15 Federal agencies)
FOG	Friends of the Greensprings
FONSI	Finding of No Significant Impact
gabion	a specially designed box container made of corrosion-resistant wire and filled with coarse rock aggregate to stabilize slopes
geology	the science that deals with the physical history of the earth, the rocks of which it is composed, and the physical changes the earth has undergone or is undergoing

geomorphic	pertaining to the form or general configuration of the earth’s surface and the changes that take place in the evolution of landforms
geotechnology	scientific methods and engineering techniques dealing with the enhancement of and use of natural resources
historic properties	prehistoric and historic archeological sites, buildings, and historically important places eligible for inclusion in the National Register of Historic Places; places of special heritage value to contemporary communities because of their association with cultural practices or beliefs important in maintaining the cultural identity of that community
HRA	Heritage Research Associates, Inc.
IF	isolated find
Indian sacred sites	any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion (as defined by Executive Order 13007)
ITA	Indian trust assets; legal interests in property held in trust by the United States for Indian tribes or individuals; examples are lands, minerals, hunting and fishing rights, and water rights
KSE	Klamath-Siskiyou Ecoregion
National Register	National Register of Historic Places
NEPA	National Environmental Policy Act
NOAA Fisheries	National Oceanic and Atmospheric Administration, National Marine Fisheries Service
No Action	the most likely future without the proposed Federal action
NTU	nephelometric turbidity units
ODEQ	Oregon Department of Environmental Quality

ODSL	Oregon Division of State Lands
ONHP	Oregon Natural Heritage Program
powerplant	Green Springs Powerplant
FONSI/Programmatic EA	Finding of No Significant Impact/Programmatic Environmental Assessment
project	Rogue River Basin Project, Oregon
proposed action	to upgrade access to Tyler Creek wasteway and stabilize localized areas of the wasteway channel
Reclamation	U.S. Department of the Interior, Bureau of Reclamation
released water	water released through Rogue River Basin Project's Talent Division facilities
revegetation	reestablishment of a vegetative cover on a disturbed area
revetment	an embankment or wall of rocks, trees, cut brush, earth, or sandbags constructed to restrain material from being transported away
right-of-way/flowage easement	the permanent right to occasionally overflow, flood, and submerge a specific parcel of property owned by another party, and to construct, operate, and maintain structures or other facilities necessary to accommodate that flowage
riparian vegetation	the trees, shrubs, and plants growing in the moist habitat adjacent to any stream
RVCOG	Rogue Valley Council of Governments
Section 1	refers to the wasteway channel within the land designation: T40S, R2E, Section 1
Section 5	refers to the wasteway channel within the land designation: T40S, R3E, Section 5
Section 6	refers to the wasteway channel within the land designation: T40S, R3E, Section 6
Section 32	refers to the wasteway channel within the land designation: T39S, R3E, Section 32
semelparous	fish species that spawn only once and then die

SHPO	Oregon State Historic Preservation Office
SONCC ESU	Southern Oregon/Northern California Coasts coho salmon evolutionarily significant unit
standard engineering	engineering techniques that include backfill, concrete linings, armored banks, concrete revetments, rock riprap, and concrete and/or metal components
TID	Talent Irrigation District
TMDL	total maximum daily load
USFWS	U.S. Department of the Interior, Fish and Wildlife Service
wasteway	Tyler Creek wasteway; the natural channel used to convey water between the wasteway's pipe outlet and where Tyler Creek enters Emigrant Creek; includes the lower reaches of Schoolhouse Creek and Tyler Creek
work area	The proposed work area includes the wasteway from the pipe outlet downstream to where Tyler Creek enters Emigrant Creek and the access road right-of-way between Tyler Creek Road and the wasteway (T39S, R3E, Section 32; T40S, R3E, Sections 5 and 6; and T40S, R2E, Section 1); but is limited to those areas where wasteway access is needed and where Reclamation's use of the wasteway has caused or could cause channel erosion. Emigrant Creek is excluded from the stabilization efforts because wasteway use has not caused bank erosion of Emigrant Creek.

Contents

Tables

Figures

Attachments

Chapter 1 — Purposes of and Need for Action

This Programmatic Final Environmental Assessment (EA) provides coverage for implementing general provisions (for which site-specific layout and design have not yet taken place) to upgrade access to the wasteway and stabilize localized areas of the wasteway channel. Because the EA must be prepared considerably in advance of development activities considered in general terms under each alternative, the level of detail and analysis is relatively broad in scope. Site-specific environmental compliance would be accomplished prior to stabilization or major surface disturbing activities. When specific actions are considered at a later stage, additional environmental evaluations would incorporate, by reference, the general discussion in this EA and concentrate solely on the issues specific to that site. This approach is known as "tiering." All necessary environmental clearances and permits would be obtained prior to construction activities.

This chapter provides background information and describes the purposes of and need for Bureau of Reclamation (Reclamation) action regarding Tyler Creek wasteway (wasteway), a component of Reclamation's Talent Division of Rogue River Basin Project (project) in Jackson County, Oregon (see the frontispiece). It identifies the proposed action, the work area, designs examined prior to building the wasteway, past construction activities, permit requirements, access, and the decision process Reclamation will follow. It also summarizes public issues and concerns gathered relative to the wasteway. (The name "Tyler Creek wasteway" is a misnomer in that the wasteway is located on Schoolhouse Creek, a tributary of Tyler Creek.)

Purposes of and Need for Action

The need for action is to stabilize localized areas of the wasteway channel for continued wasteway use.

The purposes of action are to:

- **correct existing localized streambank damage in the wasteway**
- **minimize or prevent future streambank erosion and degradation in the wasteway**
- **provide for future maintenance of the wasteway.**

Reclamation's responsibilities include maintaining its facilities, meeting water delivery obligations, and evaluating environmental effects in accordance with National Environmental Policy Act (NEPA). Routine powerplant maintenance, which may require the shut down of Green Springs Powerplant's single turbine, is typically conducted outside the irrigation season. When unforeseen powerplant equipment malfunctions occur during irrigation season, Reclamation has one alternate means of transferring water from Keene Creek Reservoir to

Ashland Lateral and Emigrant Lake to meet water delivery obligations – that is to bypass the powerplant by diverting flows through Tyler Creek wasteway. Because malfunctions happen randomly, Reclamation typically is unable to plan the timing or duration of wasteway use. Reclamation has occasionally diverted water through the wasteway (about five times) since constructing the powerplant in 1960.

The duration of wasteway use is dependent upon how long it takes to repair the powerplant and get it back on line. Wasteway use is normally restricted to short durations. However in 1993, a powerplant generator maintenance procedure started prior to irrigation season became problematic. Reclamation notified interested parties that the powerplant would be out of service for extensive repairs and maintenance and that the wasteway would convey irrigation deliveries throughout the entire 1993 irrigation season. This led to the longest continual use of the wasteway. The water volume diverted through the wasteway was limited to meeting downstream water delivery obligations. Even so, the extended use of the wasteway eroded the channel, exceeded its capacity in some locations, and damaged property outside of Reclamation's rights-of-way. One particular area of bank sloughing with loss of trees and vegetation is referred to throughout this EA as the "area of considerable erosion" and is shown in figures 1-1, 1-2, and 1-4. Released water no longer flows through the area of considerable erosion, and it is beginning to stabilize naturally with recovery of native vegetation. Several wasteway areas within and outside of Reclamation's rights-of-way require attention to minimize or prevent further bank degradation.

Figure 1-1. A portion of the area of considerable erosion (June 1997)

This EA incorporates by reference the document "*Rogue River Basin Project Talent Division – Oregon, Facilities and Operations*" (Vinsonhaler 2002), a separate report describing the facilities and operation of the entire Rogue River Basin Project. Since this EA is about stabilizing the wasteway rather than about changing operations of individual facilities within the Rogue River Basin Project, operations of Tyler Creek wasteway and Green Springs Powerplant are not addressed in this EA.

Proposed Action and Scope of Work

Reclamation is **proposing to upgrade access to the wasteway and stabilize localized areas of the wasteway channel.** The wasteway is defined as the natural channel used to convey water between the wasteway's pipe outlet and where Tyler Creek enters Emigrant Creek. **The proposed work area includes the wasteway from the pipe outlet downstream to where Tyler Creek enters Emigrant Creek and the access road right-of-way between Tyler Creek Road and the wasteway (T39S, R3E, Section 32; T40S, R3E, Sections 5 and 6; and T40S, R2E, Section 1); but is limited to those areas where wasteway access is needed and where Reclamation's use of the wasteway has caused or could cause channel erosion.** Emigrant Creek is excluded from the stabilization efforts because wasteway use has not caused bank erosion of Emigrant Creek.

The range of public comments suggests a desire to expand the scope of the stabilization efforts beyond the proposed work area. The wasteway channel carries intermittent flow during periods of snowpack runoff and precipitation. Once the flow enters Tyler Creek, other factors beyond Reclamation's control affect natural resources which occur in or use the creek channel. Therefore, watershed or basin-wide areas, issues, and studies outside the proposed work area are beyond the scope of this EA. These areas, with the exception of the access road right-of-way, comprise locations north, east, south, and west of the wasteway's natural channel, including those reaches upstream from the pipe outlet and downstream from where Tyler Creek enters Emigrant Creek. Likewise, issues that extend beyond the purposes of and need for action are considered watershed issues not specific to stabilizing the wasteway.

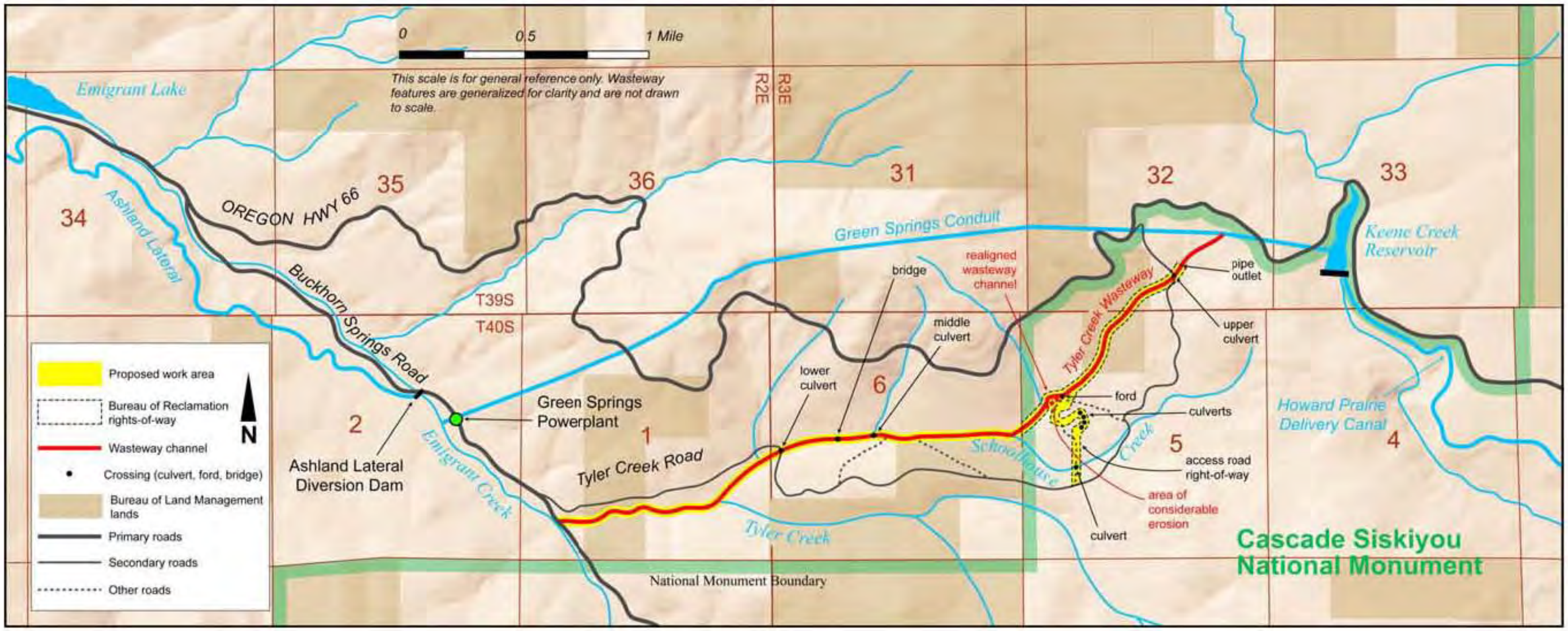

Figure 1-2. Proposed work area

Background

Authority

Reclamation rehabilitated existing Medford and Rogue River Valley Irrigation District facilities under the Rehabilitation and Betterment Act of October 7, 1949, (63 Stat. 724), as amended (68 Stat. 752). The Act of August 20, 1954, (Ch. 775, 68 Stat. 752) authorized Reclamation to construct, operate, and maintain the Talent Division of the Rogue River Basin Project according to Reclamation laws.

Rogue River Basin Project Description

Rogue River Basin Project's Talent Division collects, stores, conveys, and distributes water from high elevation reservoirs to three water districts in the Rogue River valley. The project is also authorized to provide downstream flood control. Talent Irrigation District (TID) diverts storage from Hyatt Reservoir and Howard Prairie Lake to Keene Creek Reservoir, which reregulates stored water for Green Springs Powerplant. The powerplant discharges water into Emigrant Creek for diversion into Ashland Lateral or for storage in Emigrant Lake until TID releases it for irrigation. To bypass the powerplant, a bypass valve on the power conduit diverts water released from Keene Creek Reservoir into a piped section of the wasteway that empties into an open natural channel and flows into Schoolhouse Creek, Tyler Creek, and Emigrant Creek. Using the wasteway provides no benefit for power production.

Water users hold contracts with Reclamation for rights to delivery of water via the wasteway during times when Green Springs Powerplant is out of service for maintenance or repairs.

Early Powerplant/Wasteway Designs

Reclamation examined various powerplant and wasteway design options prior to the 1959-1960 construction and in more recent years. All options, except those for the existing powerplant and wasteway, were eliminated from further consideration because they were either technically or economically unacceptable. The eliminated designs include:

- a power conduit layout with an open power canal and a traditional wasteway structure at the location where the canal would enter the penstock; this design included an alternate natural drainage channel, such as Sampson Creek
- a two unit powerhouse that could bypass one unit during maintenance and discharge water through the other unit into Emigrant Creek
- a bypass valve and pipe at Green Springs Powerplant that would discharge into Emigrant Creek
- a buried pipeline along the entire length of the existing wasteway alignment

After much analysis on design options, Reclamation found the existing Tyler Creek wasteway to be the most technically and economically acceptable option.

Regardless of whether or not any of the above options may some day prove to be technically, economically, and environmentally viable, Reclamation would still upgrade access to the wasteway and stabilize localized areas of the wasteway channel.

Wasteway Construction and Modification

Reclamation constructed the piped section of Tyler Creek wasteway in 1959, modified the channel at the pipe outlet during construction of the powerplant in 1960, and made additional modifications in winter 1992 and spring 1993 to stabilize the upper-most section of the wasteway and the pipe outlet discharge pool. At the landowner's request to avoid further property damage, Reclamation constructed a berm in 1993 along a section of the wasteway directing flow away from the area of considerable erosion (figure 1-3).

Figure 1-3. Berm prevents wasteway flow from entering the area of considerable erosion and directs it into another natural channel.

Construction Permits

Oregon Department of Environmental Quality (ODEQ), Oregon Division of State Lands (ODSL), and U.S. Army Corps of Engineers (Corps) have specific and different regulatory roles designed to protect waters within Oregon. Regulations are designed to protect navigable waters, ensure wise and beneficial water use, maintain and enhance water quality, protect fish and wildlife habitat and recreation resources, and protect the public interest. The goals of these regulatory roles are to protect the biological, chemical, and physical integrity of Oregon's waters. Wetlands are given special regulatory emphasis because of their ecological value.

Regulated activities in Oregon's waters that may require a permit include, but are not limited to:

- excavating and dredging
- changing, realigning, or relocating channels
- placing fill, riprap, or similar material
- stabilizing banks or shores including jetties and revetments
- installing culverts, bridges, or roadways.

To accomplish the purposes of action, Reclamation would obtain Clean Water Act (CWA) and appropriate State permits prior to construction activities as required by ODEQ (Section 402 permit and Section 401 certification), ODSL (removal/fill permit), and the Corps (Section 404 permit).

Rights-of-Way/Flowage Easements and Wasteway Access

Reclamation can run water through natural waterways without obtaining rights-of-way if the flow is within the carrying capacity of the channel. However, rights-of-way are needed where flow may exceed the natural channel and cause property damage. In the early 1960s during the planning and construction phases of Tyler Creek wasteway, drainage areas of existing creeks and their ability to handle released flows provided the basis for determining the location and extent of these flowage easements.

Reclamation acquired rights-of-way/flowage easements for those portions of the wasteway in Sections 32 and 5 (from the pipe outlet to the west boundary of the Garfas property). See figure 1-4. Reclamation also has reserved rights-of-way across portions of Sections 6 and 1 that are based on the 1890 Canal Act right. Initially, the creek channel in Sections 6 and 1 (downstream from the Garfas property to the confluence of Tyler Creek with Emigrant Creek) was assumed to be sufficient to carry released flows; therefore, flowage easements for this reach were not obtained. However, use of the wasteway during the 1993 irrigation season revealed that portions of the channel were not capable of carrying long-term flows without eroding the channel banks.

Reclamation and TID employees, in the past, could only legally access the wasteway by staying within the 100-foot-wide flowage easement from the pipe outlet to the west boundary of the Garfas property. This made it difficult to get equipment into the wasteway for maintenance. Hence, Reclamation and TID needed additional access to the wasteway near the area of considerable erosion. Reclamation negotiated with the private landowner and arrived at an acceptable location for a 60-foot-wide access easement approximately 1,700-feet long (figure 1-4).

Reclamation has no authority to stabilize areas outside its acquired rights-of-way, and therefore, must acquire additional rights-of-way/flowage easements before stabilization work on private land can proceed. Reclamation would involve individual landowners where wasteway flow has exceeded the natural channel and caused or could cause property damage or where additional access to the wasteway is needed. In some areas, Reclamation has the option of exercising the Canal Act reserved rights-of-way on private lands. The Canal Act of August 30, 1890, (26 Stat. 391) authorizes Reclamation to acquire lands with compensation, take possession, and exercise certain rights-of-way reserved to the United States for irrigation works and reclamation of arid lands. The 1890 Act applies to land patents issued after August 30, 1890, west of the 100th meridian[1]. Similar reservations for such purposes may also apply to privately owned lands

[1] The 100th meridian is a longitudinal line representing the boundary between the non-irrigated, moist east and the arid, irrigation-dependent west. This line runs through North and South Dakota, Nebraska, Kansas, Oklahoma, and Texas.

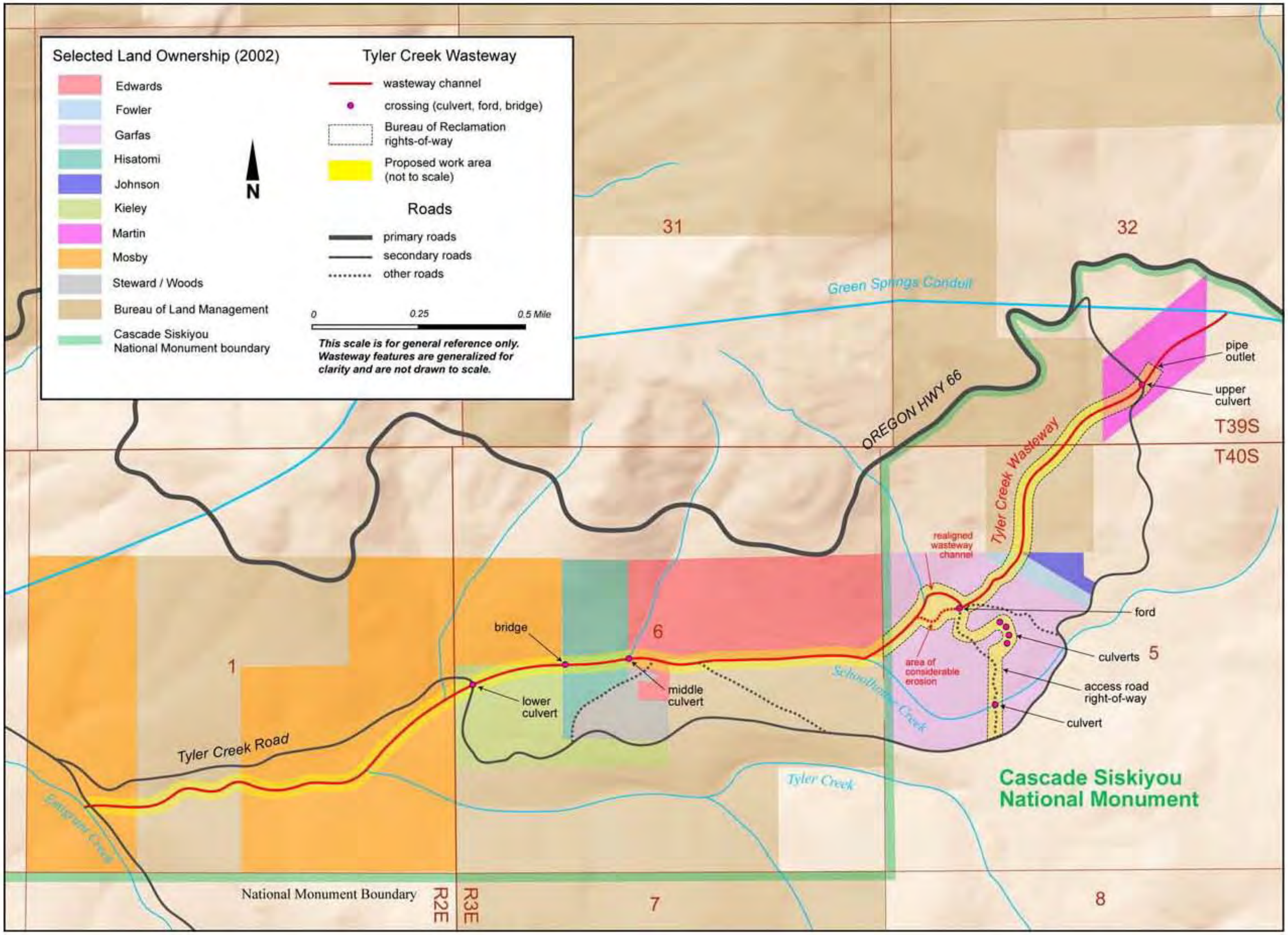

Figure 1-4. Approximate 2002 land ownership and Reclamation rights-of-way

through water-right applications, water users' association stock subscription contracts, State legislation, and the Federal Power Act of June 10, 1920, (41 Stat. 1063).

A Decision to Make

As part of the NEPA process, Reclamation considers public comments prior to **deciding which alternative to implement**. Reclamation will complete this EA on Tyler Creek wasteway stabilization and then determine whether a Finding of No Significant Impact (FONSI) is appropriate. If a FONSI is appropriate, Reclamation will make a decision on whether to implement the preferred alternative along with the environmental commitments outlined in the FONSI/Final EA.

If the proposed action results in significant environmental effects, a FONSI would be inappropriate. Reclamation would then prepare an Environmental Impact Statement (EIS) followed by a Record of Decision on whether or not to implement one of the identified alternatives.

Scoping Process and Issues Identified

As required by NEPA, Reclamation developed a preliminary range of alternatives to stabilize the wasteway taking into consideration the existing wasteway channel degradation, the steep terrain, and the goal of maintaining the environmental integrity of the channel. An ongoing and open public and agency scoping process identified the issues to be addressed in this EA. Reclamation gathered information through public outreach efforts, talking with stakeholders, and ongoing contacts with local, State, and Federal agencies. An initial scoping letter, in April 2001, requested public assistance in identifying environmental impacts and concerns or suggestions on the alternatives. The public submitted eight response letters. These alternatives were discussed at a May 21, 2001, tour of the wasteway channel attended by Bureau of Land Management (BLM), landowners, Friends of the Greensprings (FOG), and two private consultants. The participants agreed that a natural stream should be maintained rather than constructing a canal. They also agreed that bioengineering techniques using native vegetation would offer the best solution.

These preliminary alternatives were then presented at a public workshop on December 6, 2001, in Ashland. Reclamation received three letters and comment forms before and eight letters following the meeting attended by fourteen stakeholders. The workshop offered another forum for public input on the alternatives. Those comments that fell within the scope of stabilizing the wasteway and that were not already incorporated into the alternatives were given consideration. Public comments and preferences identified throughout the scoping process helped to refine the alternatives described and evaluated in this EA. They also led to the extension of the work area from the wasteway outlet pipe downstream to the confluence of Tyler Creek at Emigrant Creek.

Public and agency comments generated from the review of the Draft EA that fall within the scope were also given consideration prior to selecting an alternative.

The issues and concerns raised throughout the scoping process are categorized and summarized as follows:

Land Ownership and Access

The landowners are concerned about damage to their property caused by Reclamation's use of the wasteway. They want the damage to stop and expect Reclamation to repair their land. They want Reclamation to obtain easements through their property; some prefer permanent easements. They want to be involved in how their land would be repaired. They want to know how Reclamation would involve them to decide which sites need stabilized; where stabilization would occur, and how the work would be done. They want a more thorough understanding of the total impact of the stabilization efforts and state that Reclamation has yet to assess all the private property. They are concerned about losing their right to privacy.

Geologic Features

The public is concerned with the unstable soils present in the wasteway, the loss of those soils, long-term degradation of the landscape, and the effect erosion has on downstream resources. There is concern that using the wasteway could reactivate an ancient landslide. Reclamation acknowledges that during 1993, the channel wasn't capable of handling the flow. They want to know the soil/geology impacts from accessing sites where standard engineering techniques would be used. They want to know the geology impacts of alternative 4 from more access roads into the wasteway.

The public is concerned with the volume of water and the duration of the flow. They suggested a channel survey and design criteria that Reclamation incorporated into the preferred alternative. They offered suggestions on detailed studies and developing an alternate bypass, all of which are outside the purposes of and need for action.

Water

The public is concerned about how using the wasteway affects downstream water quality. They are concerned that Ashland Lateral flows are adding pollutants to the city of Ashland's drinking water. They want further information about water quality impacts caused by the alternatives. They took exception to three particular Draft EA statements about water quality.

Vegetation

The public wants the natural vegetated state of the channel returned and maintained with native plantings, increased riparian shade, and protection of wetlands. They want further information about vegetation removal and disposal of that vegetation.

Fish, Wildlife, and Aquatic Resources

The public is concerned about what sedimentation does to the downstream aquatic environment and species. They requested analysis of special status species. They want further information concerning the impacts created by the culverts. They provided the names of fish species present in Tyler Creek.

Social Aspects

Public concerns include quality of human life, health, and safety. Landowners are concerned that the erosion is destroying the value of their investments and causing an unsightly landscape. They are concerned about the possibility of reactivating a major landslide causing the loss of their property, homes, and human life. As a result, their peace of mind is impaired. They want to know how increased population and development in the Tyler Creek drainage have somewhat increased wasteway flow and how it impacts geologic resources.

Alternatives and Study Types

The public wants thorough analysis of current conditions and the impacts using the best science available to develop a broad range of alternatives. They want the scope of work and impacts of that work determined before any action is taken. They state the Draft EA missed the very root of the problem (too much water volume and velocity) without scientific analysis of adverse effects. It also missed the basic concepts to stabilize, restore, and mitigate and that the proposed actions are shortsighted, based on convenience, and focused on least expense and greatest expediency. The analysis falls short of offering a broad range of alternatives and addresses only a short-term fix to a portion of the affected area. Standard engineering practices are vague and fail to adequately disclose the proposed actions on private property and what benefits or harms those practices would cause. The Draft EA fails to state that Sampson Creek and an unnamed tributary were historically used to transfer water from Hyatt Reservoir to Emigrant Lake prior to constructing Keene Creek Reservoir and Tyler Creek wasteway.

The public wants clarification of Reclamation's intended future use of the wasteway, its continuing impact on private land, the proposed work schedule, the locations of right-of-way acquisition and stabilization work, exactly where bioengineering structures would be used, and where the high velocity areas are that would need standard engineering techniques. They want to know whether the private bridge and middle culverts are the only locations being considered for standard engineering techniques. They want equal information and equal repairs for all land sections along the wasteway. They want to know what monitoring would be done, where, and who would do it. They want to know how equipment would move around in the work area. There are concerns that backfill and riprap may not adequately prevent further erosion. They question whether the wasteway would be engineered to handle increased flow or just repaired to be destroyed again.

Suggestions include small wasteway maintenance flows throughout summer to stabilize and maintain the channel, reexamine powerplant and wasteway designs previously eliminated, consider surfacing the entire access road or at least the stream approaches and crossings, extend the work area down to Tyler Creek and Tyler Creek Road, and restrict channel stabilization to the dry season and during the Oregon Department of Fish and Wildlife (ODFW) instream work period.

Clarification was requested on the grade of the proposed access road, how the access road route was determined, the rational for proposing a natural surface road rather than a rocked or paved running surface, the location of the abandoned logging road and proposed new sections of the access road, culvert sizes, the number of culverts, Reclamation's use of the road, and whether any already existing roads into the wasteway are on BLM land.

Quality of Analyses

One letter states that using the wasteway for 20-60 cfs was never an environmentally acceptable option. Others state the analysis fails to adequately address issues raised in scoping letters and at the public workshop, the assessment is incomplete and lacks substantive issues, it is not clear that Reclamation considered all the FOG environmental studies, and the public wants more analyses. They state the greatest flaw is lack of acknowledgement of adverse cumulative effects of sustained wasteway use.

Management and Infrastructure

Some of the public wants to see first-hand and discuss the wasteway damage; some offered assistance. Some want the Rogue Valley Technical Pool to review and comment on the proposed plan. Others lack trust in Reclamation's actions and analyses. One letter requested extension of the comment period.

Issues Outside the Purposes of and Need for Action

Several of the public comments and requests pertain to issues unrelated to stabilizing the wasteway. Reclamation acknowledges and has documented these issues, but considers them as being beyond the scope of this EA. Specific issues and concerns are:

- General engineering, geomorphic, geologic, and geotechnical studies not specific to stabilization
- Cost, benefits, and cumulative effects on whole river system
- Dependable irrigation water delivery
- Drinking water in the city of Rogue River
- Permanently abandon the wasteway
- Return the stabilized wasteway to a natural channel
- Observe other streams not affected by Reclamation releases
- Stream profiles and cross sections on tributaries
- Stabilize tributary channels and swales
- Extend the study area from the pipe outlet to Buckhorn Springs Road
- Alternate way to bypass powerplant
- Significant offsite impacts beyond the scope of the proposed action
- Long-term impact and cost analysis of wasteway versus an alternate bypass
- Revisit Sampson Creek as wasteway channel

- Cleaning sedimentation from sprinkler systems
- Deliver irrigation water without degraded water quality or social, economic, or environmental damage
- Gross oversight not to mention a wasteway operating plan
- Determine maximum flow including combined water deliveries and natural flow of weather events
- Impose a flow restriction that limits future releases to 20 cfs.

Chapter 2 — Alternatives

The proposed action is to upgrade access to the wasteway and stabilize localized areas of the wasteway channel so it can continue to function, as it has for the past 43 years, as a water delivery bypass when the powerplant is out of service. This chapter identifies alternatives examined but eliminated from further consideration as well as the following reasonable range of alternatives that are based on current engineering practices and input from landowners and the public:

1) No Action
2) Combining Bioengineering with Standard Engineering Techniques
3) Using Only Bioengineering Techniques
4) Using Only Standard Engineering Techniques.

NEPA typically defines "No Action" as the most likely future without the proposed Federal action. The No Action alternative serves two purposes:

- It identifies expected future environmental conditions without taking measures to stabilize the wasteway or upgrade access.
- It is the basis (baseline condition) by which all other alternatives are compared.

The three action alternatives (2, 3, and 4) offer different methods of accomplishing the purposes of and need for the action. The alternatives are described in general terms, rather than site specific, due to the continual geomorphic changes occurring within the wasteway channel and the expected long-term efforts to stabilize the channel. Also, the exact repair method for any particular eroded area would depend on what Reclamation and the landowner agree to following negotiations on right-of-way/flowage easement and stabilization methods. Until these negotiations take place, site-specific stabilization descriptions are not available.

Future Diversions Through the Wasteway

If, in the future Green Springs Powerplant needs repair or maintenance during irrigation season, Reclamation will divert flow through the wasteway to meet water delivery obligations. Future use of the wasteway is expected infrequently, based on only about five occurrences of use in the 43-year history of the wasteway.

Alternatives Considered But Eliminated From Further Consideration

A couple of alternatives discussed early in the evaluation process were eliminated from further analysis as they were shown to be technically or economically unacceptable for stabilizing the wasteway. These alternatives are:

- stabilizing the entire length of the wasteway
- constructing energy dissipaters and settlement ponds.

Alternative 1 – No Action

The No Action alternative leaves the wasteway in its current condition with unstable banks and no road access for maintenance equipment. This alternative does not address existing environmental problems associated with use of the wasteway. No work would occur under this alternative to repair or enhance bank stability.

Alternative 2 (Preferred Alternative) – Bioengineering Combined With Standard Engineering

The preferred alternative offers a well-rounded approach to stabilizing the wasteway. It effectively addresses existing environmental problems associated with past wasteway use and applies proactive, environmentally friendly measures to stabilize the wasteway. **The preferred alternative is to:**

- **stabilize localized areas of the wasteway banks and immediate upslope areas using a combination of bioengineering and standard engineering techniques,**
- **construct an access road to the wasteway within existing Reclamation right-of-way, and**
- **acquire new right-of-way/flowage easements as needed in the future.**

The preferred alternative most likely would be approximately 80 percent bioengineering techniques and 20 percent standard engineering techniques. Bioengineering techniques would be incorporated as much as possible except where a standard engineering method would be considerably more effective and reliable. Access to specific areas of the wasteway affects which type of engineering techniques can be implemented. Stabilization structures, including the types of vegetation, would be designed specifically for site characteristics and conditions based on channel and bank morphology, access, and consultation with private and Federal landowners. The process of stabilizing the wasteway would likely continue for several years.

Acquiring Additional Rights-of-Way/Flowage Easements

Reclamation has no authority to stabilize areas outside its acquired rights-of-way, and therefore, must acquire new rights-of-way/flowage easements before stabilization work on private land can proceed. Reclamation policies, authorities, and the 1890 Canal Act, would direct acquisition of additional rights-of-way/flowage easements. The *Rights-of-Way/Flowage Easements and Wasteway Access* section of chapter 1 explains this Act.

Landowner Negotiations

The goal of the stabilization efforts would be to upgrade access and stabilize the wasteway channel banks. Stabilization is not intended to fix all the basin’s problems nor is it intended to upgrade private property beyond what previously existed or what was damaged by Reclamation’s actions. Stabilization is instead intended to repair damage caused by diverting water through the wasteway so the wasteway can continue to function as a water delivery bypass when the powerplant is out of service.

With cooperation from landowners, Reclamation could construct additional stabilizing structures and repair channel damage downstream from the Garfas property. Reclamation would contact and meet with individual landowners as needed to discuss and negotiate the purchase of rights-of-way/flowage easements at a fair market value. After acquisition of rights-of-way, Reclamation would then discuss and negotiate site-specific stabilization efforts with individual private and Federal landowners. Some specific topics of these negotiations are:

- which sites Reclamation would stabilize
- would a site be stabilized using bioengineering or standard engineering techniques
- could specific trees be removed
- could live brush be cut
- would concrete or metal, or both, be used
- would access to the wasteway be temporary or permanent
- how heavy equipment (for standard engineering structures) could move across the property
- which vegetation species would be used

Reclamation would acquire all the necessary permits prior to beginning construction. Based on these negotiations, the required permits, and professional judgment, Reclamation would make the decision on which areas to stabilize and how. The priority of sites selected is outlined in the *Alternative 2, Proposed Work Sequence* section of this chapter.

Data Collection

Sections 32 and 5

Reclamation surveyed and developed slope, gradient, and cross section information for the wasteway channel from the pipe outlet to the west edge of the Garfas property (figure 1-4).

Sections 6 and 1

The wasteway channel centerline survey was completed from the west edge of the Garfas property downstream to where Tyler Creek enters Emigrant Creek. Slope, gradient, and cross section data will be developed.

Using Data

Reclamation would use survey data to:

- identify the physical location of existing landownership
- identify channel slope and specific areas needing standard engineering techniques that could handle higher flow velocities
- identify needed rights-of-way/flowage easements for access to and along the wasteway channel
- identify physical location of known archeological sites Reclamation would exclude from right-of-way acquisitions
- to acquire right-of-way/flowage easements

Collecting Further Data

Following negotiations with private and Federal landowners, Reclamation would gather more in-depth survey data and site-specific information as appropriate to:

- assist engineers in designing and developing appropriate stabilization structures such as standard engineering structures
- determine the quantity and type of appropriate construction materials

Bioengineering Techniques

The overall concept of bioengineering uses mostly natural materials to repair slope failures and strengthen banks to sustain released flows without further deterioration. Bioengineering techniques would be used where the channel slope is such that vegetation should withstand the expected flow velocities. The exact locations of these structures would be determined in consultation and negotiations with individual private and Federal landowners.

Vegetation Selection

Consultation with private and Federal landowners would determine appropriate site-specific vegetation species. Vegetation and seed/plant mixture selection would depend upon local availability, ease of establishment, competitiveness with invasive weed species, compatibility within the mixture, and desired streambank protection attributes. Additional native grasses (e.g. Bromus, Festuca, Stipa, and the wheatgrass/ryegrass complex) would likely augment existing grass species to maximize vegetation establishment, site stabilization, and desirable habitat values (Reclamation 2001). Native vegetation plantings and use of best management practices would reduce the likelihood of introducing noxious weeds.

The planted native vegetation would rely on natural weather patterns and ground moisture for survival. This EA is about stabilizing the wasteway rather than about changing operations to provide maintenance flows. This EA incorporates by reference the document "*Rogue River Basin Project Talent Division – Oregon, Facilities and Operations*" (Vinsonhaler 2002).

Stabilizing Infrastructures

Designs for the stabilizing infrastructures would include supporting crib structures, geotextile cover, revegetation, root wad systems, gabion fill material, rocks, and possibly small amounts of concrete and/or some metal. Some structures would be constructed from trees within the adjacent mixed conifer stand (pine, spruce, fir) and transplanting of live woody cuttings from local native shrubs (e.g., Salix, Alnus, Symphoricarpos, etc.). Some structures would be constructed from acquired, untreated wooden logs to reduce cutting of live trees. Native vegetation would develop root masses adding stability to the banks and upslope, and after a growth period, would cover infrastructure components. Specific bioengineering techniques that could be used are:

- Live cribwalls (figure 2-2) or vegetated gabions (figure 2-3) to add bulk and stabilize actively sliding, near vertical banks (figure 2-1)

- Tree revetments (figure 2-5), live fascines (figure 2-6), live stakes (figure 2-7), or brush mattresses (figure 2-8) to stabilize other sloughing banks (figure 2-4).

The bottom of the channel would substantially remain unchanged except for high velocity areas where existing rock and boulder materials would be relocated into the channel bottom to construct small hand-placed rock energy dissipaters as shown in figure 2-9.

Figure 2-1. Near vertical wasteway banks

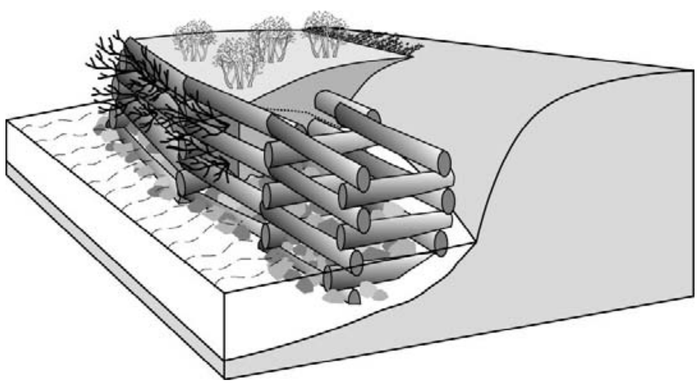

Figure 2-2. Live cribwalls

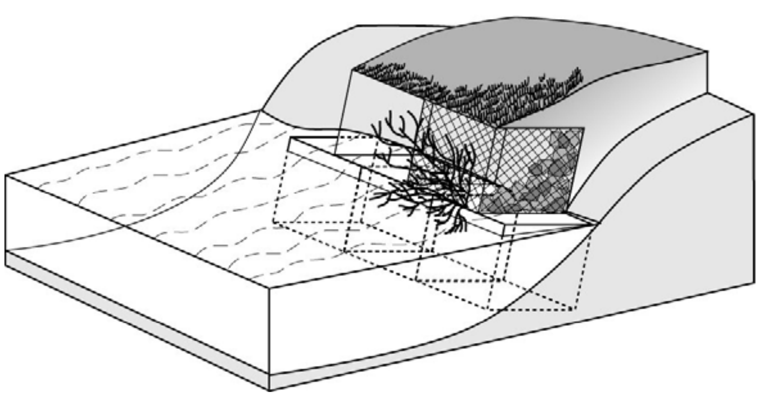

Figure 2-3. Vegetated gabions

Figure 2-4. Sloughing banks

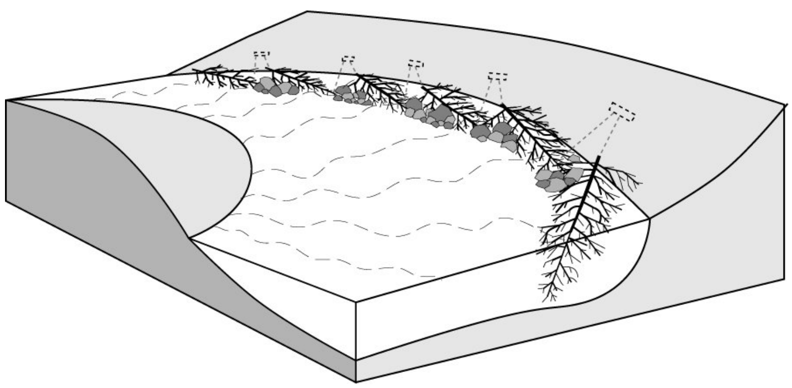

Figure 2-5. Tree revetments

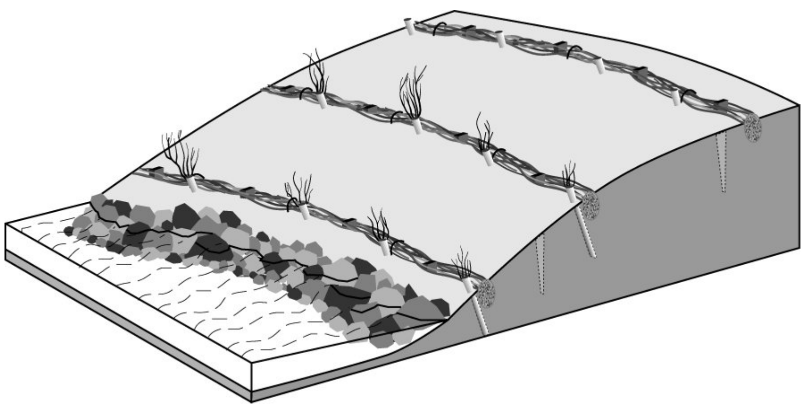

Figure 2-6. Live fascines

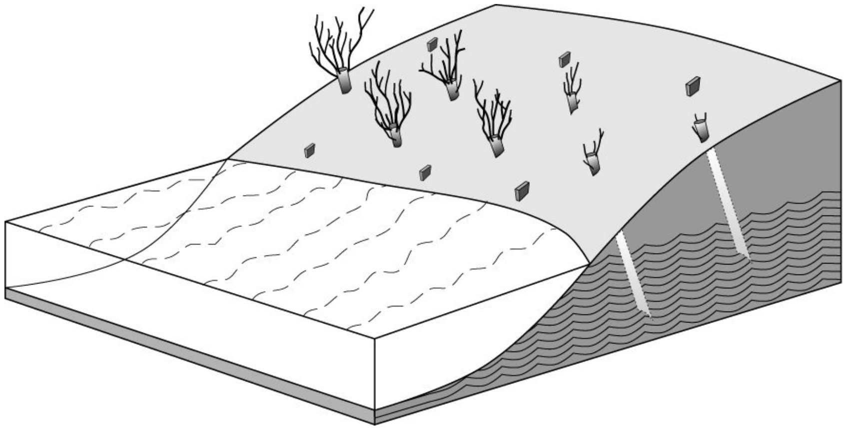

Figure 2-7. Live stakes

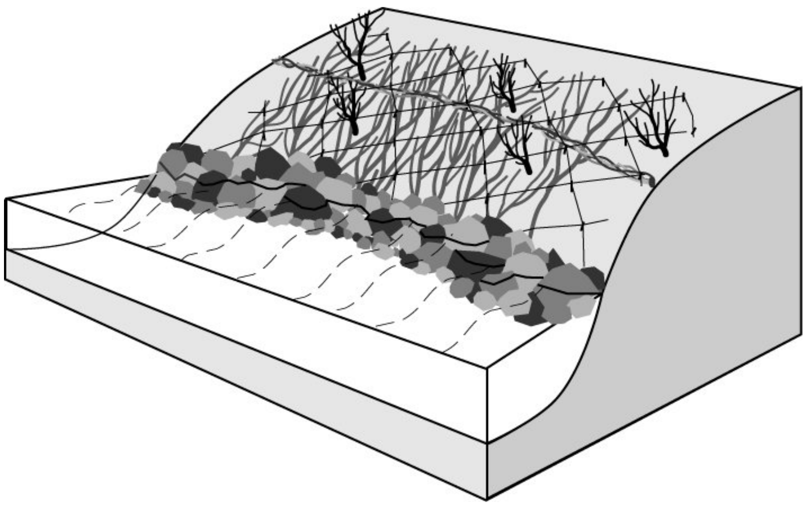

Figure 2-8. Brush mattresses

Figure 2-9. Example of a small hand-placed rock energy dissipater

Bioengineering Advantages

Bioengineering techniques have the following three advantages over standard engineering techniques:

Bioengineering Structures	Standard Engineering Structures
made with natural locally available materials	made from large rocks, concrete, steel, and artificial materials
installed primarily by hand labor, use of standard vehicles, and minimal machinery (Reclamation 2001)	installed by use of heavy equipment (dump truck, front end loader, trackhoe, and backhoe)
used in areas of restricted access	used in areas accessible to heavy equipment

Standard Engineering Techniques

Standard engineering techniques would be used where the channel slope is such that vegetation alone would not likely withstand the expected flow velocities. The number of and exact locations of these structures would be based on professional judgment and consultation and negotiations with individual private and Federal landowners.

Standard engineering techniques used under this alternative could include backfill and riprap armament (figure 2-10) to protect against erosion and upslope plant disturbance in high velocity areas. Minimal concrete and metal components would be used. Heavy equipment would haul and place material; therefore, this method would be limited to locations with easy access. Equipment type and size would be selected to have the least environmental impact. A trackhoe would be used where possible as it would not likely disturb vegetation or surface soils while moving about within the work area or from site to site. Areas of construction would be reseeded or revegetated with live cuttings as needed at individual sites. Some areas could receive both methods to reinforce banks and prevent future erosion. Reclamation would negotiate with individual landowners on a site-specific repair method and whether equipment access rights-of-way would be temporary or permanent.

Figure 2-10. Example of backfill and riprap armament
with minimal concrete and metal components

Examples of two locations (figures 2-11 and 2-12) for standard engineering techniques are both outside Reclamation's existing acquired rights-of-way. Following landowner negotiations, Reclamation would acquire an easement from Tyler Creek Road to access the private bridge and middle culvert and would stabilize these structures. Other eroded wasteway sites may also be suitable and considered for standard engineering structures.

Figure 2-11. Middle culvert site where standard engineering techniques would be beneficial

Figure 2-12. Bridge site where standard engineering techniques would be beneficial

Access Road

Route

Reclamation and TID needed wasteway access near the area of considerable erosion. Reclamation, therefore, negotiated with the private landowner and arrived at an acceptable location for a 60-foot-wide access easement approximately 1,700-feet long (figure 2-13). The access road alignment lies within the acquired right-of-way and is positioned, as requested by the landowner, along a relatively flat area skirting a wetlands to avoid cutting an adjacent steep bank. Within this right-of-way, the road is aligned to have the least environmental impact to Schoolhouse Creek, nearby wetlands, and other vegetation.

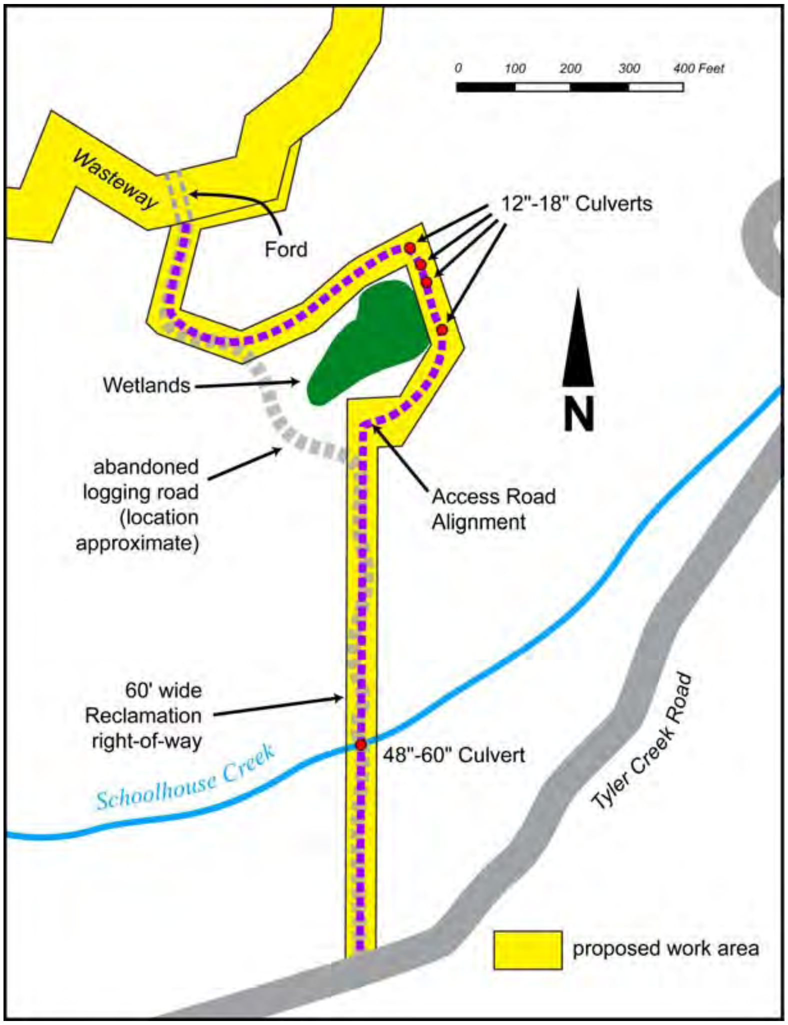

Figure 2-13. Approximate access road alignment

Road Specifications

Two primitive tracks across existing pasture would connect to an abandoned logging road where large trees have already been cleared (figure 2-14). Minimal cut and fill activities would be done on small portions of the road. The access road would be relatively flat except for an area just north of the Schoolhouse Creek crossing which would have a grade between 1 and 2 percent. The road design maintains the natural character of the surrounding landscape rather than paving which could cause oil runoff into the channel. Therefore, neither the existing portion nor new portions of the access road would be paved or graveled (with the exception of some gravel near the culverts). Vehicles could travel over the natural road surface during dry conditions without rutting the surface.

The 12-foot-wide dry weather road would include the following crossing structures:

- a 48- to 60-inch-diameter culvert crossing Schoolhouse Creek
- 12- to 18-inch-diameter culverts crossing small intermittent tributaries to existing wetlands
- a rock or concrete ford crossing the wasteway channel.

Permits would dictate quantities of material to be removed and fill material to be placed. Reclamation would review specifications for existing nearby county culverts and size culverts and crossing structures appropriately for expected runoff, to accommodate use by construction equipment, and to have the least impact on drainage characteristics surrounding the wetlands. These structures would be placed to allow for passage of aquatic species and to not impede flow. Once the culverts were in place, backfill, and then rock, placed around the culverts would improve stability and reduce channel erosion. A graveled road surface near the culverts would reduce sediment movement into the waterway. The exact number of wetland culverts remains to be determined. The Schoolhouse Creek culvert area would be the only graded portion of the access road and would be ramped to allow vehicles to cross over the culvert.

Figure 2-14. The 12-foot-wide primitive dirt road, ungraveled and unpaved, would consist of two tracks across existing pasture and connect to an abandoned logging road

Construction

Road construction would occur during dry weather. Minimal use of heavy equipment (loaded dump truck, front end loader, trackhoe, and backhoe) and disturbance of the area would occur during culvert construction.

Use of the Road

A locked gate would block the entrance of the access road at Tyler Creek Road. Reclamation, its agents, successors, and assigns would perform stabilization efforts, road construction, inspection, and maintenance during dry periods. Should a need arise to access the wasteway during non-dry periods, Reclamation and TID would use foot traffic within the acquired right-of-way. Should a rare instance require immediate vehicular access for emergency stabilization repairs during a wet period, Reclamation would also repair the access road as necessary. The landowner would have unrestricted use of the road regardless of weather conditions.

Vegetation Cuttings and Removal

Along the Wasteway

Cuttings of live brush within existing rights-of-way or with the landowner permission would likely be necessary to construct stabilizing structures. Native vegetation plantings and use of best management practices would reduce the likelihood of introducing noxious weeds. Reclamation would analyze individual erosion sites and negotiate with private and Federal landowners on where vegetation cuttings would be made, from which plants, and whether specific vegetation would be removed. Site-specific conditions, including the presence or absence of habitat and fish species within that site, would be analyzed and efforts made to limit disruption of existing riparian habitat.

Vegetation and live trees within the wasteway channel would likely be removed if the flow around them was causing bank erosion. Live trees would also likely be removed if they were about to fall into the flow channel. Minimal existing vegetation may be removed where concrete and metal components would be placed. Until negotiations took place and specific trees were identified for removal, the diameter, location, and proximity to or within the channel would remain unknown.

Efforts would be made to build stabilizing structures from already downed trees, especially those in the flow channel and along the banks. To avoid cutting live trees, Reclamation would acquire untreated wooden logs if additional logs were needed to build the stabilizing structures.

Workers would remove or realign already downed timber from the wasteway that might direct flows into the channel bank. Other timber would be left or rearranged and anchored in the wasteway to serve as energy dissipaters. Negotiations with the landowner would identify what Reclamation would do with timber removed from the channel and not used in the stabilization efforts. Should slash or debris be created during construction, it would be burned, chipped, or buried on site.

Along the Access Road

A 12-foot-wide band of brush and trees would be removed as necessary from within the entire length of the access road alignment. This would include approximately 8 to 10 scrub oak trees, about 20 to 30 small trees, and small shrub-type vegetation. The road would dodge other trees as much as possible within the right-of-way.

The right-of-way agreement with the landowner stipulates that trees cut for construction of the access road would be laid along the side of the access road for the landowner's use. Slash or debris created during road construction and not used for wasteway bank stabilization would be burned, chipped, or buried onsite.

Proposed Work Sequence

As much as possible, road construction, bank stabilization, inspection, and maintenance would take place during dry periods and when flow is absent from the channel. The proposed work is categorized into three priorities as follows; however, work items within a single priority may not be in chronological order.

First Priorities

- obtain all the necessary environmental clearances and permits
- construct nonexistent sections of the access road
- begin stabilizing actively eroding banks within existing acquired rights-of-way that were damaged by previous wasteway use
- obtain necessary rights-of-way/flowage easements to the private bridge (figure 2-12) and middle culvert (figure 2-11)
- consult and negotiate with individual landowners on stabilization methods to use at the private bridge and middle culvert sites
- stabilize and armor the channel banks at the bridge site
- stabilize and armor the middle culvert site
- periodically inspect stabilized areas
- stabilize the realigned wasteway channel that bypasses the area of considerable erosion (see figure 1-4)
- may do some revegetation in the area of considerable erosion with minimal environmental disturbance

Second Priorities

- obtain all the necessary environmental clearances and permits
- inspect previously stabilized areas and repair as needed
- obtain rights-of-way/flowage easements along the wasteway channel as needed
- consult and negotiate with individual landowners on stabilization at specific sites
- stabilize eroded areas within acquired rights-of-way/flowage easements
- periodically inspect stabilized areas

Subsequent Priorities

Each subsequent year of the stabilization process would begin with inspection and repairs, as needed, of previously stabilized areas. Reclamation would negotiate with individual landowners of those wasteway areas where flow has exceeded the natural channel and caused property damage. Further stabilization would occur on impacted sites over a period of several years depending upon the severity of existing erosion and the potential for future degradation with released flows. Reclamation would assess and repair wasteway areas needing preventative stabilization with the goal of the wasteway performing without further degradation.

Minimizing Construction Impacts

Reclamation would take the following actions to minimize construction impacts:

- complete site-specific environmental compliance
- as much as possible, perform road construction during dry conditions
- avoid rutting the access road by limiting Reclamation and TID's use as much as possible to dry periods
- use foot traffic within the acquired right-of-way when accessing the wasteway during non-dry periods
- in rare emergency requiring immediate vehicular access to make stabilization repairs during a wet period, also repair the access road as necessary
- as much as possible, do stabilization work during dry periods and when flow is absent from the channel
- acquire untreated wooden logs to reduce cutting of live trees if additional logs were needed to build the stabilizing structures
- prevent introduction of noxious weeds
- vegetate with live brush cuttings from within existing rights-of-way
- keep construction debris and rubble out of the stream channel to minimize construction impacts to the downstream fishery
- limit vegetation removal to those plants that:
  - are causing erosion because of their location in relation to the flow,
  - are about to fall into the flow channel, or
  - are located where standard engineering structures would be placed to reduce bank erosion
- construct waterbars on the access road as necessary to prevent rutting and washing of surface materials

Inspection and Maintenance

Stabilization would be an ongoing effort for several years. Bioengineering techniques are dependent upon plant growth which is dependent upon soil type, precipitation, temperature, insect damage, wildlife damage, etc. Therefore, Reclamation and TID would perform annual inspections of the wasteway each spring, during and after wasteway use, and after high precipitation events. Inspectors would walk the entire length of the wasteway to identify sites of new erosion or potential erosion sites needing stabilization. Continual inspection during the first few years and replacing dead planted vegetation would enhance bank protection. Early intervention, before extensive erosion occurs, using bioengineering structures at these sites would increase the effectiveness of the stabilization efforts. Standard engineering structures would be inspected prior to, during, and after periodic releases through the wasteway and repaired as necessary. The routine inspection would include taking water measurement readings from the weir at the pipe outlet.

Reclamation and TID would perform annual inspection of the access road in early summer and after spring runoff and high precipitation events. Active road erosion would be corrected with necessary modifications such as water bars or relocation of culverts. The landowner would likely continue to use the road corridor for pasture; therefore, cutting of vegetation along the centerline of the road would not be necessary.

Should a need arise to access the wasteway during non-dry periods, Reclamation and TID would use foot traffic within the acquired right-of-way. Should a rare instance require immediate vehicular access for emergency stabilization repairs during a wet period, Reclamation would also repair the access road as necessary. The landowner would have unrestricted use of the road regardless of weather conditions.

Alternative 3 – Bioengineering Only

Alternative 3 would use only bioengineering techniques to stabilize localized eroded areas of the wasteway banks and upslopes regardless of whether a standard engineering technique would be considerably more effective and reliable.

Rights-of-Way/Flowage Easements, Negotiations, and Data Collection

Data collection, negotiations, and acquisition of rights-of-way/flowage easements would be accomplished in the same manner as described for alternative 2 (the preferred alternative), except that no standard engineering structures would be built.

Bioengineering Techniques

This alternative would be 100 percent bioengineering techniques, similar to those described for alternative 2. The one difference is that rather than installing standard engineering structures in areas of high velocity, some of the more sturdy bioengineering structures (such as live cribwalls and vegetated gabions) could be installed in those areas.

Access Road

An access road would be constructed from Tyler Creek Road to the wasteway and secured from public access as described for alternative 2. The landowner would have unrestricted use of the road.

Vegetation Cuttings and Removal

Vegetation cuttings and removal would occur as described for alternative 2.

Proposed Work Sequence

The work sequence for this alternative would be the same as for alternative 2, except that no standard engineering structures would be built.

Minimizing Construction Impacts

Reclamation would take the same actions to minimize construction impacts as described for alternative 2.

Inspection and Maintenance

Reclamation and TID would inspect the access road and wasteway channel each spring and during and after released flows or after high precipitation events as described for alternative 2, except that no standard engineering structures would be built, inspected, or maintained.

Alternative 4 – Standard Engineering Only

Alternative 4 would include treating localized eroded portions of the wasteway with liberal use of backfill, lining, and armoring of the slopes using concrete, concrete revetments, and riprap. This alternative would likely exclude the use of vegetation regardless of whether bioengineering techniques would suffice.

Rights-of-Way/Flowage Easements, Negotiations, and Data Collection

Data collection, negotiations, and acquisition of rights-of-way/flowage easements would be accomplished in the same manner as described for alternative 2 (the preferred alternative), except that there would be no live brush cuttings and no need to determine vegetation species since bioengineering techniques are not included in this alternative. This alternative would, however, include additional access rights-of-way at many locations off Tyler Creek Road into the wasteway and the widening of the existing wasteway rights-of-way.

Land survey data would assist engineers in designing appropriate standard engineering structures for individual sites and determining the quantity and type of construction materials most appropriate for that site.

Standard Engineering Techniques

This alternative would be 100 percent standard engineering techniques likely involving concrete, metal, and artificial components. Installation would require heavy equipment (loaded dump truck, front end loader, trackhoe, and backhoe) to haul and install large boulders, prefabricated structures, and other construction materials; therefore, additional access would be needed into and along the wasteway. Stabilization work would continue as needed on impacted sites depending upon the severity of existing erosion and the potential for future bank degradation with released flows.

Access Roads

An access road would be constructed from Tyler Creek Road into the wasteway within the acquired right-of-way (figure 2-13) and would be secured from public access the same as described for alternative 2. The culvert sizes would be the same as described for alternative 2. One difference in this alternative is that this road would likely be extended paralleling the wasteway short distances both upstream and downstream as the terrain would allow without major environmental disturbance.

Since standard engineering techniques would require the use of heavy equipment for hauling material and installation, many other access roads off Tyler Creek Road into localized areas of the wasteway would be needed. These roads would also be gated to prevent public access. Equipment, in some locations, could then travel cross country to stabilization sites without building a road if the terrain and vegetative growth would permit passage.

The steep terrain in some localized areas would dictate that materials be hauled in and structures built without the aid of heavy equipment. Additional manual labor would likely be needed.

Use of the access roads would be the same as described in alternative 2.

Vegetation Removal

Along the Wasteway

This alternative would include removal of local vegetation from throughout the wasteway channel and replacement with standard engineering structures of concrete and metal components. Vegetation in the way of these structures would be removed. Reclamation would analyze individual erosion sites and negotiate with private and Federal landowners on whether specific vegetation would be removed. In particular, vegetation and live trees within the wasteway channel would be removed if the flow around them was contributing to bank erosion. Live trees would be removed if they were about to fall into the flow channel. This alternative would likely include extensive removal of willow (*Salix* spp.), snowberry (*Symphoricarpos* spp.), alder (*Alnus* spp.), currant (*Ribes/Rubus* spp.), sedge (*Carex* spp.), various forb/grasses, and other vegetation as described on table 3-1. Until landowner negotiations took place and specific trees were identified for removal, the diameter, location, and proximity to or within the channel would remain unknown.

Workers would remove or realign already downed timber from the wasteway that might direct flow into the channel bank. Other timber would be left or rearranged and anchored in the wasteway to serve as energy dissipaters. Negotiations with the landowner would identify what

Reclamation would do with slash or debris created during construction and timber removed from the channel.

Along Access Roads

Vegetation removal would be similar to that described for the access road in alternative 2, except that additional roads for alternative 4 would require additional vegetation removal. The roads would dodge trees as much as possible within the rights-of-way. Disposal of cut trees, slash, and debris created during construction of the roads would comply with negotiated agreements with private and Federal landowners.

Proposed Work Sequence

The work sequence for this alternative would be similar to alternative 2, with a couple of exceptions. The area of considerable erosion would not be revegetated. Since live vegetation would not be planted in this alternative, stabilization efforts would take less time, likely spanning a couple of years. Once a standard engineering structure was placed, that area should be stabilized.

Minimizing Construction Impacts

Reclamation would take the following actions to minimize construction impacts:

- complete site-specific environmental compliance
- as much as possible, perform road construction, stabilization efforts, inspection, and maintenance during dry conditions
- avoid rutting the access roads by limiting Reclamation and TID's use as much as possible to dry periods
- use foot traffic within the acquired right-of-way when accessing the wasteway during non-dry periods
- in rare emergency requiring immediate vehicular access to make stabilization repairs during a wet period, also repair the access roads as necessary
- perform stabilization when flow is absent from the channel
- keep construction debris and rubble out of the stream channel to minimized construction impacts to the downstream fishery

Inspection and Maintenance

Reclamation and TID would inspect the access roads and the standard engineering structures by walking the entire length of the wasteway channel to identify sites of new erosion or potential erosion sites needing stabilization. These inspections would take place each spring and during and after released flows or high precipitation events. Wasteway repairs would be made as needed to prevent erosion or degradation of the structures. Standard engineering structures would require less maintenance than bioengineered structures. Active road erosion would be corrected with necessary modifications such as water bars or relocation of culverts. The routine inspection would include taking water measurement readings from the weir at the pipe outlet.

Reclamation, its agents, successors, and assigns would perform stabilization efforts, road construction, inspection, and maintenance during dry periods. Should a need arise to access the wasteway during non-dry periods, Reclamation and TID would use foot traffic within the acquired right-of-way. Should a rare instance require immediate vehicular access for emergency stabilization repairs during a wet period, Reclamation would also repair the access roads as necessary.

Chapter 3 – Affected Environment and Environmental Consequences

This chapter describes existing physical, biological, and natural resources that could be affected and it identifies potential impacts to those resources in the event any one of the identified alternatives were implemented.

The No Action alternative (alternative 1) describes conditions in the future if stabilization were not implemented and it provides the basis to compare the action alternatives (alternatives 2, 3, and 4). Specific impacts of each alternative are identified to the extent possible; however, if quantitative estimates were not possible, qualitative analyses are provided for comparison purposes.

The resources discussed include geology, water quality, wetlands, vegetation, fish and wildlife, threatened and endangered species, historic properties, Indian sacred sites, Indian trust assets, Cascade Siskiyou National Monument, and environmental justice. This chapter also describes cumulative effects of the alternatives and mitigation measures for each resource. The depth of analysis corresponds to the range of resource occurrence in the work area and the magnitude of potential environmental impact.

Geology

This section discusses the geology of Tyler Creek watershed, geotechnical recommendations, and potential effects of stabilizing the wasteway banks.

Affected Environment

The wasteway lies within the Tyler Creek watershed in southern Oregon along the western border of the Western Cascades geologic province. Strata in this province dip to the east and consist of folded, faulted, and slightly altered volcanic rocks from between 5 and 33 million years ago (Reclamation 1989). The rocks are generally deeply eroded and their original volcanic land forms are not easily recognized.

Western Cascade rocks underlying the watershed vary from massive, bluff forming lava flows to weak, fragmented, and landslide-prone ashflow and decomposed volcanic ash beds. The rocks consist of basaltic lava flows and angular, course fragments (breccias) of layered and altered basaltic glass (Orr et al. 1992). Some of the soils have high shrink-swell properties and are highly susceptible to landslide. A principal geomorphic feature of Tyler Creek watershed is major landslide deposits (Hicks 1993) within the deeply weathered volcanic rocks.

Wasteway Erosion and Landslides

The wasteway channel carries released flow, intermittent natural flow during periods of snow pack runoff and precipitation, and drainage from increased population and development. Water flowing through the wasteway has eroded the channel and directly led to the need for action. Excessive erosion decreases water quality and makes the streambanks less stable. Slopes adjacent to the wasteway could slide and restrict the channel with debris jams. Debris jams could cause new channels to form which could also be unstable and could erode in the same manner.

Reclamation's Geologic and Geotechnical Studies

The following discussion summarizes geologic and geotechnical studies and reports performed by Reclamation following the 1993 wasteway use. A separately bound geology appendix contains the two Reclamation studies in entirety and is available, along with this EA, for public review at website: www.usbr.gov/pn/programs/tyler/index.html.

Reclamation's Pacific Northwest Regional Geologist conducted a geologic field review of the wasteway in November 1993 (Reclamation 1993) and a geotechnical field review of the wasteway in 1997 (Reclamation 1997) to observe site conditions and provide recommendations for restoring, rehabilitating, and/or relocating wasteway alignments. The reports state the wasteway contains erodible materials that, in intermittent locations, were degraded by streamflow. Some locations with undercut and over-steepened banks caused small landslides that further impacted the channel. Ancient earthflow and landslide deposits beneath the ridge area between Tyler Creek and Schoolhouse Creek have been stable in historic time as indicated by numerous larger trees. The reports state the wasteway channel will continue to deteriorate without protection and recommend:

- resloping and protecting channel banks where erosion has created instability
- using existing rocks and downed trees to protect the channel and slopes
- using standard engineering structures for erosion protection
- downing potentially unstable trees
- removing some downed trees and erosion debris
- abandoning the central portion of the area of considerable erosion
- realigning the central portion of the wasteway to the north
- thoroughly documenting before and after channel conditions

Privately Completed Studies

Three private studies, completed following the 1993 wasteway use, are summarized here.

Hicks Reports

Rogue Valley Council of Governments (RVCOG) contracted with consulting engineering geologist Bill Hicks in 1993 (Hicks 1993) to study past and potential geologic failures in the wasteway drainage. Then in 1996, local landowners hired Mr. Hicks to report on damage to the their property (Hicks 1996).

Both reports describe wasteway erosion and landslide activity that Mr. Hicks attributes fully to discharge from the wasteway pipe outlet. He states the basic problem is that the bypass outlet was sited on a channel flowing onto a major earthflow. This earthflow mass is predominantly naturally stable under present climatic conditions except when subject to excessive impacts such as surface water diversion. He states major seismic events combined with wet periods can also destabilize these earthflows. This movement is a natural process and does not indicate massive failure is imminent without greatly increased unnatural impacts.

Mr. Hicks states the 1993 discharge into the wasteway created a major disturbance to the surrounding terrain. The only landslide activity known on the ancient Tyler Creek earthflow is along the channel downstream from the wasteway pipe outlet, along the wasteway, lower Schoolhouse Creek, and lowermost Tyler Creek. He estimates a net volume of 128,000 cubic yards of material was transported from the system during a 1980s high flow event and the 1993 event.

Mr. Hicks made several recommendations including some beyond the purposes of and need for action. His recommendations that fall within the scope of this EA are:

- not doing massive channelization/stabilization
- developing stabilization methods which would have the least overall impact
- implementing a designed biostabilization revegetation program using native grasses, shrubs, trees, and the correct vegetative successional sequence for stabilizing plant growth
- not building roads to remove trees from the channel
- not using creative, temporary solutions
- performing topographic mapping of the area to insure the overall geologic integrity of the area is not adversely affected
- surveying the land to ensure minimum impact to the surrounding environment prior to any additional road modifications or reconstruction
- letting the main failure area (*the area of considerable erosion*) attain its own equilibrium over time; a natural and relatively stable grade will eventually develop

1999 Tyler Creek Monitoring

In 1999, FOG conducted a 1-year study (FOG 2000) of contributions that mass wasting, landslides, irrigation water delivery, and livestock in the Tyler Creek and adjacent drainages make to the high nutrient level in the Bear Creek subbasin. The following is a summary of the report as it relates to geology.

The FOG report states mass wasting from an unrestored wasteway channel was the main sediment source for year round phosphorus exceedances in the Bear Creek system. The released flow over the lower surface of an ancient landslide cut a wider, deeper, and larger eroded canyon at the lip of the landslide. About 2 miles of channel were gutted and perhaps 200,000 cubic yards of material were removed. Even intentionally diverting the flow did not stop the erosion, slumping, and slope failures in the canyon area (*the area of considerable erosion*).

The FOG report pointed out several watershed activities and sources of erosion that contribute large quantities of pollutants to the watershed's river system, but are unrelated to the wasteway and Reclamation activities. These include aggressively harvesting forests, massive soil disturbance with other human-caused slope instabilities, clear cutting steeply sloping mineral soils, road construction and slurry grinding techniques, bulldozing large drainage channels, major geologic faults with movement, extensive trenching and earthmoving to install underground cables, downcutting and erosion with extensive streambank failures in other creeks, and high precipitation events.

Future Detailed Geologic or Geotechnical Studies

Current laws, agency regulations, guidelines, and policy give Reclamation authority to complete this EA, to stabilize the wasteway within existing rights-of-way, and to build access to the wasteway. The *Data Collection* section in chapter 2 describes future investigations Reclamation would perform pertinent to stabilizing the wasteway.

Environmental Consequences

Alternative 1 – No Action

The absence of preventative maintenance and bank stabilization would likely result in continued erosion of the wasteway. The potential for landslides and further erosion adjacent to the wasteway could worsen. Potentially over a very long period of time, some unstable areas may attain their own equilibrium. The No Action alternative would adversely impact the wasteway and the environment.

Alternative 2 (Preferred Alternative) – Bioengineering Combined With Standard Engineering

The preferred alternative incorporates many of the recommendations made in the previously mentioned completed studies. This alternative would reduce erosion, stabilize wasteway banks during high flows, and minimize further degradation of the wasteway and its banks. Eliminating the erosion problem would reduce the likelihood of reactivating an ancient landslide.

Standard engineering structures made of rock riprap would provide immediate protection. Bioengineered structures would rely heavily on live native vegetation to stabilize the channel. Designs for the stabilizing structures would include supporting crib structures, revegetation, root wad systems, and large boulders to serve as energy dissipaters. The full benefit of these structures would be realized after a period of a few years while the plants grew and developed root systems. The root systems and supporting structures would anchor the slopes and protect against sloughing and washouts. However, until the plants became established, water diverted through the wasteway could continue to erode the channel and make the banks less stable. The standard engineering structures in high velocity areas would reduce this effect. Annual stabilization efforts would continue until 80 to 90 percent of those areas susceptible to erosion were stabilized. Since stabilization and construction of standard engineering structures would take place during dry periods, impacts to soils and sediment runoff from vehicles accessing these sites would be minimal.

The access road would have no effect on the local geology since the road surface would not be graded and Reclamation and TID's road use would be limited to dry periods. Storm runoff could potentially carry some sediment into Schoolhouse Creek and the wetlands; however the relatively flat grade of the road would likely keep sediment movement to a minimum.

Alternative 3 – Bioengineering Only

This alternative would result in the most natural looking corrective measure and has many similar effects as alternative 2. It incorporates many of the recommendations made in the previously mentioned completed studies. The vegetation would eventually cover the infrastructure of the bioengineered structures. Long-term use of the wasteway, especially with high volume flows, could damage restoration work and make it necessary to replant. Stabilization work would continue as needed on impacted sites depending upon the severity of existing erosion and the potential for future bank degradation with released flows. Inspection of restoration sites would be critical to the success of bioengineered wasteway stabilization. Like the preferred alternative, annual stabilization efforts would continue until 80 to 90 percent of those areas susceptible to erosion were stabilized.

Some sites could be inappropriate for bioengineering techniques. Plants and supporting structures placed in severely damaged areas with high velocities would not likely withstand the flow velocity and could easily erode; whereas standard engineering structures could have withstood the velocity. This alternative's lack of standard engineering structures makes it less reliable and stabilization efforts could continue for more years than the preferred alternative.

The access road would have no effect on the local geology for the same reasons described for alternative 2.

Alternative 4 – Standard Engineering Only

While this alternative would incorporate a few of the recommendations from the previously mentioned completed studies, it would contradict many of the other recommendations. Stabilizing the wasteway with riprap, concrete revetments, and other standard engineering structures would immediately reduce local areas of bank erosion during periodic use of the wasteway and would provide greater certainty of success than alternative 3.

These structures would likely be more environmentally intrusive (concrete, metal, and artificial components) than the standard engineering techniques described for alternative 2. Those lengths of the wasteway with the greatest likelihood of future erosion could be completely lined with artificial structures. This alternative would be less natural and more artificial in appearance. It would drastically change the natural character of the wasteway by potentially transforming it into a channelized canal for conveyance of released water.

Standard engineering approaches would require heavy equipment to haul and install large boulders, prefabricated structures, and other construction materials; therefore, additional access to the wasteway would be needed. Since stabilization and construction of standard engineering structures would take place during dry periods, impacts to soils and sediment runoff from vehicles accessing these sites should be minimal.

Storm runoff could potentially carry some sediment into Schoolhouse Creek and the wetlands; however the relatively flat grade of the road would likely keep sediment movement to a minimum. Other access roads with steep grades could experience sediment movement during storm runoff.

Cumulative Effects

BLM's management of the Cascade Siskiyou National Monument ensures a high level of resource protection on BLM land. Doing nothing to prevent further erosion of geologic resources in and around the wasteway would cause the most damaging cumulative effects. The preferred alternative would reduce cumulative effects by involving BLM and private landowners in discussions on site-specific stabilization efforts and providing a natural and effective solution that protects the geologic resource. The preferred alternative would also stabilize the wasteway, thereby decreasing erosion impacts that could be caused by natural runoff.

While Reclamation and TID would limit their use of the access road to dry conditions, the landowner would have unrestricted use of the road.

Mitigation

Most of the access road would consist of existing pasture or existing primitive roads. Construction activities would occur during installation of culverts at Schoolhouse Creek and around the wetlands. As much as possible, road construction and bank stabilization would take place during dry periods and when flow is absent from the channel. Areas of construction would be reseeded to prevent future erosion. Reclamation would limit use of the access road to dry periods.

Reclamation would use best management practices as identified in the construction contract specifications to minimize environmental consequences caused by stabilizing activities or constructing the access road. All standard and reasonable precautions would be taken to reduce erosion during and after construction.

Water Quality

Reclamation has no water quality data specific to the wasteway, thus this analysis is based on data gathered by other agencies and Section 303(d) of the Clean Water Act. This water quality discussion reflects the 2002 ODEQ 303(d) listing and identifies known water quality conditions and how implementing any of the four alternatives could potentially affect water quality.

Affected Environment

Tyler Creek wasteway lies within the 5,600-acre Tyler Creek subwatershed (within the middle Rogue subbasin) which has its headwaters to the east in the Siskiyou Mountains (FOG 2000). Water diverted into the wasteway flows into Schoolhouse Creek, Tyler Creek, Emigrant Creek, and then into either Ashland Lateral or Emigrant Lake. Although extended periods of wasteway use may reduce bank stability and increase sediment concentrations, other factors independent of wasteway use impact water quality in the three creeks, Ashland Lateral, and Emigrant Lake.

The Clean Water Act requires that states develop a 303(d) list and total maximum daily loads (TMDLs). The 303(d) list includes water bodies where water quality impairs or threatens the established beneficial uses. The TMDLs address the pollutants causing the beneficial use impairment. ODEQ is responsible for the 303(d) list and TMDL development for Oregon.

Although many water reaches within the Rogue River basin are included on the 303(d) list, only two (Tyler Creek between River Miles 0.7 and 0.0 and Emigrant Creek between River Miles 8.8 and 5.6) are potentially affected by wasteway flows or by the proposed action (figure 3-1). According to the 303(d) Bear Creek Watershed Assessment and TMDL, water temperature during the summer is the only listed water quality deficiency for the streams potentially affected by the proposed action. Degraded water quality in the watershed will be addressed outside this EA through the TMDL process.

Water Temperature

Problems occur in streams when the water temperature during the summer becomes too high for many aquatic organisms to function normally. High water temperature is caused by solar heating, but is worsened by low flow and lack of riparian vegetation. The lack of vegetation reduces shade, thereby increasing the amount of solar heating of the stream. High water temperature can lead to changes in aquatic species composition (FISRWG 1998). ODEQ's applicable water temperature criterion[2] for this area is 64 °F. Figure 3-1 shows the water bodies within the wasteway area that are considered temperature limited as compiled from the 2002 Oregon 303(d) listing.

ODEQ listed Tyler Creek (River Mile 0 to 4) for exceeding the water temperature criterion based on data provided by FOG from sample sites upstream from Hobart Creek (River Mile 2.8). ODEQ reported from these data that the 7-day average maximum temperature in 1996 for Tyler Creek was 68.6 °F and 78.1 °F in 1997 (ODEQ 2001). The upper reaches of Tyler Creek (upstream from River Mile 0.7 at the Schoolhouse Creek confluence) are unaffected by

[2] On March 31, 2003, U.S. District Court Judge Ancer Haggerty, ordered the Environmental Protection Agency to void its earlier approval of Oregon's water temperature standards. Oregon has initiated rulemaking and is working in concert with the ODFW, EPA, NOAA Fisheries, and U.S. Fish and Wildlife Service to develop new temperature standards. Water quality discussions relative to temperature in this EA reflect Oregon's existing temperature criteria.

wasteway flows. Hobart Creek at the mouth (River Mile 0 to 0), although listed for exceeding the water temperature criterion, is also unaffected by wasteway flows.

ODEQ listed Emigrant Creek (River Mile 5.6 to 15.4) based on FOG data. The 7-day average maximum temperature at two Emigrant Creek sites in 1996 was 67.9 and 67.6 °F. Four sites within Emigrant Creek exceeded the temperature criterion in 1997 with recordings of 67.5, 66.7, 66.5, and 68.9 °F. Emigrant Creek upstream from River Mile 8.8 is unaffected by wasteway flows.

BLM collected water temperature data in the Tyler Creek watershed during mid-summer audits in 1999 (Montfort 2002). These data do not confirm FOG data downstream from the wasteway's confluence with Schoolhouse Creek [not a 303(d) listed stream] showing water temperatures exceed the ODEQ temperature criterion for salmonid rearing. BLM's 1999 Schoolhouse Creek (upstream from the middle culvert) data show the 7-day average maximum water temperature to be 57.7 °F. Since Reclamation did not operate the wasteway in 1999, these data provide baseline temperature conditions in the area.

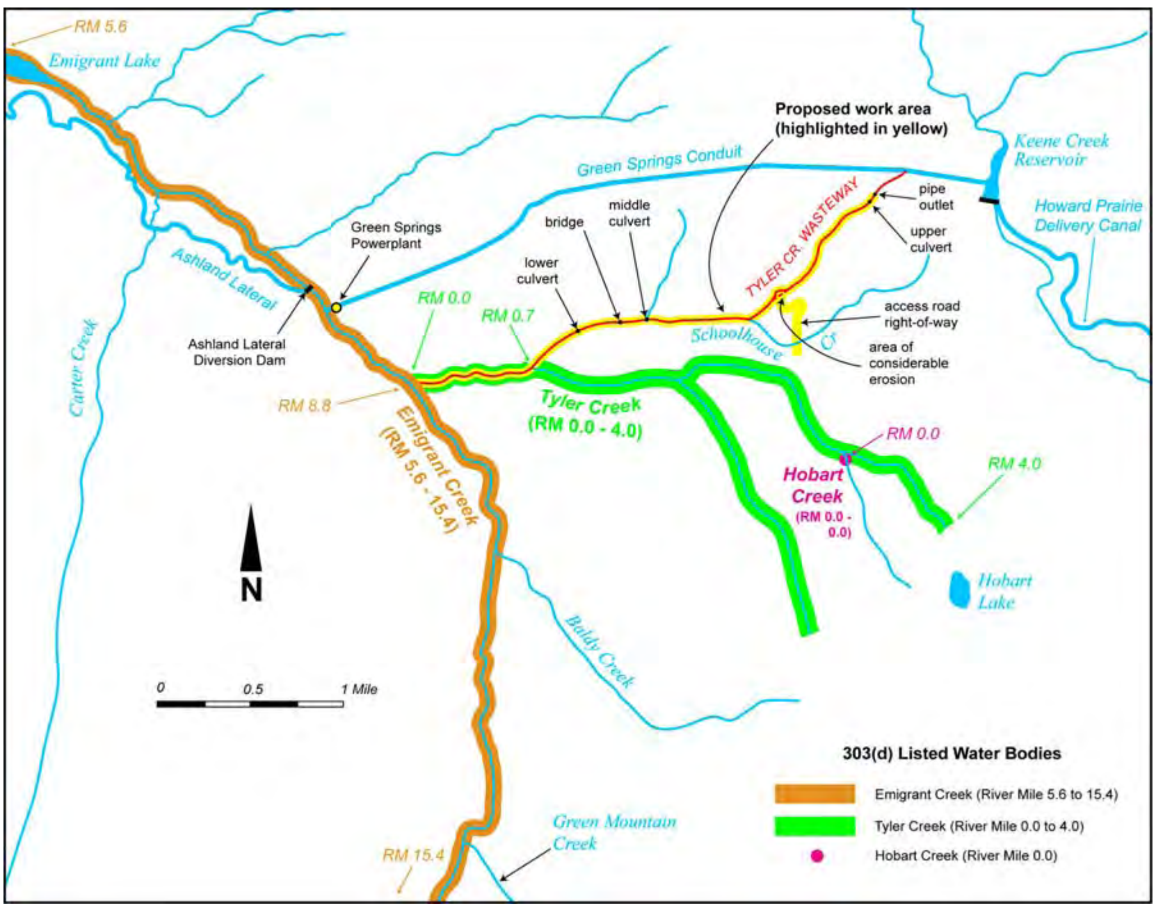

Figure 3-1. Streams near Tyler Creek wasteway exceeding summer water temperature standards [based on 2002 Oregon State 303(d) list]

Sediments

Water in the wasteway channel flows over volcanic deposits and causes natural increased turbidity. This process occurs with spring runoff, heavy precipitation, runoff from development, and Reclamation's use of the wasteway. This flow undercut some of the wasteway banks resulting in an unspecified volume of sediments being scoured out and moved downstream. The suspended materials most likely settled out in lower Tyler Creek, Emigrant Creek, and potentially downstream in Emigrant Lake. Some sediment may enter Ashland Lateral.

The FOG (2000) report discusses a 1990 timber harvest on Hobart Creek that caused 150,000 cubic yards of mud, boulders, and vegetation to flow into Hobart Creek. Rains mobilize the slide and the turbidity is visible where Tyler Creek passes beneath Buckhorn Springs Road on the valley floor. This level was 400 percent greater than any other stream turbidity level encountered but equaled the 400 nephelometric turbidity units (NTU) measured in 1998 in Schoolhouse Creek that appears to have been related to landslide movement following 1-inch of rain in the previous week. FOG checked Tyler Creek at Hobart Creek, as well as Schoolhouse Creek at the middle and upper culverts, for turbidity at the same time but found no appreciable turbidity. A dramatic increase in bedload and sediment transport into Tyler Creek has been observed, with angular tan gravel, sand, and silt aggrading many pools to the mouth of Emigrant Creek. Peak turbidity in Hobart Creek in early May did not coincide with peak flow in late February for Hobart and Tyler Creeks.

Nutrients

FOG (2000) collected monthly ortho-phosphorus and/or total phosphorus during 1999 at 25 sites. Eighteen of the sites were in the Tyler Creek subwatershed. The remainder of this nutrient discussion is based on phosphorus and streamflow information presented in the FOG report.

FOG intended to collect and analyze wasteway water samples for their study, but Reclamation had no reason to release water into the wasteway during 1998 or 1999, thus the wasteway upstream from Schoolhouse Creek was dry on all sampling days. Data from watershed sites outside the wasteway provide a baseline description of phosphorous levels potentially occurring in the watershed. However, the direct wasteway contribution to the watershed for phosphorus and other nutrients remains unknown.

While the FOG report describes the wasteway as a main source of sediment, it states that until their 1999 study, there was a data gap in phosphorous levels along the east side of the Bear Creek subbasin. It further states that phosphorous levels measured at multiple project sites, including immediately below Greensprings Powerplant, did not exceed the Bear Creek total phosphorous TMDL limit of 0.08mg/L.

The FOG study shows phosphorous levels in the Green Springs Powerplant discharge remained lower than the Bear Creek phosphorous TMDL. The study states the TID/Reclamation water delivery system contains little reactive phosphorus and does not contribute to phosphorous exceedances in the Bear Creek system when the irrigation water is confined within man-made canals, channels, and other TID/Reclamation facilities. In 1999, total phosphorous levels in these facilities were within the Bear Creek limit.

The report states it is clear that the dilution effect of TID water transfer through the powerplant does not appear to increase the total phosphorous level in the Tyler Creek area. Other activities (i.e., grazing, agriculture, and forestry) may contribute large quantities of sediment, turbidity, and soluble phosphorus into the Bear Creek system through the Tyler Creek project area. These human-caused sediments and natural sediments likely settle out in Emigrant Lake and perhaps, are remobilized by recreational boating as the reservoir is drawn down.

Storm events send additional pulses of suspended sediment believed to be high in phosphorus into the streams. Generally, turbidity levels and total suspended solids increase with storm water flows; anecdotal data indicate Schoolhouse Creek turbidity has decreased since the 1993 use of the bypass. No data were gathered during earlier storm events. RVCOG believes erosion is a major water quality problem in Tyler Creek. A significant portion of the phosphorous load probably results from a few annual peak runoff events transporting eroded materials and phosphorus into the stream.

The FOG study offers some evidence for the relative phosphorous contribution from specific areas of the Schoolhouse drainage. Surface waters gain phosphorus between the upper culvert and lower culvert on Schoolhouse Creek, but it appears this may be due to the addition of ground water to any surface flow in dry months. Schoolhouse Creek at the upper culvert and at the middle culvert were dry at the surface for 2 to 6 months, yet flow was observed at the lower culvert. About ten springs, mostly perennial and including the original Greensprings, are present in the Schoolhouse Creek drainage. Ground water seeps into the eroded channel. Other ground water sources may exist. Monthly monitoring at the lower Schoolhouse Creek culvert just upstream from the confluence with Tyler Creek found total phosphorus exceeded the Bear Creek TMDL limit most of the year.

The Hobart landslide and the Carter Creek erosion routinely caused 100 to 400 NTU increase above background data during storm events. No detectible nitrate or nitrite was found in samples indicating nitrate and nitrite levels are below the detection limits for the test methods used. The FOG report concludes testing of wasteway flows is critical to understanding the wasteway's contribution of phosphorus to the drainage.

Drinking Water

The city of Ashland gets its water supply from two sources. Most years, Ashland gets its drinking water supply by exercising a water exchange with willing parties on the East Fork Ashland Creek. Ashland Creek (the city's main water source) and its water quality are unaffected by wasteway flows since Ashland Lateral water enters a siphon and is piped beneath Ashland Creek. The two water sources do not intermix. Infrequently, when Ashland Creek water is unavailable, Ashland gets its drinking water from Ashland Lateral. Wasteway diversions flow 1.4-miles down Emigrant Creek to the Ashland Lateral diversion dam. Most of the diversions enter Ashland Lateral. The flow travels 12 miles to the city of Ashland. Any sedimentation generated by using the wasteway would likely settle out in Emigrant Creek and the lateral. Most likely, sedimentation from wasteway use would not enter the city's water supply.

Environmental Consequences

Alternative 1 – No Action

The wasteway's baseline water quality conditions occur under the No Action alternative. Tyler Creek would continue to exceed ODEQ's salmonid rearing water temperature criterion. Bank erosion in the wasteway would continue the process of washing an unquantified amount of sediment downstream, especially during heavy spring runoff. Phosphorus, nitrogen, and other chemical nutrients present in wasteway sediments would continue to leach into the creek and reservoir waters downstream. Implementation of a TMDL in this watershed will continue with or without stabilization efforts, thus improving water quality over time.

Alternative 2 (Preferred Alternative) – Bioengineering Combined with Standard Engineering

Stabilizing the wasteway with a combination of standard engineering and bioengineering techniques would reduce erosion along the channel banks resulting in reduced levels of sediment and nutrients released downstream. Sites stabilized with standard engineering techniques would have an immediate reduction in localized erosion. Slightly lower water temperatures could occur with increased vegetation and riparian shade along the wasteway.

Diverting water from Keene Creek Reservoir into the wasteway would likely decrease Schoolhouse Creek water temperatures since the reservoir is generally cooler than shallow natural summer flow through the wasteway. Following stabilization, water released through the wasteway would somewhat decrease Emigrant Creek water temperature in the 1.2-mile reach between the mouth of Tyler Creek and the Green Springs Powerplant discharge.

Construction activities would be timed to occur when the wasteway was dry; however, rain, runoff, and emergency wasteway use cannot always be predicted. Therefore, if any of these events caused flow through the wasteway that coincided with stabilization activities or access road construction, temporarily increased water temperature, sediment movement, and turbidity could potentially occur. The required permits would address these issues. Compliance with these permits would mitigate short-term water quality impacts. The removal of vegetation should be assumed to have short-term negative impacts; however, the positive long-term impacts of revegetation would outweigh these negative impacts. Until plants became established, and if water were flowing through the wasteway, the water temperature may temporarily increase somewhat.

Alternative 3 – Bioengineering Only

Sites where standard engineering techniques would be used for the preferred alternative would instead be stabilized under alternative 3 with live vegetation. Erosion and the release of sediment and nutrients would continue in these high velocity areas as plants may continue to wash out. The levels of sediment and nutrients would be less than under the No Action alternative. Because of continued erosion in high velocity areas, vegetation in these areas would likely take longer to become well established, thereby extending the time for water quality to improve. Slightly lower water temperatures could occur with increased vegetation and riparian shade along the wasteway.

Alternative 4 – Standard Engineering Only

This alternative would provide the fastest reduction of erosion, sedimentation, and nutrients. Water temperature could increase with removal of local vegetation.

Storm events could potentially increase silt discharge from the access roads to the wasteway channel and could affect water quality. Road design and permitting would address these issues. Without gravel or paving on steep graded roads, silt loads during storm events could be greater than if the roads were graveled or paved.

Cumulative Effects

Past activities beyond Reclamation's jurisdiction (livestock grazing, aggressive timber harvests, massive human-caused soil disturbances, clearing of all vegetation from steep slopes, public road construction and repair, terracing of slopes, extensive trenching and earthmoving, extensive streambank failures outside the wasteway area), as well as large precipitation events and the natural process of erosion, contributed to the watershed's water quality problems. Future pollution from these activities and similar land uses on public and private land could keep the Tyler Creek subwatershed an area of water quality concern. Organizations should continue monitoring the water quality to identify trends early and prevent further water quality decline.

Water quality improvements in watershed tributaries would help reduce cumulative water quality effects within the watershed. The preferred alternative is designed to improve water quality. It would reduce cumulative effects by reducing wasteway erosion and, thereby reducing sediment and nutrients released from the wasteway. The preferred alternative's increased vegetation and riparian shade could slightly lower water temperatures.

Mitigation

As much as possible, road construction and bank stabilization would take place during dry periods and when flow is absent from the channel. Reclamation will consult with ODFW regarding in-water work periods.

Construction activities would occur during installation of culverts at Schoolhouse Creek and around the wetlands. Once the culverts were in place, backfill, and then rock, placed around the culverts would improve stability and reduce channel erosion. A graveled road surface near the culverts would reduce sediment movement into the waterway. Reclamation would use best management practices as described in the construction contract specifications to minimize environmental consequences caused by stabilizing activities or constructing the access road. All standard and reasonable precautions would be taken to reduce erosion and limit sediment during and after construction. Areas of construction would be reseeded to prevent future erosion.

A locked gate would block the entrance of the access road at Tyler Creek Road. Reclamation, its agents, successors, and assigns would perform inspection and maintenance during dry periods. Should a need arise to access the wasteway during non-dry periods, Reclamation and TID would use foot traffic within the acquired right-of-way. Should a rare instance require immediate vehicular access for emergency stabilization repairs during a wet period, Reclamation would also repair the access road as necessary.

Wetlands

Wetlands have two major characteristics:

- soils free of oxygen during the growing season due to saturation (hydric soils)
- vegetation tolerant of those soils (hydrophytic vegetation).

Wetlands have many important environmental functions such as providing high-quality habitat for fish and wildlife, flood water storage, sediment removal, and ground water recharge.

Affected Environment

Reclamation accompanied ODSL on a 2000 site visit to examine the proposed wasteway access road alignment and identify wetlands as defined by the Clean Water Act. ODSL identified a 1/4- to 1/2-acre wetland adjacent to the proposed access road alignment as shown in figure 3-2. The entire wetland area is inundated but the surface water decreases in size after spring runoff stops. Evaporation and the lack of precipitation also reduce the surface water. The wetland is occupied by common wetland species, such as sedges and rushes.

ODSL identified no emergent wetlands within the wasteway channel.

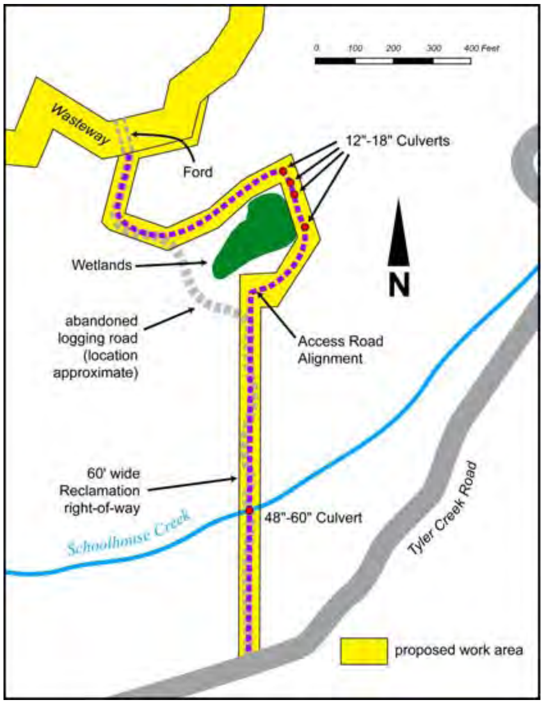

Figure 3-2. Wetlands adjacent to the proposed access road alignment

Environmental Consequences

Alternative 1 – No Action

The No Action alternative would have no beneficial or adverse impacts on wetlands.

Alternative 2 (Preferred Alternative) – Bioengineering Combined With Standard Engineering

A goal of the preferred alternative is to preserve the local wetland ecosystem. Reclamation would obtain a removal/fill permit from ODSL and a CWA 404 permit from the Corps prior to road construction. In all, less than 50 square feet of wetlands could be affected. Culverts would be installed where the road would intersect small intermittent tributaries entering the wetlands. The permit application would specify quantities of material to be removed and fill material to be placed while installing the culverts. The road alignment would minimize wetland impacts to the extent possible while remaining within the Reclamation rights-of-way. The permits could be conditional on mitigation, timing of work, and other construction limitations at the discretion of the Corps and ODSL. No quantifiable impacts would occur at the small culverts around the perimeter of the wetlands or in the way the wetland functions.

Streambank stabilization efforts within the wasteway would not affect emergent wetlands.

Alternative 3 – Bioengineering Only

Alternative 3 would have the same impacts as the preferred alternative (alternative 2).

Alternative 4 – Standard Engineering Only

Alternative 4 would have the same impacts as alternative 2; but, additional access roads could potentially affect other wetlands. If wetlands were identified in the vicinity of a potential access road site, Reclamation would take the same precautions to protect and preserve those wetlands as identified for alternative 2.

Cumulative Effects

The Corps and ODSL regulate the loss (from dredge and fill activities) of wetland habitat through permitting programs that track the loss and creation of wetlands. While replacement wetlands are less likely to function as well as naturally occurring wetlands, they are better than losing wetlands and are a means of preserving wetland values. The small area affected by the preferred alternative would not significantly alter wetland values.

Mitigation

The Corps and ODSL, through the CWA 404 permitting process, would determine how Reclamation would mitigate for the loss of the wetlands, change in character of wetlands, or damage to wetlands. Mitigation often involves replacement in nearby similar habitats by creating a new wetland or restoring and expanding an existing wetland. The replacement wetlands typically would be 1.5 to 3 times larger than the lost wetlands. The permits would specify the exact ratio and should prevent an overall loss of wetlands values. Reclamation would be committed to following all conditions of State of Oregon and Corps permits.

Vegetation

This section discusses the diversity of plants and the riparian plant community within and adjacent to the wasteway.

Affected Environment

The wasteway lies within a climatic zone that should support revegetation efforts by both seeding and transplanting. The mean annual precipitation at Ashland, Oregon, is approximately 19.5 inches and the mean annual temperature is 52.1 °F. Precipitation at the wasteway is likely slightly higher because of the higher elevation, and temperatures are likely slightly lower. (Reclamation 2001)

Riparian vegetation growing in the moist habitat adjacent to the wasteway provides:

- substrate support
- shade cover that keeps water temperatures cooler
- nutrients to the aquatic ecosystem
- structural habitat for a variety of wildlife.

Table 3-1 contains a list of understory vegetation within the affected riparian zones directly adjacent to the wasteway channel. The channel bottom and streambanks are characterized by dominant vegetation consisting of willows (*Salix* spp.), snowberry (*Symphoricarpos* spp.), alder (*Alnus* spp.), currant (*Ribes/Rubus* spp.), sedge (*Carex* spp.), and various grasses. Upland sites adjacent to streambanks and/or lower riparian sites were dominated by varying forb/grass associations in the understory with mixed conifer overstory. (Reclamation 2001) Many of the same vegetation species inhabit the access road corridor.

Disturbances such as erosion, livestock grazing, and human activities can be detrimental to riparian zone plants. Recolonization of a riparian zone often occurs from nearby plant sources when the environmental conditions (such as a plentiful water supply, adequate soils, and sunlight) are right. This natural process is occurring throughout the wasteway and within the area of considerable erosion with recovery of native herbaceous and woody vegetation (Reclamation 2001). Natural recolonization and succession of plant communities can be a slow process. Manual revegetation can often occur over relatively short time periods; therefore, revegetation techniques can speed up the natural process.

Table 3-1. Vegetation Found in the Local Vicinity of the Work Area

Scientific	Common
Grasses/Sedges	
Festuca arundinacea	Tall fescue
Elytrigia elongata	Tall wheatgrass
Bromus japonicus	Japanese brome
Bromus tectorum	Downy brome
Hordeum pusillum	Little barley
Bromus carinatus	California Brome
Carex spp., *Eleocharis* spp.	Sedge
Poa pratensis	Kentucky bluegrass
Blepharoneuron tricholepis	Pine dropseed
Festuca thurberi	Thurber fescue
Festuca spp.	Other fescue(s)
Forbs	
Vicia americana	American vetch
Liatris spp.	Gayfeather
Lesquerella spp.	Bladderpod
Centaurea solstitialis	Yellow starthistle
Asclepias spp.	Milkweed
Lupinus spp.	Lupine
Calochortus spp.	Lily
Thermopsis spp.	Golden banner
Geum macrophyllum	Mountain avens
Rubus parviflorus	Thimbleberry
Smilacina spp.	False Solomon’s seal
Potentilla spp.	Herbaceous cinquefoil
Rubus spp.	Blackberry
Lathyrus spp.	Peavine
Shrubs	
Salix lucida spp. *lasiandra*	Pacific willow
Salix spp.	Willow
Symphoricarpos spp.	Snowberry
Fraxinus latifolia	Oregon ash
Calocedrus decurrens	Incense cedar
Alnus spp.	Alder
Rosa spp.	Wild rose
(Reclamation 2001)	

Environmental Consequences

Alternative 1 – No Action

The absence of preventative maintenance and bank stabilization would likely result in continued erosion of the wasteway banks and loss of vegetation. The potential for further loss of existing vegetation from landslides and erosion could worsen under the No Action alternative.

Alternative 2 (Preferred Alternative) – Bioengineering Combined With Standard Engineering

Stabilizing the wasteway would have an overall positive effect by preserving and increasing the riparian vegetation along the wasteway. The preferred alternative would result in some loss of riparian vegetation, particularly in those areas where standard engineering techniques were used. Backfilled and riprap armament structures would protect upslope plants from disturbance caused by further erosion. Bioengineering techniques would increase the overall amount of vegetation within the wasteway channel. Some temporary loss of vegetation could occur during installation of standard engineering and bioengineered structures but would be replaced with native plants. The lost vegetation would, however, be replaced with native plantings that would stabilize disturbed and eroding banks, enrich the stabilizing structures, and function as riparian habitat. The removal of vegetation should be assumed to have short-term negative impacts; however, the positive long-term impacts of revegetation would outweigh these negative impacts. The removal of vegetation outside the riparian zone would not affect the amount of channel shade.

The removal of some trees and vegetation would be unavoidable along some reaches of the access road. The removal of trees and plants to build the access road would be an irretrievable loss.

Alternative 3 – Bioengineering Only

This alternative would preserve and increase riparian vegetation along the wasteway. Some temporary loss of vegetation could occur during installation of bioengineered structures but would be replaced with native plants. The additional riparian vegetation would add more cover to the wasteway and keep water temperatures lower. Planting native vegetation would stabilize disturbed and eroding banks, enrich the stabilizing structures, and function as riparian habitat.

This alternative would also have unavoidable removal of some trees and vegetation along some reaches of the access road. The removal of trees and plants to build the access road would be an irretrievable loss.

Alternative 4 – Standard Engineering Only

A greater amount of vegetation would be lost under this alternative due to the nature of standard engineering techniques. Concrete revetments, riprap banks, and other standard engineering techniques offer the least possibility for restoring and increasing riparian vegetation along the wasteway. All vegetation would be removed from localized areas of the channel bank where standard engineering structures would be placed. No further significant vegetation loss would be expected once the stabilization efforts were complete. Those lengths of the wasteway with the greatest likelihood of continued erosion could be completely lined with these artificial structures.

This alternative would also have unavoidable removal of some trees and vegetation along some reaches of the access road and along the road paralleling the wasteway. The only standard engineering structures that would be built on the access road would comply with right-of-way restrictions stipulating installation of a ford crossing the wasteway and culverts at locations on the wetlands perimeter. The removal of trees and plants to build the access roads would be an irretrievable loss.

Cumulative Effects

BLM's management of the Cascade Siskiyou National Monument ensures a high level of resource protection on BLM land and the surrounding area. Doing nothing to prevent further loss of vegetation in and around the wasteway would cause the most damaging cumulative effects. The preferred alternative would reduce cumulative effects by involving BLM in discussions on site-specific stabilization efforts and providing a natural and effective solution that protects the vegetation resource. The preferred alternative would also stabilize the wasteway, thereby decreasing vegetation impacts that could be caused by runoff from the increasing development.

Mitigation

Reclamation would involve private and Federal landowners in determining how to stabilize the channel banks and essentially mitigate for current adverse conditions. The design of the preferred alternative reduces the amount of cleared, unvegetated soils by using local native plant species for reseeding and revegetation; thereby reducing the possibility of introducing noxious weeds. Efforts would be made to build stabilizing structures from already downed trees that may be causing or could cause bank erosion. To avoid cutting live trees, Reclamation would acquire untreated wooden logs if additional logs were needed to build the stabilizing structures.

Where possible, the access road would dodge most trees. Trees cut for construction of the access road would be laid along the side of the access road for the landowner's use. Slash or debris created during construction of the road but not used for wasteway bank stabilization would be burned, chipped, or buried onsite.

Fish and Wildlife

This section discusses fish and wildlife that potentially carry out life activities within the wasteway area based on life history traits and habitat requirements. Discussion of federally listed Endangered Species Act species is in the *Threatened and Endangered Species* section of this chapter.

Affected Environment

The wasteway lies high within the upper Rogue River basin and a few miles east of the Klamath-Siskiyou Ecoregion (KSE) boundary (figure 3-3). Riparian zones provide a complex habitat structure for a high degree of biologically diverse species. Habitat in the vicinity of the wasteway is well suited for a variety of animal life due to the combination of climate, geology, hydrology, and vegetation (Kauffman et al. 2001). The nearby KSE has exceptionally high species diversity. Where documented animal life specific to the wasteway is lacking, the following discussion is based on known species found in the KSE.

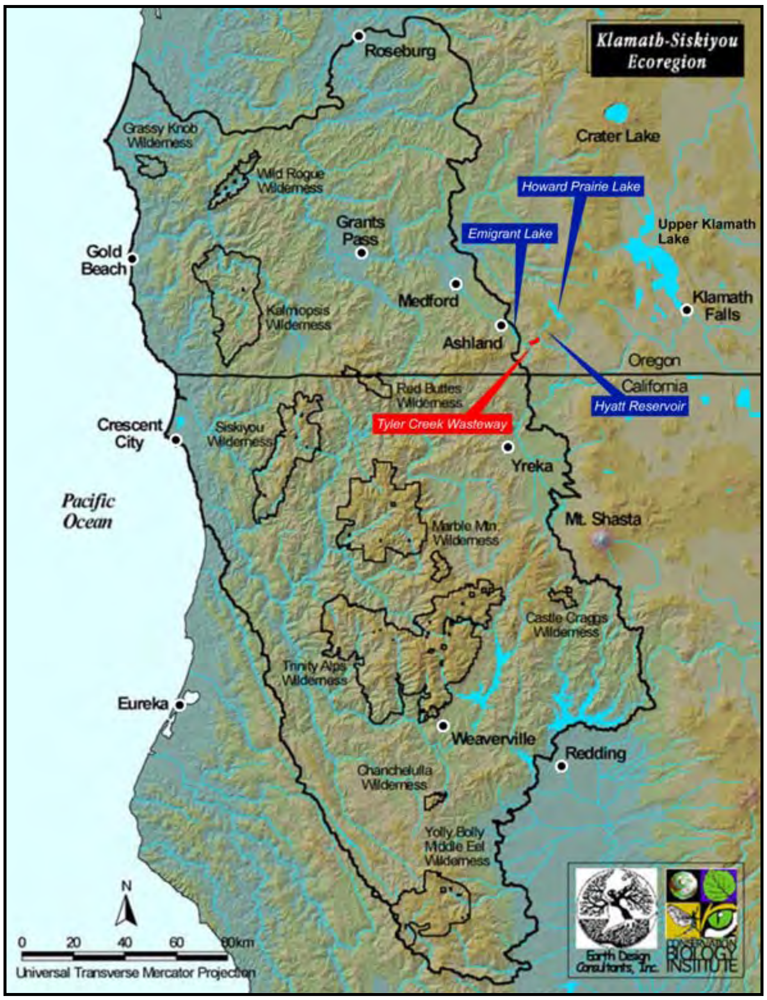

Figure 3-3. Tyler Creek wasteway in relation to Klamath-Siskiyou Ecoregion

Fish

Emigrant Dam restricts the natural migration of anadromous fish beyond the dam. ODFW stocks Emigrant Lake with hatchery rainbow trout and surplus hatchery summer and winter steelhead, thereby giving them access upstream from Emigrant Lake into Emigrant Creek and its tributaries. During the infrequent periods of wasteway flow, these game and nongame species, consisting of cutthroat trout (*Oncorhynchus clarkii*), suckers (*Catostomus* sp.), dace (*Rhinichthys* sp.), and reticulate sculpin (*Cottus perplexus*), could be present in the lower reach of the wasteway.

Amphibians and Reptiles

The KSE supports 38 native species of reptiles and amphibians (Bury and Pearl 1999). Several species are distributed within the northern and southern boundaries of the KSE but could extend beyond the eastern boundary. The overlap of these species accounts for much of the amphibian and reptile richness in the region (Bury and Pearl 1999). Amphibians have moisture requirements that make proximity to water sources crucial to their survival and reproduction. Much of the upper wasteway channel (upstream from Schoolhouse Creek) is dry all or most of the year and is not likely to be occupied. However, occasional minor spring seepage pools in depressed areas scattered throughout the reach could have reptiles and amphibians. The lower wasteway channel (downstream from where the wasteway joins Schoolhouse Creek) has a more consistent water source from springs and precipitation and is likely to be occupied by the following species (Bury and Pearl 1999; FOG undated; Csuti et al. 1997):

> Northwestern salamander (*Ambystoma gracile*), long-toed salamander (*Ambystoma macrodactylum*), Pacific giant salamander (*Dicamptodon tenebrosus*), clouded salamander (*Aneides ferreus*), ensatina (*Ensatina eschscholtzii*), roughskin newt (*Taricha granulosa*), Western toad (*Bufo boreas*), Pacific tree frog (*Hyla regilla*), Cascades frog (*Rana cascadae*), Northern alligator lizard (*Elgaria coeruolea*), western rattle snakes (Crotalus viridis) rubber boa (*Charina bottae*), racer (*Coluber constrictor*), ring-neck snake (*Diadophis punctatus*), gopher snake (*Pituophis melanoleucus*), terrestrial garter snake (*Thamnophis elegans*), and the common garter snake (*Thamnophis sirtalis*).

Birds

Riparian habitat along the wasteway channel has the potential to support many bird species. Migratory birds breeding locally could find sufficient food, water, nest materials, and cover habitat along the wasteway to use during critical breeding and nesting periods of their life histories. The wasteway riparian habitat could also support wintering and resident species. Trail et al. (1997) provides a comprehensive list of breeding birds found in the KSE.

Mammals

Water in the wasteway channel is likely to attract several mammal species that would not normally remain close to the wasteway. A wide variety of mammals (particularly rodents, rabbits, mustelids, black-tailed deer, cougars, bats, raccoons, and many others) are likely to be present in the uplands adjacent to the wasteway. Some mammals, including shrews, could reside along the wasteway.

Environmental Consequences

Alternative 1 – No Action

The absence of preventative maintenance and bank stabilization would likely result in continued erosion of the wasteway. The potential for landslides and further erosion could worsen as would downstream water quality from an increase in suspended sediments. Increased sediment in streams can cause negative biological impacts. Sedimentation from the wasteway would likely settle out in Emigrant Creek or Ashland Lateral. Minimal levels of sedimentation may affect aquatic and semi-aquatic species. Upland species would not be affected.

No new vegetation would be planted. Shade and habitat in riparian zones would be dependent upon natural recolonization of plants on bare soils exposed by unstable, eroding banks. No trees would be removed from the upland area where an access road might have been built under alternatives 2, 3, or 4.

Alternative 2 (Preferred Alternative) – Bioengineering Combined With Standard Engineering

Aquatic and semi-aquatic species would benefit from the preferred alternative because of potential water temperature and water quality improvements created by the planted vegetation. Better water quality in Emigrant Creek and Emigrant Lake would improve aquatic conditions for resident fish and other aquatic life.

The access road culverts would not affect aquatic species since these structures would be sized appropriately for expected runoff, to not impede flow, and to have the least impact on drainage characteristics surrounding the wetlands. They would be placed to allow for passage of aquatic species.

Upland species would benefit from increased riparian vegetation which provides habitat and resources. Removing trees and herbaceous plants to build the access road would reduce some existing habitat. Human presence and the use of construction equipment could cause temporary localized disturbances to fish and wildlife.

Alternative 3 – Bioengineering Only

Alternative 3 would have the same benefits and impacts as the preferred alternative (alternative 2).

Alternative 4 – Standard Engineering Only

Standard engineering structures would prevent vegetation growth where the structures were placed and would reduce habitat for terrestrial, riparian zone, and semi-aquatic species such as song birds, salamanders, frogs, and shrews. The structures would immediately control erosion and reduce sediment and turbidity in the wasteway flow. Water quality, except temperature pollution, would improve. Human presence and the use of heavy construction equipment could cause temporary disturbances to riparian zone, aquatic, and semi-aquatic wildlife. Overall, this alternative would be the least beneficial to wildlife species because of loss of potential habitat resources.

Alternative 4 would have significant impacts on fish populations inhabiting the lower reach of the wasteway because removal of streambank vegetation would increase water temperatures and reduce cover.

Localized lengths of the wasteway with the greatest likelihood of continued erosion could be completely lined with these artificial structures. This type of channelization would increase the flow velocity and is known to cause adverse environmental impacts to fish, the prey base for wildlife, and watershed systems.

Cumulative Effects

The preferred alternative would reduce cumulative effects by reducing erosion and improving water quality, thereby improving conditions for fish and wildlife. Stabilizing the wasteway would be done in concert with other efforts to preserve and protect local fish and wildlife species. Other land uses affecting terrestrial and aquatic habitats in the area would be unaffected by the preferred alternative.

Mitigation

Reclamation would use best management practices (as outlined in the construction contract specifications) to minimize environmental consequences caused by stabilizing activities or constructing the access road. All standard and reasonable precautions would be taken to reduce erosion and limit sedimentation during and after construction. Proper planning would produce efficiency and timely completion of construction activities with the least amount of people and heavy equipment working at any given time.

As much as possible, road construction and bank stabilization would take place during dry periods and when flow is absent from the channel. Reclamation will consult with ODFW regarding in-water work periods.

Threatened and Endangered Species

Reclamation requested information in March 2001 from National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NOAA Fisheries), and U.S. Department of the Interior, Fish and Wildlife Service (USFWS), on listed or proposed threatened and endangered plant and animal species that could be present in the proposed wasteway work area. The USFWS response indicates the Gentner's mission-bells (endangered), bald eagle (threatened), Northern spotted owl (threatened), and coho salmon Southern Oregon/Northern California Coast Evolutionarily Significant Unit (SONCC ESU) (threatened) could be present in the Rogue River Basin Project. NOAA Fisheries indicates threatened coho salmon could occur within the basin and directed Reclamation to their website in lieu of a written response.

Reclamation requested updated species listings from USFWS in October 2001 and May 2003. The 2001 USFWS response includes these same species; however, the 2003 USFWS response did not mention the coho salmon SONCC ESU. Attachment A contains copies of the species correspondence.

Gentner's Mission-Bells

Affected Environment

USFWS listed Gentner's mission-bells (*Fritilaria gentneri*) as an endangered plant species in December 1999 (USFWS 1999a) but has not yet published a recovery plan or designated critical habitat. The long-term vigor and viability of this species is dependent upon a breeding population greater than 500 plants. Total counts for this species barely exceed this number (USFWS 1999a).

Gentner's mission-bells is a perennial herb belonging to the lily family (*Liliaceae*). It has a fleshy bulb and a sturdy stem that grows 20-28 inches high. The stems and leaves have a blue-tinted waxy coating. The leaves are arrow-shaped, grow 3-6 inches long, and are often whorled. The bell-shaped flowers are 1.4-1.6 inches long and are reddish purple with pale yellow streaks. The flowers are solitary or in groups of up to five on long pedicels. The flowering season is from April to June; however, not every plant will flower each season. Many of the plants remain dormant for 1 to several years and will not produce above-ground stems and flowers. Reproduction occurs when bulblets break off and form new plants (USFWS 1999a).

Gentner's mission-bells is restricted to scattered locations within the Rogue and Illinois River drainages in Jackson and Josephine Counties in southwestern Oregon. Gentner's mission-bells grows in forest openings within three habitats: oak woodlands dominated by Oregon white oak, mixed hardwood forests dominated by Pacific Madrone, and coniferous forests dominated by Douglas-fir.

Gentner's mission-bells is found at elevations between 600 and 4450 feet (ONHP 2000a). Over half of the known occurrences of Gentner's mission-bells are found at elevations higher than 2400 feet (ONHP 2000a). Those occurrences below elevation 2400 feet are localized in a central cluster within a 30-mile radius of the Jacksonville Cemetery. The remaining plants exist as single individuals or occasional clusters widely distributed across the area. Landownership varies from the BLM's Medford District, the city of Jacksonville, Southern Oregon University, District 8 of the Oregon State Department of Transportation, and private individuals. Gentner's mission-bells do not inhabit cultivated cropland.

The Oregon Natural Heritage Program database indicates the closest Gentner's mission-bells are approximately 5 miles southeast of the wasteway in Soda Mountain Wilderness near upper Dutch Oven Creek drainage. The database does not identify any plants within the proposed work area (ONHP 2000a).

The principle threat to Gentner's mission-bells is habitat loss caused by both fire suppression and urban development. Oak woodlands within the Rogue River Basin Project area are becoming more thickly wooded and less grassy due to fire suppression to protect the increasing number of homes. Residential development makes prescribed burning difficult. Records indicate natural fires occurred every 12-15 years and these frequent, low-intensity fires maintained the open canopy normally found within oak woodlands. The transformation from a grassy understory to a shrub understory, along with a dense, closed canopy, is excluding Gentner's mission-bells (USFWS 1999a). Urban development within this centralized area is destroying Gentner's mission-bells habitat at a rapid rate. (USFWS 1999a).

Environmental Consequences

Alternative 1 – No Action

There is no demonstrated or known presence of Gentner's mission-bells in the wasteway area. Therefore, the No Action alternative would not affect this species.

Alternative 2 (Preferred Alternative) – Bioengineering Combined With Standard Engineering

There is no demonstrated or known presence of Gentner's mission-bells in the wasteway area. If any plants were found, Reclamation would avoid activities that would negatively impact individuals and their habitats. The preferred alternative would, therefore, have no effect on this species.

Alternative 3 – Bioengineering Only

This alternative would result in similar effects as the preferred alternative. There would be no effect on Gentner's mission-bells.

Alternative 4 – Standard Engineering Only

This alternative would have the greatest potential to alter habitats and create disturbance in the wasteway work area. However, as discussed under the preferred alternative, these actions would have no effect on Gentner's mission-bells.

Bald Eagle

Affected Environment

USFWS currently lists the bald eagle (*Haliaeetus leucocephalus*) as threatened in the 48 contiguous states. The historic distribution of bald eagles included most of the North American continent. The widespread use of organochloride pesticides contributed to a steep decline in reproduction from 1947 to 1970 (USFWS 1986). Habitat degradation, illegal harassment and disturbance, poisoning, and a reduced food base also contributed to the decline. By 1978, the bald eagle was federally listed as a threatened species in five states and as an endangered species in the remaining 43 states. USFWS (1986) approved a bald eagle recovery plan for the Pacific Recovery Region. Bald eagle populations have increased steadily since its Endangered Species Act (ESA) listing as threatened. The improvement is a direct result:

- of bans on DDT and other persistent organochloride pesticides
- habitat protection
- a growing public awareness of the bald eagles' plight.

Due to the overall population increase, USFWS (1995a) reclassified the bald eagle from endangered to threatened in the continental states. The number of bald eagles in the Pacific Recovery Region is five times what it was when the recovery plan was written (USFWS 1999b).

Bald eagles need suitable habitat and a prey base to thrive and reproduce. Suitable habitat includes, but is not limited to, large nesting and perching trees which are subject to minimal disturbance by humans, especially during the breeding season (January through mid-August). Eagles forage over large, open bodies of water by catching fish in their powerful talons or by stealing fish caught by Osprey. Their large size and long wingspan would make hunting in forest or dense woodlands difficult. Eagles prey primarily on fish, but will also consume birds, mammals, and carrion.

Two bald eagle nesting territories are in the vicinity of the proposed work area. One nest is approximately 2 miles southwest of Emigrant Lake and about 6 miles west of the wasteway. The other is situated close to the Hyatt Reservoir shoreline about 5 miles northeast of the wasteway. Both nests are closer to their respective reservoirs than to either the wasteway or Schoolhouse Creek. The large, open-water, fish-stocked Emigrant Lake and Hyatt Reservoir would attract eagles occupying these nesting territories. In recent years, both of these nesting territories have fledged eaglets (Isaacs and Anthony 2002).

Creeks within the proposed work area are relatively small and enclosed with canopy cover that makes it difficult for bald eagles to locate, pursue, and capture live prey.

Environmental Consequences

Alternative 1 – No Action

No bald eagle nests currently exist in the proposed work area. The habitat is unsuitable for this species' life history, making it unlikely a nesting territory would be established in the proposed work area. The only potential presence of bald eagles would be occasional migrants passing over the area. Continued sediments and nutrients from wasteway erosion may occasionally diminish water quality in Emigrant Lake, and in turn, may affect fish prey populations used by the resident nesting eagles and winter migrants. However, these occasional episodes are not likely to alter or limit the fish populations to a significant degree. This alternative would have no effect on bald eagles.

Alternative 2 (Preferred Alternative) – Bioengineering Combined With Standard Engineering

No bald eagle nests currently exist in the proposed work area. The habitat is unsuitable for this species' life history, making it unlikely a nesting territory would be established in the proposed work area. The only potential presence may be from occasional migrants passing over the area.

Construction activities would be timed to occur when the wasteway was dry; however, rain, runoff, and emergency wasteway use cannot always be predicted. Therefore, if any of these events caused flow through the wasteway that coincided with stabilization activities or access road construction, some sediments could be carried downstream to Emigrant Lake and temporarily affect prey fish populations.

Overall, the preferred alternative would result in a permanent reduction in wasteway sediments reaching Emigrant Lake. Therefore, this alternative would not affect bald eagles.

Alternative 3 – Bioengineering Only

Like the preferred alternative, this alternative would not affect bald eagles.

Alternative 4 – Standard Engineering Only

Like the preferred alternative, this alternative would not affect bald eagles.

Northern Spotted Owl

Affected Environment

USFWS listed the northern spotted owl (*Stix occidentalis caurina*) as threatened under ESA on July 23, 1990, and designated critical habitat in January 1992. Oregon lists this species as a State threatened species. The primary reason for the northern spotted owl population decline is loss and fragmentation of habitat due to timber harvest (USFWS 1995b). USFWS published guidelines in their Northwest Forest Plan adopted in 1994 for timberland management within the northern spotted owl range; however, a final northern spotted owl recovery plan has not been published.

Northern spotted owl habitat occurs in mountainous areas with old growth forest characterized by multilayered canopy and uneven-aged stands with overstory trees ranging in age from 230-600 years old (Marshall et al. 1996). The owls nest in cavities or on platforms created by abandoned raptor nests, squirrels nests, debris accumulations, and mistletoe brooms (Marshall et al. 1996). Northern spotted owls are primarily nocturnal predators of small mammals such as northern flying squirrels, woodrats, and red tree voles (Marshall et al. 1996, USFWS 1995b).

Over 150 northern spotted owl breeding territories exist near Rogue River Basin Project (ONHP 2000b). However, northern spotted owls do not forage on fish or other aquatic species that would attract them to project reservoirs nor do they depend on habitat provided by project facilities. Most of the breeding territories are above elevation 3500 feet in mature or old growth forest.

Two northern spotted owl critical habitat units (OR-37 and OR-38) occur within the Rogue River Basin Project area (Arnold 2001). One of these critical habitat units is near Hyatt Reservoir and Howard Prairie Lake under BLM management. The other is near Fish Lake under U.S. Forest Service management. Neither of these units falls within the wasteway work area. No northern spotted owl activity centers occur within 2 miles of the wasteway in any direction according to BLM Ashland Resource Area data on spotted owl activity centers (Arnold 2002).

Environmental Consequences

Alternative 1 – No Action

Continued sediments and nutrients from wasteway erosion may occasionally diminish the water quality. However, since no northern spotted owl activity centers occur within 2 miles of the wasteway in any direction, it is expected that these occasional episodes would not affect northern spotted owl populations.

Alternative 2 (Preferred Alternative) – Bioengineering Combined With Standard Engineering

Construction activities would be timed to occur when the wasteway was dry; however, rain, runoff, and emergency wasteway use cannot always be predicted. Therefore, if any of these events caused flow through the wasteway that coincided with stabilization activities or access road construction, temporarily increased turbidity could potentially occur. The required permits would address these issues. The resulting sediments and nutrients may temporarily diminish the water quality. However, since no northern spotted owl activity centers occur within 2 miles of the wasteway in any direction, it is expected that neither this temporary episode nor construction activities would affect this species.

There would be an overall permanent reduction of sediments and nutrients as a result of the preferred alternative. This alternative would reduce harmful effects but would have no effect on northern spotted owl populations.

Alternative 3 – Bioengineering Only

This alternative would result in similar effects as the preferred alternative. However, temporary and long-term wasteway sedimentation would be reduced even more than in the preferred alternative. There would be no effects on spotted owls.

Alternative 4 – Standard Engineering Only

This alternative would have the greatest potential to alter habitats and create disturbance in the wasteway work area. However, as discussed under the preferred alternative, these actions would have no effect on spotted owls. The temporary effects of construction would be overshadowed by the long-term benefits of reduced sedimentation and nutrients to the downstream and

Emigrant Lake ecosystems. Therefore, as explained for the preferred alternative, this alternative would not affect spotted owls.

Southern Oregon/Northern California Coasts ESU Coho Salmon

Affected Environment

Coho Salmon

Coho salmon (*Oncorhynchus kisutch*) are anadromous and semelparous. Coho salmon spend approximately the first half of their life cycle rearing in streams and small freshwater tributaries. The remainder of the life cycle is spent foraging in estuarine and marine waters of the Pacific Ocean prior to returning to their stream of origin to spawn and die (NOAA Fisheries 2002).

NOAA Fisheries (1997) listed the SONCC ESU as threatened on May 6, 1997, due to the extreme population loss and then published a final rule (NOAA Fisheries 1999) effective June 4, 1999, designating critical habitat for SONCC ESU that includes Bear Creek and its tributaries downstream from Emigrant Dam. Emigrant Dam prevents passage of anadromous fish into upper Emigrant Creek, Tyler Creek, Schoolhouse Creek, and the wasteway. The effects of the preferred alternative would not continue downstream from the dam. Therefore, consultation on this species is not required.

Essential Fish Habitat

Essential fish habitat is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. The following interprets this definition. “Waters” include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include areas historically used by fish where appropriate. “Substrate” includes sediment, hard bottom, structures underlying the waters, and associated biological communities. “Necessary” means habitat required to support a sustainable fishery and a healthy ecosystem. “Spawning, breeding, feeding, or growth to maturity” covers a species’ full life cycle.

The Magnuson-Stevens Fishery Conservation and Management Act requires Federal agencies to consult with NOAA Fisheries regarding potential adverse effects their actions may have on essential fish habitat [Section 305 (b)(2)]. This includes Federal agencies which fund, permit, or carry out activities that may adversely impact essential fish habitat of federally managed fish species.

The geographic extent of freshwater essential fish habitat for the Pacific salmon fishery is specifically defined as all currently viable waters and most of the habitat historically accessible to salmon within certain U.S. Geological Survey hydrologic units (PFMC 1999). The Pacific Fisheries Management Council (PFMC 1999), under Appendix A of Amendment 14 to the Pacific Coast Salmon Plan on fishery management, identified and described essential fish habitat for SONCC coho and Chinook salmon in the middle Rogue River hydrologic unit. All essential fish habitat located upstream from Emigrant Dam is currently inaccessible to SONCC coho and Chinook salmon. The species distribution map in figure 3-4 shows that identified essential fish habitat for SONCC coho and Chinook salmon is outside the proposed Tyler Creek wasteway stabilization work area.

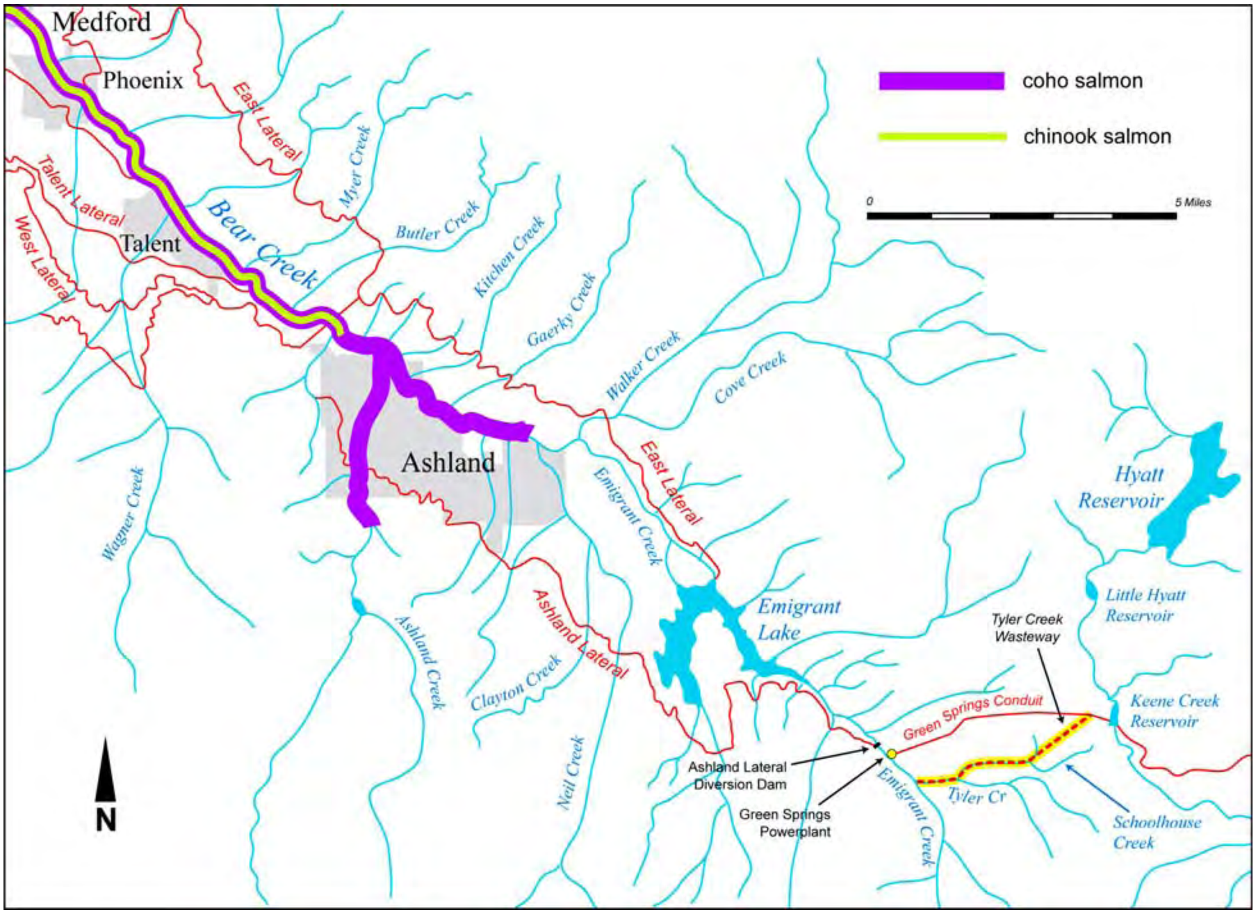

Figure 3-4. Anadromous Fish Distribution Map

Environmental Consequences

Coho Salmon

Since Emigrant Dam prevents passage of anadromous fish into river reaches upstream from the dam, there is no demonstrated or known presence of coho salmon in the wasteway area. Continued sediments and nutrients from wasteway erosion may occasionally diminish the water quality in Emigrant Lake. However, these occasional episodes would not alter the downstream coho salmon population. None of the four alternatives would affect coho salmon.

Essential Fish Habitat

The preferred alternative is unlikely to have any adverse impacts to essential fish habitat. Stabilization efforts would reduce wasteway bank erosion resulting in the release of less sediment and nutrients. Slightly lower water temperatures could occur over time with increased vegetation and riparian shade along the wasteway channel. The quality and quantity of essential fish habitat in the Rogue River basin would either remain unchanged or increase with implementation of the preferred alternative.

Species Comparison Table

Table 3-2 summarizes the effects the alternatives would likely have on the federally listed threatened or endangered species.

Table 3-2. ESA Species Effects

	Alternative 1 No Action (baseline for comparison)	Alternative 2 Preferred Alternative Bioengineering Combined With Standard Engineering	Alternative 3 Bioengineering Only	Alternative 4 Standard Engineering Only
Gentner's mission-bells	no effect	no effect	no effect	no effect
Bald eagle	no effect	no effect	no effect	no effect
Northern spotted owl	no effect	no effect	no effect	no effect
Coho salmon	no effect	no effect	no effect	no effect

Cumulative Effects

The alternatives would have no effect on the four federally listed species. Cumulative effects are, therefore, not an issue.

Mitigation

None of the alternatives would be expected to adversely affect the four federally listed threatened and endangered species; therefore, no mitigation is needed.

Historic Properties

Affected Environment

Historic properties include prehistoric and historic archeological sites, buildings, and historically important places eligible for inclusion in the National Register of Historic Places. Historic properties are also places of special heritage value to contemporary communities (often, but not necessarily, Indian communities) because of their association with cultural practices or beliefs important in maintaining the cultural identity of that community.

Early Occupation of Southwest Oregon

Limited archeological evidence exists for occupation of southwestern Oregon prior to around 6,500 years before present (BP). Available evidence indicates populations from that time until about 2,250 BP were groups of highly mobile hunter-gatherers who moved with some seasonal regularity through a territory to obtain food and raw materials. Groups seem to have become less mobile through time, centering their seasonal movements around semi-permanent base camps and placing greater reliance on riverine resources. By 2,250 BP, groups seem to have maintained permanent villages from which members traveled to collect resources.

The Takelma, Molala, and Shasta tribes were living in southwestern Oregon by the time Euro-American's entered the area. Recent analysis suggests the Latkawa Takelma occupied much of the valley, while Shasta territory extended north only as far as modern Ashland. Since both tribes have place names and stories for Bear Creek valley locations, it is likely their territories overlapped in this area. Takelma and Shasta lifeways appear to have been broadly similar. Both lived in relatively permanent villages much of the year. These villages were located on terraces along principal rivers, often at the confluence of tributaries or near economically important resource locations. Small family groups traveled in a predictable pattern from those villages to various places from late spring to fall to obtain seasonally available food. Plant foods contributed the bulk of the daily diet, with acorns and camas being dietary staples. Fishing, especially for salmon, was a significant economic and social activity, although hunting supplemented the diet.

Euro-Americans first entered the area in 1826-1827. The Rogue River and Bear Creek valleys became a primary travel route between Oregon and California during the 1830s. Gold was discovered in 1851 near what became the city of Jacksonville, Oregon. Miners and other settlers flocked to the area bringing disease and driving the Indian people from their lands. The upper Rogue River Indian groups signed a treaty in 1853 establishing a reservation northwest of Medford. Attacks on the Indians in 1855 caused many to leave the reservation to fight. The fighting ended in 1856. The reservation was then abolished and the Indians who had survived disease and warfare were forced to relocate to reservations elsewhere in Oregon.

Existing Wasteway and Access Right-of-Way Conditions

The area of considerable erosion caused Reclamation to reroute released flows into a second natural intermittent stream channel which then returns the water to the original wasteway channel. This area is wooded, and fallen leaves and duff obscure the ground surface. Similar conditions are present along the wasteway channel upstream from the area of considerable erosion, while downstream, there is a mixture of wooded areas and open fields. Visibility is limited in all areas due to duff or grasses.

The first 1,000 feet of the access road right-of-way corridor crosses land that is used for agricultural purposes, and where no roadway presently exists. Grass (planted pasture or hay) is thick in this area. Schoolhouse Creek and several shallow, ephemeral surface drainages cross this segment of the right-of-way. The last 700 feet of the right-of-way corridor extend through woods where timber harvesting has occurred, and there is an abandoned roughly graded vehicle trail. Fallen leaves and duff obscure the ground in this wooded area.

Archeological Investigations

In October 2000, Reclamation contracted with Heritage Research Associates, Inc., (HRA) for an intensive pedestrian archeological survey of lands that would be impacted by the proposed stabilization efforts as defined at that time. In addition to the survey, HRA was to dig exploratory shovel probes in specified areas. The survey and exploratory probing methods and results are reported in HRA Report No. 238 (Oetting 2000), and are summarized below.

The archeological survey covered the area of considerable erosion and its access, including:

- the channel immediately upstream from the eroded area
- the eroded area, where stabilization would occur
- the second channel used to reroute released water around the area of considerable erosion
- the land between the two channels
- the entire right-of-way corridor for the access road

Survey methods used in the wasteway area varied depending upon ground conditions. The area between the two channels was surveyed at 10 meter (32 foot) intervals. Along the two channels, the survey extended 10 meters back from the bank, beyond the area that might be disturbed by either future erosion or bank stabilization actions. At both the wasteway channel upstream from the area of considerable erosion and at the rerouted channel, HRA surveyed with one archeologist walking in the channel examining the channel banks, while two archeologists surveyed the ground above the bank. At the area of considerable erosion, survey was confined to the ground beyond the eroding edge as it was unsafe to walk inside that section of the channel. The access road right-of-way corridor was walked at 5 meter (16 foot) intervals. One sparse scatter of prehistoric artifacts (later designated as site 35-JA-492) was identified during the survey.

Visibility was relatively poor (10 to 20 percent) throughout the survey areas due to thick grass or from leaf or duff cover. Reclamation's survey contract with HRA required that they dig exploratory shovel probes when there was poor surface visibility at locations where there might be construction disturbance. They were also required to probe a specific section of the access corridor parallel to a location where a landowner reported finding archeological material on his property about 150 feet outside of the road corridor. HRA excavated 15 site discovery shovel probes. Each was 30 cm (12 in) in diameter, was excavated in 10 cm (4 inch) levels, and all fill was screened through 1/8-inch mesh. HRA placed probes at the following locations:

- two along the wasteway where stabilization would occur
- two in the specified section of the access corridor parallel to the reported archeological site
- five where road culverts would be installed
- four at a location where environmental conditions indicated a site might be present but hidden by vegetation, and
- two near where the sparse artifact scatter (site 35-JA-492) had been recorded.

The probes identified two additional prehistoric material scatters (sites 35-JA-293 and 35-JA-494). All three recorded sites were located within the access road corridor on privately owned land. Further test excavations were needed to determine the character and physical integrity of the sites. In Oregon, a State permit must be obtained before completing archeological test excavations on private land. Therefore, once HRA determined these locations were indeed archeological sites, they halted subsurface examination until a State permit could be obtained.

The State Historic Preservation Office (SHPO) issued a State permit (number AP-477) to HRA in June 2002 for test excavations, and HRA completed the test excavation the next week. Consistent with Reclamation's specification, test excavations were limited to the portion of each site located within the 60-foot-wide right-of-way corridor. The methods used and test excavation results are reported in HRA Report No. 258 (Oetting 2002). The following summarizes the site findings from all phases of investigation.

Site 35-JA-492 is a lithic scatter site located in the northern portion of the road access corridor. The site was discovered during the site survey, and two probes were excavated at that time, followed in 2002 by more extensive test excavation. A small quantity of waste flakes and two flaked stone tools were found scattered on the surface across a 25 by 30 meter area. The tools were a chert narrow-necked projectile point mid-section fragment, and a large basalt used flake. Enough remained of the point fragment to demonstrate that it was a narrow-necked style commonly used during the last 2,200 years. Test excavations yielded very little additional cultural material. Subsurface materials were largely confined to a very small area consistent with the surface artifact concentration, and all material was confined to the top 10 cm of soil. Except for the two tools noted on the surface, all materials found were unmodified chert, obsidian, or basalt flakes, and most were small interior specimens. No features were noted. The site was assessed to be a low-density surface artifact scatter with little potential to yield additional information.

Site 35-JA-493 is located on a small terrace. No surface material had been found at the site location during survey. However, since it seemed to be an area where a site might be expected to occur and the grass cover was very dense, HRA excavated two discovery probes to test subsurface soils. One of the probes yielded two flakes in the top 10 cm. The ground surface in that immediate area was then inspected on hands-and-knees, and a small number of additional flakes was found in small bare spots near a bedrock outcrop. Test excavations in 2002 indicated that, at least within the right-of-way, the site is a rather sparse lithic scatter with most of the material confined to the surface and top 20 cm of soil. Only lithic debitage and two square nails were found. The flakes were chert and obsidian, and most were interior specimens 1 to 2 cm in size. The two square nails do not appear to be associated with an identifiable early historic period feature within the right-of-way. The site appears to have been disturbed by plowing in the past. Site deposits within the right-of-way were assessed to have little potential to yield significant information that would increase our understanding of prehistoric life in the area or region. It is possible that the tested area may represent the west edge of a larger site, but that area lies beyond the right-of-way corridor and Reclamation's proposed work area.

Site 35-JA-494 is located in the south half of the road corridor. No surface evidence of a site had been found during survey. However since this section parallels the archeological site reported about 150 feet outside the corridor, two discovery probes were excavated in the area. Both probes yielded interior flake specimens 1 to 2 cm in size. Intensive examination of the surface then occurred near the probes, but no additional materials were found. The grass is extremely dense in the area, with no bare spots. Extensive additional testing was completed in 2002. Testing revealed much more cultural material, extending to a greater depth. However, again the material was essentially limited to unmodified lithic debitage – 236 flakes were recovered, one core, one biface fragment, and one animal bone fragment. There was no evidence of features, either prehistoric or historic period in origin. Also, the site appeared to be rather disturbed. Test units revealed mottled soils indicating that leveling or soil redistribution has occurred at the site. This interpretation is supported by discovery of a glass fragment between 10 and 20 cm below surface and a button between 30 and 40 cm below surface. Material density and distribution indicates that this site may extend well beyond the area tested within the right-of-way corridor. It is possible that those untested areas have historically significant deposits. However, it was determined that deposits within the right-of-way have limited physical integrity and lack the kind and variety of materials that could provide significant new information about area history or prehistory.

In September 2002, Reclamation initiated consultations with the SHPO and interested Indian tribes about the eligibility of site deposits within the right-of-way corridor for listing on the National Register of Historic Places (National Register). Tribes notified were the Cow Creek Band of the Umpqua Tribe of Indians, the Confederated Tribes of the Siletz Indians, the Klamath Tribes, and the Confederated Tribes of the Grand Ronde Community of Oregon (the Grand Ronde Tribes). On October 17, 2002, the SHPO indicated they concurred with Reclamation's determination that the deposits within the right-of-way were not eligible to the National Register. Attachment B contains a copy of this correspondence.

In a letter dated October 28, 2002, (attachment C) the Grand Ronde Tribes indicated they believe the sites were culturally significant, and that materials might be discovered during ground disturbing actions. They requested notification in the event of any discovery. No other tribe responded. Reclamation considered the Grand Ronde Tribes' response, and retained the determination that the site deposits within the right-of-way are not eligible to the National Register.

In June 2002 while completing the test excavations, HRA conducted an archeological survey of the wasteway downstream from the area of considerable erosion. The survey began near the confluence of the wasteway with Schoolhouse Creek and extended downstream to the confluence of Tyler Creek with Emigrant Creek. Within this reach, HRA examined an area extending approximately 100 feet to each side from the wasteway's centerline. HRA recorded three isolated finds (IF):

- a section of a wooden flume (IF-1)
- an artifact scatter (IF-2)
- an isolated artifact (IF-3).

IF-1 clearly lies beyond the potential work area and, therefore, will not be considered further in this EA. IF-2 consisted of four flakes and one fire-cracked rock scattered over a 10 by 20 meter area on a terrace about 5 meters from the creek bank. IF-3 was a single chert flake about 20 meters from the creek bank on a bench that appears to have been leveled and plowed in the past.

In June 2003, HRA conducted an archeological survey approximately 100 feet wide centered on the wasteway's centerline and upstream from the area of considerable erosion. No prehistoric sites or isolated finds were recorded, and there appears to be little likelihood of undetected prehistoric sites. One scatter of 20th Century trash was found, consisting of sheet metal and a cable. It does not appear to be an historically significant site (Oetting 2003).

HRA also completed limited shovel testing at the locations of IF-2 and IF-3 by excavating a line of 50-cm-diameter test holes about 20 feet from the bank's edge. This indicated that archeological sites are present at both sites (Oetting 2003). Both sites are on private land; therefore in conformance with State law, the shovel testing was halted as soon as it was clear that archeological sites were present. Reclamation does not anticipate completing further investigations at these sites, since no ground disturbing actions are proposed in the area, and the creek appears to carry the flow without causing erosion.

Environmental Consequences

Alternative 1 – No Action

Continued wasteway channel erosion would have no effect on historic properties upstream from or within the area of considerable erosion, as no sites were found there. It appears unlikely that using the creek as a wasteway would impact IF-2 or IF-3 since no cultural material was visible in the streambank and the bank does not appear to be actively eroding at either site (Oetting 2003).

There would be no effect to the three archeological sites identified in the access road right-of-way since Reclamation would not construct the access road under the No Action alternative.

Alternative 2 (Preferred Alternative) – Bioengineering Combined With Standard Engineering

Ground disturbing actions associated with wasteway bank stabilization in the area of considerable erosion or along the wasteway upstream from that area would have no effects on historic properties, as no sites were found in those sections of the wasteway.

Sites 35-JA-492 and 35-JA-493 both lie near areas where ground disturbance would occur during wasteway access construction. Associated excavation may extend into site deposits within the right-of-way. If construction excavation occurs within those sites, archeological deposits would be destroyed. Construction actions in the vicinity of 35-JA-494 would be limited to sinking several post holes to allow installation of a gate. Use of the unimproved access route would occur within the right-of-way across all three sites. Reclamation would drive over the unimproved ground surface during dry-weather conditions as stipulated in the right-of-way agreement. Standard vehicles or farm equipment already drive over this land. Therefore, Reclamation's dry-weather use of the access would not cause further damage to the landscape or the resources on that land.

The National Historic Preservation Act holds Federal agencies accountable for impacts to historic properties that are eligible to the National Register. The portions of all three sites within the right-of-way corridor have been determined in consultation with the SHPO to be not eligible to the National Register. Therefore under National Historic Preservation Act, there is no effect to these sites from the preferred alternative, even if damage occurs to site deposits within the corridor. Attachment B contains SHPO's concurrence with Reclamation's findings.

The creek channel in the vicinity of sites IF-2 and IF-3 is well incised and eroded to basal cobbles. It is stable and appears to have the capacity to carry flows without triggering bank erosion. No cultural features or materials were exposed in the banks. No further investigations are proposed at these site locations. Therefore, continued use of the creek channel as a wasteway appears unlikely to impact archeological deposits at IF-2 and IF-3.

Alternative 3 – Bioengineering Only

Impacts would be the same as for the preferred alternative (alternative 2).

Alternative 4 – Standard Engineering Only

Impacts would be the same as for the preferred alternative (alternative 2).

Cumulative Effects

The three archeological sites impacted by access improvements are located on private property. Two of the sites have clearly been used and appear to still be used for agricultural purposes (pasture and/or hay). The third site has had past timber harvest. The landowner retains the right under Reclamation's easement to personal use of the access road corridor. This might include grazing, harvesting crops, or driving the route with his own vehicles to access his land. These potential impacts would occur under all four alternatives. Preferred alternative actions taken to minimize potential impacts would also minimize cumulative effects.

Mitigation

No mitigation would be necessary for continued use of the wasteway or for stabilization under any of the action alternatives (2, 3, or 4). No historic properties were found near or upstream from the area of considerable erosion. Using the wasteway is not impacting deposits at IF-2 or IF-3 and is unlikely to do so in the reasonably foreseeable future.

No mitigation would be necessary for road access improvements or use, as the portions of the three archeological sites within the right-of-way corridor were determined to be not eligible to the National Register. However, Reclamation does commit to several actions with the objective of minimizing impacts to the site deposits. Minimizing efforts are appropriate because the deposits within the corridor are segments of larger sites and because the Grand Ronde Tribes indicated the sites have cultural significance for their tribe. Actions to minimize potential impacts are:

- inspect initial soil excavation at site 35-JA-493 to ensure immediate detection in the unlikely event of discovery of potentially significant subsurface deposits that were not revealed during test excavations
- align the access road route across 35-JA-493 and across the west side of the right-of-way
- align the access road route across 35-JA-494 and across the east side of the right-of-way

If test excavations reveal that IF-2 or IF-3 is eligible to the National Register, and if on-going use of the wasteway channel is damaging those sites, Reclamation would use a stabilization method in that area to have the least impact to site deposits. If sites are found elsewhere along the channel, this same strategy would be applied. Determinations of eligibility, impact, and stabilization method would occur in consultation with the SHPO and interested tribes.

Reclamation would also comply with National Historic Preservation Act concerning discovery situations. If any archeological sites other than 35-JA-492, 35-JA-493, and 35-JA-494 were encountered during construction, work would halt immediately in the area of the find and a Reclamation archeologist would be notified. Also, if unanticipated deposits were found within the boundaries of the three recorded sites that appear to be of the quality to meet eligibility criteria for the National Register, work would also halt in that location and a Reclamation archeologist would be notified. Reclamation would make an initial assessment of the discovery, and if warranted, notify the SHPO and interested tribes and reinitiate site evaluation actions. Reclamation would also comply with requirements of State of Oregon burial laws if human remains were encountered. This would include an assessment of whether the remains are Indian or Euro-American in origin, and tribal notifications and consultations if they are of Indian origin.

Indian Sacred Sites

Affected Environment

Executive Order 13007 defines Indian sacred sites as "any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion." The provisions of Executive Order 13007 apply only to Federal lands. More than half of the length of the wasteway is on private lands to which traditional practitioners have no access.

Environmental Consequences

Reclamation has not yet consulted with tribes on the potential for sacred sites being located on Federal lands within the proposed work area. Should any areas on Federal land be identified as needing wasteway stabilization, Reclamation would notify tribes and ask if they have any issues. At this time, Reclamation cannot determine if sacred sites would be affected.

Indian Trust Assets

Indian trust assets (ITA) are legal interests in property held in trust by the United States for Indian tribes or individuals. Examples of ITA's are lands, minerals, hunting and fishing rights, and water rights. The United States has trust responsibility to protect and maintain rights reserved by or granted to Indian tribes or individuals by treaties, statutes, and executive orders. Reclamation policy is to protect ITA's from adverse impacts of its programs and activities and to enable the Secretary of the Interior to fulfill responsibilities to Indian tribes.

Affected Environment

No Indian owned lands, federally recognized Indian reservations, or ceded lands have been identified within the work area where traditional use rights (such as hunting, fishing, and gathering) are retained by federally recognized Indian tribe.

Environmental Consequences

None of the four alternatives would impact ITA's.

Cascade Siskiyou National Monument

Affected Environment

President Clinton signed a proclamation June 9, 2000, creating the 52,947-acre Cascade Siskiyou National Monument in south central Oregon. BLM designated the area as an Ecological Emphasis Area in its 1994 Northwest Forest Plan and its 1995 Resource Management Plan because of the unique ecological and biological characteristics (Clinton 2002). A portion of the wasteway lies within the monument as shown on figures 1-2, 1-4, and 3-5.

The monument, 25 miles southeast of Medford along the Oregon/California border, includes Soda Mountain and surrounding lands at the intersection of three ecological regions: Coast, Klamath, and Eastern Cascade slopes. The designation protects the extraordinary ecological value of these regions and their associated flora and fauna from resource exploitation and habitat degradation. It also places a permanent timber harvesting moratorium on the area.

Species from each ecological region meet and mix in the diverse habitats provided by the area's unique combination of biological, geological, hydrological, climatological, and topographical features. The monument is home to a variety of rare species of plants and animals whose survival in this region depends upon its continued ecological integrity. The area supports an exceptionally high diversity of fauna, including one of the highest diversities of butterfly species in any area of the United States. The area also contains old-growth habitat crucial to the threatened Northern spotted owl.

The area contains both public Federal lands managed by BLM and numerous private land holdings. The Presidential proclamation gave BLM 3 years to develop a management plan for the area. The guiding principles for managing the monument are to protect, maintain, restore, and enhance relevant and important resources. BLM currently manages the monument under an interim management policy. Much of the private land has historically been managed for commercial purposes such as grazing and timber harvest (Boise Cascade 2002). Grazing continues while BLM studies whether continued livestock use is compatible with the protective purposes of the monument (Clinton 2002).

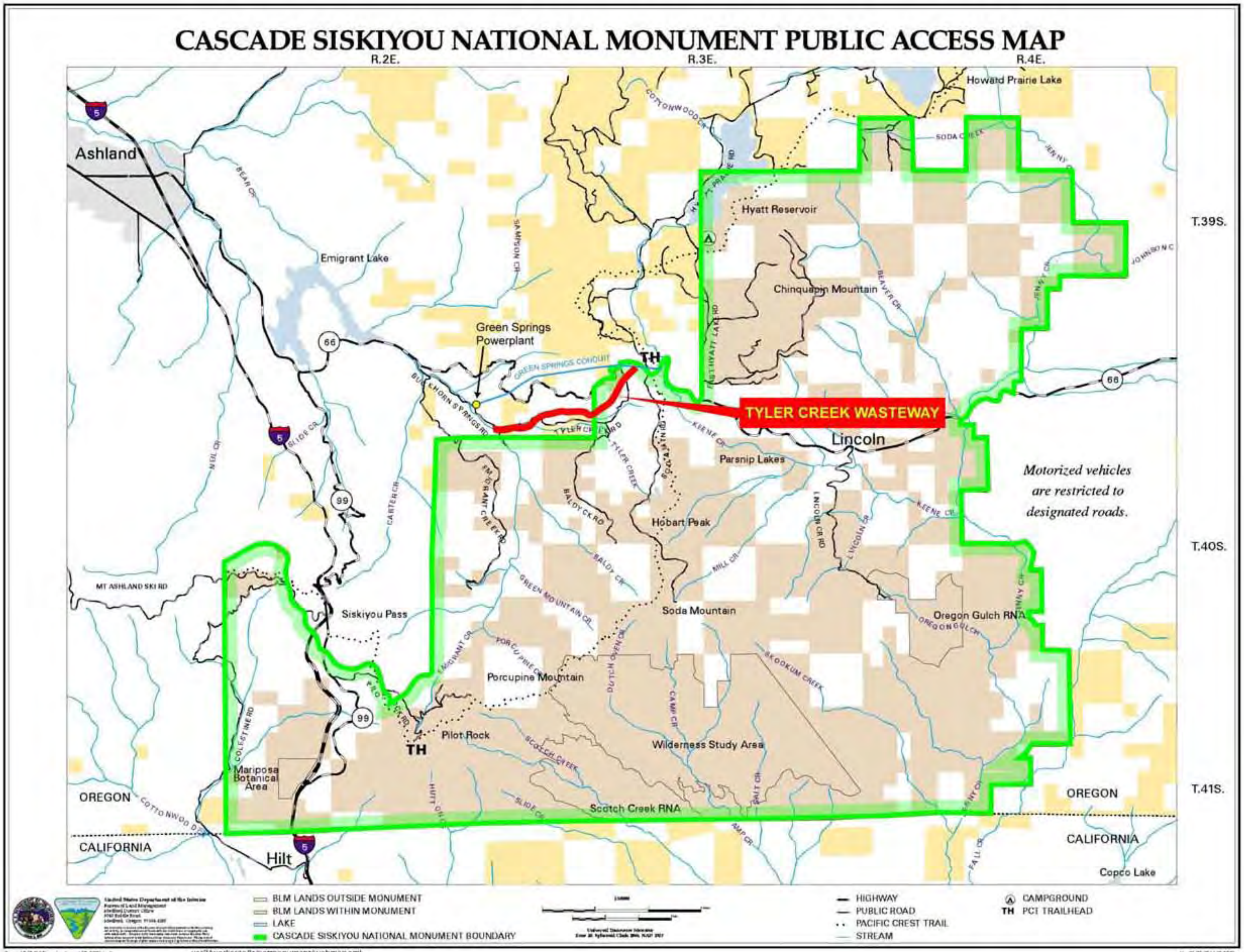

Figure 3-5. Wasteway in relation to Cascade Siskiyou National Monument

Environmental Consequences

Reclamation will continue cooperating with BLM to ensure its actions are in agreement with monument management goals. Reclamation actions would have the same environmental consequences whether within the monument or outside monument boundaries. Environmental consequences are therefore discussed under the headings of each specific natural resource (e.g. vegetation, water quality, etc.).

Cumulative Effects

BLM's management of the Cascade Siskiyou National Monument ensures a high level of resource protection on BLM land. Doing nothing to prevent further erosion in and around the wasteway would cause the most damaging cumulative effects. The preferred alternative would reduce cumulative effects by involving BLM and private landowners in discussions on site-specific stabilization efforts and providing a natural and effective solution that protects the resources. The preferred alternative would stabilize the wasteway, thereby decreasing erosion impacts that could be caused by natural runoff. Implementing either alternative 2 (the preferred alternative) or 3 would be in agreement with BLM's management plan.

Mitigation

Mitigation discussion is under the headings of each specific natural resource (e.g. vegetation, water quality, etc.) since mitigation within the monument would be no different than outside monument boundaries.

Environmental Justice

The 1994 Presidential Executive Order 12898 (EO) mandates Federal agencies to identify and address any impacts their actions would have on environmental justice with regard to human health as well as social and economic issues. The EO identifies environmental justice as "disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." The EO is designed to protect minority and low-income communities from discrimination of a disproportionately more hazardous or degraded human environment being imposed by a Federal action. It also emphasizes that Federal agencies provide minority and low-income communities with an opportunity for public participation and access to information relating to human health or the environment.

Affected Environment

The wasteway is in a rural and predominately white community (as shown in table 3-3) in Jackson County, Oregon. The county's population increased by 23.8 percent from 1990 to 2000. This growth rate is slightly higher than the State's overall population growth.

Table 3-3. 2000 Jackson County, Oregon, Census Statistics

U.S. Census Bureau 2000 Statistic	Jackson County	Oregon State
Total population	181,269	3,421,399
Population Percentage of Change (1990 to 2000)	+23.8	+20
White	91.6	86.6
Hispanic or Latino	6.7	8
American Indian or Alaska Native	1.1	1.3
Asian	0.9	3
Black or African American	0.4	1.6
Native Hawaiian or Pacific Islander	0.2	0.2
Other races	2.9	4.2
Persons below poverty	13.8	11.6
Children below poverty	20.3	16.3

The expanding human population along the wasteway has increased water usage. The number of property subdivisions and wells along the wasteway has increased since 1960.

Environmental Consequences

None of the four alternatives would cause disproportionately adverse social, economic, or human health impacts to local minority or low-income populations, therefore, mitigation would not be required.

Chapter 4 — Consultation and Coordination

This chapter summarizes the wasteway consultation and coordination efforts required by law. Attachment D contains a list of agencies, organizations, and persons receiving a copy of this EA.

Public Involvement

Reclamation began working with local landowners, TID, and other stakeholders in the early 1990s concerning erosion damage in the wasteway. Reclamation entered into a right-of-way agreement and acquired a 60-foot-wide easement across private property for easier access to the wasteway from Tyler Creek Road (figure 1-2).

The NEPA scoping process officially began with an April 6, 2001, letter to over 100 potentially interested individuals, organizations, and local media. The letter provided basic Rogue River Basin Project background information, relevant history into events leading to the proposed action, and requested assistance in identifying environmental issues and concerns associated with access to and stabilizing the wasteway. An April 9, 2001, news release to local media also announced a 30-day public comment period. Public interest in commenting on the proposed action resulted in a 2-week extension of the comment period. Reclamation received eight letters from the public during that time; many comments were beyond the purposes of and need for action and outside the scope. Reclamation determined from the responses that the scope, purposes, and need had not been clearly stated or understood.

Reclamation conducted a tour of the wasteway channel on May 21, 2001, to inform the public of progress toward stabilizing the wasteway and to seek their input. Private landowners, BLM, a FOG representative, and two private consultants (Hicks and Hart) participated in the tour. The attendees walked the length of the wasteway from the pipe outlet to the lower Tyler Creek Road crossing. A Reclamation representative explained how the project operates, the alignment of the channel at the area of considerable erosion, and why the channel was realigned at the landowner's request. Discussions with the private consultants led to the agreement that the area of considerable erosion is healing naturally and should be left alone. Different types of bioengineering techniques were discussed for specific areas along the channel. Using cuttings from local native vegetation or bringing in additional native vegetation (versus bringing in non-native vegetation) was agreed upon as the preferred source.

Reclamation also sponsored a public workshop on December 6, 2001, at Ashland Middle School in Ashland, Oregon, to communicate the need, purposes, scope, and proposed action and to solicit public input on alternatives to stabilize the wasteway. Notice of the workshop was mailed November 14 to approximately 150 individuals on the scoping mailing list. The notice provided background information, a map, and a request for questions and informational needs. Medford Mail Tribune, Grants Pass Daily Courier, Ashland Daily Tidings, and Illinois Valley News received a November 26 news release announcing the workshop. Fourteen individuals attended the workshop and participated in small and large group discussions about their concerns and stabilization options. Facilitators recorded public comments on flip charts. Reclamation received three letters and comment forms before and eight letters following the meeting. Copies of the workshop displays were provided to BLM.

The Draft EA was mailed to more than 175 interested parties on July 1, 2003. BLM and landowners of three adjacent properties submitted response letters within the 30-day comment period.

Agency Consultation and Coordination

Endangered Species Act of 1973

Reclamation has concluded the alternatives discussed in this EA would have no effects on listed species; therefore, no further consultation is needed. If, during the course of the stabilization efforts, NOAA Fisheries or USFWS lists any new species which occupy the work area, Reclamation would begin consultation on those species.

National Historic Preservation Act of 1966, as Amended

Historic property investigations were completed using consultation processes defined both by Section 106 of the National Historic Preservation Act and by Oregon State law requiring that archeological investigations on private land occur under a State permit. In May 2001, Reclamation informed the SHPO of the proposed access upgrade and wasteway stabilization and that three sites were present in the access road right-of-way. In December 2001, in compliance with State law, Reclamation's contractor (HRA) submitted a request to the SHPO for a State permit to complete test excavations at the three sites. As part of the permit application process, in April 2002, the SHPO notified the Cow Creek Band of the Umpqua Tribe of Indians, the Confederated Tribes of the Siletz Indians, the Klamath Tribes, and the Grand Ronde Tribes of the request. In June 2002, the day the permit was to be issued, the Grand Ronde Tribes notified HRA that they were interested in monitoring the test excavation. Since scheduling issues required that HRA begin work immediately following receipt of the State permit, the Grand Ronde Tribes agreed to forgo monitoring and instead requested to be kept informed of testing results.

In September 2002, following receipt of HRA's test excavation report, Reclamation initiated consultations with the SHPO and the above-listed tribes about the eligibility of the sites to the National Register. Only the portion of each site included within the 60-foot-wide right-of-way corridor was addressed in the consultation. Each consulting party was provided with a copy of the test excavation report and a cover letter explaining the basis for Reclamation's assessment that the segment of the sites within the corridor was not eligible to the National Register. As shown in attachment B, the SHPO responded on October 17, 2002, with their concurrence that the segment of all three sites lying within the right-of-way corridor was not eligible for the National Register.

In a letter dated October 28, 2002, (attachment C) the Grand Ronde Tribes responded that "the Tribe considers these sites culturally significant, with a high possibility of an inadvertent discovery during any ground-disturbance." They indicated their desire to be involved in future consultations if any discoveries were made. No other tribe responded.

August 14, 2003, Reclamation sent the SHPO a copy of the Draft EA and provided a 30-day comment period. The SHPO provided no comments within that period.

Bureau of Land Management Coordination

Reclamation included three BLM employees on the initial wasteway stabilization mailing list and has since added two more. BLM provided comments on the initial scoping document. They attended Reclamation's May 21, 2001, wasteway tour and the December 6, 2001, public workshop and provided information concerning the location of BLM property along the wasteway. BLM also provided comments on the Draft EA. Reclamation would continue cooperating with BLM to ensure its actions are in agreement with BLM land resource management practices.

Tribal Consultation and Coordination

Reclamation included the Coquille Indian Tribe; the Cow Creek Band of the Umpqua Tribe; and the Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Tribes in mailings of the initial scoping letter and the public workshop announcement. None of the tribes responded. Further tribal contacts are described in the *National Historic Preservation Act of 1966, as Amended* section of this chapter.

Adjacent Landowners

Adjacent landowners are included on the wasteway stabilization mailing list, received a copy of the scoping letter, and have had opportunities to comment. They attended the May 21, 2001, wasteway tour and the December 6, 2001, public workshop. Reclamation consulted with some individual landowners regarding the wasteway, its general use, and impacts specific to their property. One landowner negotiated with Reclamation for right-of-way for the proposed access road alignment. A copy of the Draft EA was mailed to adjacent landowners for review and comment. Landowners submitted three comment letters on the Draft EA. Reclamation would continue consulting and negotiating with adjacent private and Federal landowners to acquire rights-of-way/flowage easements and to accomplish wasteway stabilization.

The adjacent landowners are on Reclamation's call list for notification prior to diverting water through the wasteway. When called, they will each receive information concerning why the wasteway will be used and approximately how long released water will be diverted through the wasteway. They will also be notified that someone will be on site to inspect the wasteway during flows.

Other Contacts

Other contacts regarding the wasteway include the local offices of ODEQ, ODFW, NOAA Fisheries, USFWS, and TID. Reclamation invited these agencies to the May 21, 2001, public tour but none attended. All are included on the wasteway stabilization mailing list and were sent copies of the scoping document and the Draft EA. ODEQ, ODFW, and TID are also on Reclamation's call list for notification prior to diverting water through the wasteway. Reclamation would continue cooperating with these agencies as stabilization efforts progress.

Chapter 5 – Environmental Commitments

In addition to the actions described as part of the alternatives, the following commitments are made by Reclamation.

Soil

- As much as possible, perform road construction and bank stabilization during dry periods and when flow is absent from the channel.
- As much as possible, restrict the use of the access road to Reclamation, its agents, successors, and assigns during dry conditions.
- Use foot traffic within the acquired right-of-way should a need arise to access the wasteway during non-dry periods.
- Should a rare instance require immediate vehicular access for emergency stabilization repairs during a wet period, Reclamation would also repair the access road as necessary.
- Use best management practices, as described in the construction contract specifications, to minimize environmental consequences caused by stabilizing activities or constructing the access road.
- Take standard and reasonable precautions to reduce erosion and limit sediment-laden runoff from leaving the construction site.
- Preserve the natural landscape and prevent unnecessary destruction, scarring, or defacing of the natural surroundings.
- Use hand labor when possible for bioengineering techniques to reduce or eliminate motorized or heavy equipment use and vehicular disturbance of existing soils.
- Arrange standard engineering technique clearing schedules to minimize the exposure of soils.
- At standard engineering sites, stockpile or deposit excavated materials away from streambanks, wetlands, or other watercourse perimeters where they could be washed away by storm runoff.

- Reseed areas of construction, including culvert installation sites, to prevent future erosion.
- As soon as a site is no longer needed for construction or access, initiate final erosion control and site restoration measures; such as restoring to original contours and making impassable to vehicular traffic when no longer needed.

Water

- Obtain and follow all conditions of the appropriate State of Oregon and Corps permits.
- Use best management practices, as described in the construction contract specifications, to minimize environmental consequences caused by stabilizing activities or constructing the access road.
- Take standard and reasonable precautions to reduce erosion and limit sediment-laden runoff from leaving the construction site.
- Incorporate site-specific erosion and sediment control measures to reduce sediment delivery into drainages.
- Protect water quality by avoiding construction activities as much as possible during wet periods or when flow is in the wasteway.
- Take standard mitigation measures during construction to prevent the entrance or accidental spillage of contaminants or other objectionable pollutants into surface waters.
- Use bioengineering techniques as much as possible to help reduce summer water temperatures.
- Reseed areas of construction, including culvert installation sites, to prevent future erosion.

Vegetation

- Continue working with landowners on suitable native vegetation species.
- Arrange work areas to preserve trees and vegetation to the maximum practicable extent.
- Preserve and protect all trees, shrubs, and other vegetation from construction equipment except where clearing operations are required for standard engineering structures or the access road.

- Limit vegetation removal to those plants that:
  - are causing erosion because of their location in relation to the flow,
  - are about to fall into the flow channel, or
  - are located where standard engineering structures would be placed to reduce bank erosion.
- Use hand labor when possible for bioengineering techniques to reduce the effects construction could have on vegetation.
- Use live cuttings of local native plant species to maximize the potential to restore revegetated areas to high quality habitat beneficial to wildlife.
- Acquire untreated wooden logs rather than cut live trees to build stabilizing structures.
- Reduce the amount of cleared, unvegetated soils by reseeding and revegetating with local native plant species.
- Lay trees cut for construction of the access road along the side of the access road for the landowner’s use.
- Burn, chip, or bury onsite slash or debris created during construction of the access road but not used for wasteway bank stabilization.
- Protect and preserve wetlands.
- Mitigate wetland losses as directed by the CWA 404 permit.

Fish and Wildlife

- As much as possible, perform road construction and bank stabilization during dry periods and when flow is absent from the channel. Reclamation will consult with ODFW regarding in-water work periods.
- Time construction to avoid degradation of downstream fish spawning and rearing habitat caused by the release of sediment or increased turbidity.
- Coordinate closely with fish and wildlife agencies to ensure potential impacts are either avoided or minimized.
- Work in concert with other efforts to preserve and protect local fish and wildlife species.
- Plan properly to produce efficiency and timely completion of construction activities with the least amount of people and heavy equipment working at any given time.
- Keep construction debris and rubble out of the channel to minimize construction impacts to the downstream fishery.

- To reduce the temporary effects construction could have on wildlife, use hand labor when possible for bioengineering techniques to reduce or eliminate motorized or heavy equipment use.

- Incorporate site-specific erosion and sediment control measures to reduce sediment delivery into drainages.

- Revegetate wasteway streambanks to provide shade and habitat for aquatic species and near-shore wildlife.

Historic Properties

- Minimize impacts to site deposits within the access road corridor.

- Align the access road route across 35-JA-493 at the west side of the right-of-way.

- Align the access road route across 35-JA-494 at the east side of the right-of-way.

- Monitor initial soil excavation at site 35-JA-493 to ensure immediate detection in the unlikely event of discovery of potentially significant subsurface deposits that were not revealed during test excavations.

- Comply with National Historic Preservation Act concerning discovery situations. Halt construction work immediately in the area of any historically significant find and notify a Reclamation archeologist. Make an initial assessment of the discovery and, if warranted, notify the SHPO and interested tribes and reinitiate site evaluation actions.

- Comply with requirements of State of Oregon burial laws if human remains are encountered.

- Have a monitor at necessary sites during initial construction.

Indian Sacred Sites

- Should any areas on Federal land be identified as needing stabilization, notify tribes and ask if they have any issues.

Cascade Siskiyou National Monument

- Contact and coordinate with BLM on wasteway matters within the boundaries of the Cascade Siskiyou National Monument and other BLM managed lands.

Chapter 6 — References

This chapter lists references mentioned throughout the EA. The list is organized according to the chapter in which a reference is mentioned and further organized alphabetically by the agency or author's name and then chronologically.

Glossary References

No references

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Chapter 2 References

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Chapter 4 References

No references

Chapter 5 References

No references

Attachments

- Attachment A – Endangered Species Act Correspondence
- Attachment B – National Historic Preservation Act Correspondence
- Attachment C – Tribal Consultation
- Attachment D – Mail Distribution List
- Attachment E – Public Involvement

Attachment A — Endangered Species Act Correspondence

- Reclamation requests for list of threatened and endangered species for Rogue River Basin Project
  - March 15, 2001, memorandum to USFWS
  - March 15, 2001, letter to NOAA Fisheries

- NOAA Fisheries Rogue River Basin Project referral to internet site: http://www.nwr.noaa.gov/lsalmon/salmesa/cohosoc/htm)

- April 16, 2001, USFWS Rogue River Basin Project response

- October 22, 2001, Reclamation memorandum to USFWS requesting updated threatened and endangered species list for Tyler Creek wasteway

- December 13, 2001, USFWS Tyler Creek wasteway response

- May 1, 2003, Reclamation memorandum to USFWS requesting updated threatened and endangered species list for Tyler Creek wasteway stabilization

- May 16, 2003, USFWS Tyler Creek wasteway stabilization response

United States Department of the Interior

BUREAU OF RECLAMATION
Pacific Northwest Region
Lower Columbia Area Office
825 NE Multnomah Street, Suite 1110
Portland, Oregon 97232-2135

IN REPLY REFER TO:

LCA-6101
ENV-7.00

MAR 15 2001

MEMORANDUM

To: State Supervisor, U.S. Fish and Wildlife Service
2600 SE 98th Avenue, Suite 100, Portland, OR 97266

From: for J. Eric Glover Romeo Wise
Area Manger

Subject: Request for List of Threatened and Endangered Species Under the Endangered Species Act - Bureau of Reclamation's Rogue River Basin Project

The Bureau of Reclamation (Reclamation) is proposing to upgrade access to the Tyler Creek Wasteway (Wasteway) and conduct bank stabilization and restoration activities. The storage system of the Rogue River Basin Project-Talent Division includes two high elevation reservoirs, Hyatt and Howard Prairie. Storage form these reservoirs is diverted to Keene Creek Reservoir, which serves as a forebay for the Green Springs Powerplant (Powerplant). Water from the Powerplant discharges into Emigrant Reservoir via Emigrant Creek and is subsequently regulated for irrigation within the Talent Irrigation District. The only alternative means of transferring water from Keene Creek Reservoir to Emigrant Reservoir is the Wasteway. Therefore, for periods when the Powerplant is out of service during the irrigation season, storage water is conveyed to Emigrant Reservoir through the Wasteway. The term Tyler Creek Wasteway is a misnomer in that the Wasteway is actually located in the South Fork of Schoolhouse Creek.

Use of the Wasteway is generally restricted in duration; however, during the spring of 1993, repairs and scheduled maintenance forced the shutdown of the Powerplant for virtually an entire irrigation season. As a consequence of the extended use of the Wasteway, damage to property outside Reclamation's existing right-of-way occurred. Reclamation has made an agreement with the property owners to conduct restoration activities in exchange for right-of-way access. Reclamation proposes construction of an unpaved road, including installing three culverts and one crossing ford to gain access to the Wasteway. Prior to the acquisition of the right-of-way, irrigators and Powerplant operators could not access the Wasteway directly. The construction of the road will make operation and maintenance of the Wasteway more feasible.

As part of Reclamation's National Environmental Policy Act (NEPA) compliance procedure, it is formally requesting information on any listed and/or proposed endangered and threatened species that may be present within the proposed project area, as required under the Federal Endangered Species Act (ESA) of 1973. We request that your ESA species list cover the townships below.

Jackson County, Oregon	T39S: R3E S32-33
	T40S: R3E S4-5

We would appreciate receiving the ESA species list at your earliest convenience. Please send your response and any other correspondence related to this NEPA process to our Lower Columbia Area Office, 825 NE Multnomah Street, Suite 1110, Portland, OR 97232, Attention - L.A. 6101. You should contact Mr. Chuck Korson, (541) 312-9323, if you have any questions during the course of this NEPA review.

United States Department of the Interior

BUREAU OF RECLAMATION
Pacific Northwest Region
Lower Columbia Area Office
825 NE Multnomah Street, Suite 1110
Portland, Oregon 97232-2135

IN REPLY REFER TO:

LCA-6101
ENV-7.00

MAR 15 2001

Mr. Michael P. Tehan
Chief, Oregon State Branch Habitat Conservation Division
National Marine Fisheries Service
525 NE Oregon Street
Portland, OR 97232

Subject: Request for List of Threatened and Endangered Species Under the Endangered Species Act - Bureau of Reclamation's Rogue River Basin Project

Dear Mr. Tehan:

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Sincerely,

Romeo Lino
for J. Eric Glover
Area Manager

Protected Resources
NOAA Fisheries National Marine Fisheries Service

COHO SALMON

Oncorhynchus kisutch

SOUTHERN OREGON/NORTHERN CALIFORNIA COASTS ESU

LISTED THREATENED

May 1997

ESU* STATUS AND DESCRIPTION: Listed as a threatened species on May 6, 1997. The ESU includes all naturally spawned populations of coho salmon in coastal streams between Cape Blanco, Oregon, and Punta Gorda, California.

** An Evolutionarily Significant Unit or "ESU" is a distinctive group of Pacific salmon, steelhead, or sea-run cutthroat trout.*

CRITICAL HABITAT:

Current Status - Designated on May 5, 1999.

Description - Critical habitat is designated to include all river reaches accessible to listed coho salmon between Cape Blanco and Punta Gorda. Excluded are areas above specific dams or above longstanding, naturally impassable barriers (i.e., natural waterfalls in existence for at least several hundred years). Major river basins containing spawning and rearing habitat for this ESU comprise approximately 18,090 square miles in California and Oregon. The following counties lie partially or wholly within watersheds inhabited by this ESU:California - Del Norte, Glenn, Humboldt, Lake, Mendocino, Siskiyou, and Trinity; Oregon - Coos, Curry, Douglas, Jackson, Josephine, and Klamath.

More detailed critical habitat information (i.e., specific watersheds, migration barriers, habitat features, and special management considerations) for this ESU can be found in the May 5, 1999 *Federal Register* notice.

PROTECTIVE REGULATIONS: On July 18, 1997, NMFS published an interim rule that identified several exceptions to the Endangered Species Act's Section 9 take prohibitions.

ESU MAPS AND DATA:

- View Detailed Oregon Coast Coho ESU Map (Adobe Acrobat PDF format)§
- View Range Map for all Coho ESUs
- Download coho salmon ESU data in Arc/Info export and shape file format
- Download E-sized plot files of West Coast coho salmon listings in RTL file format for large format

plotters

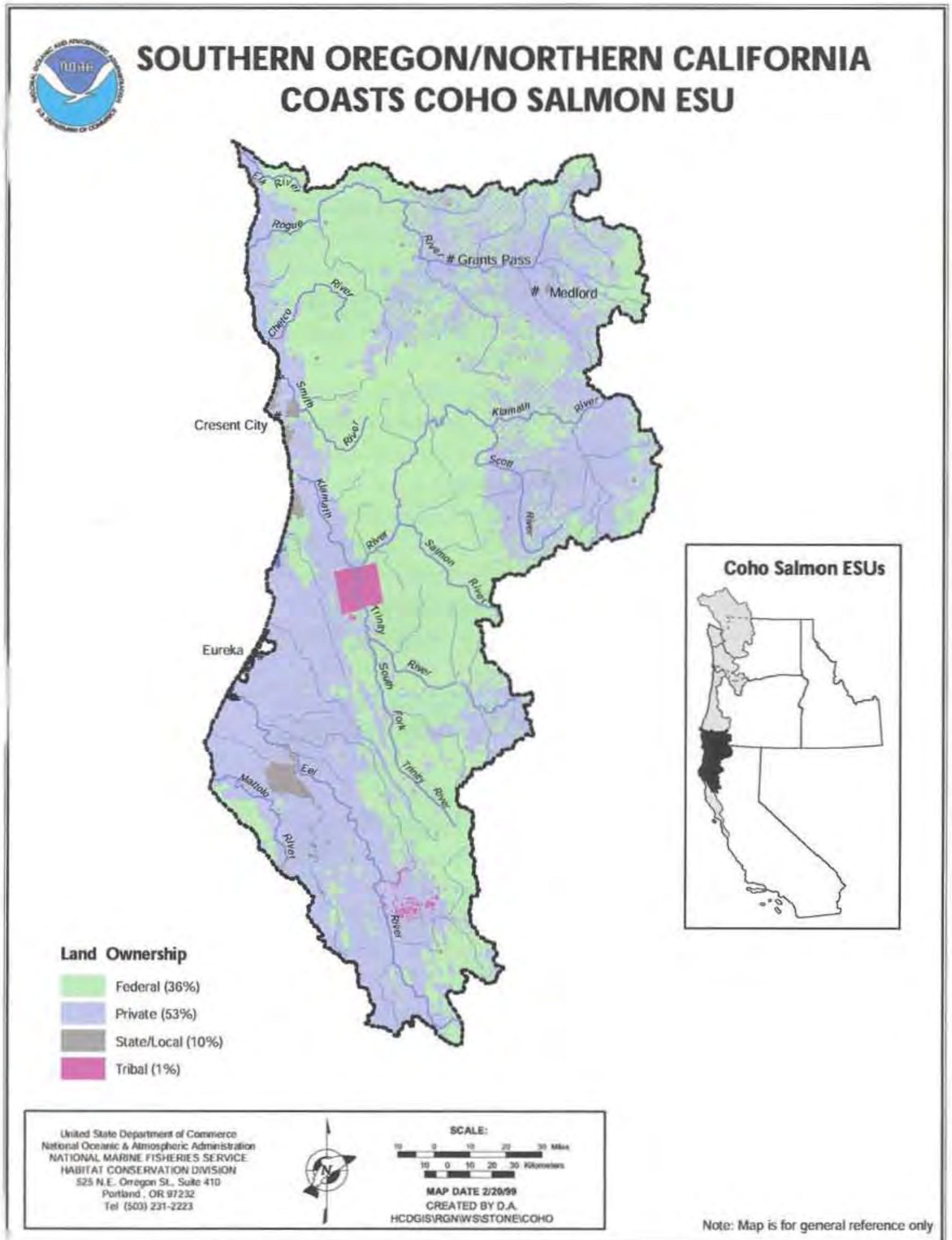
STATUS REVIEWS:
NOAA Technical Memorandum NMFS-NWFSC-24, September 1995
Status Review of Coho Salmon from Washington, Oregon, and California

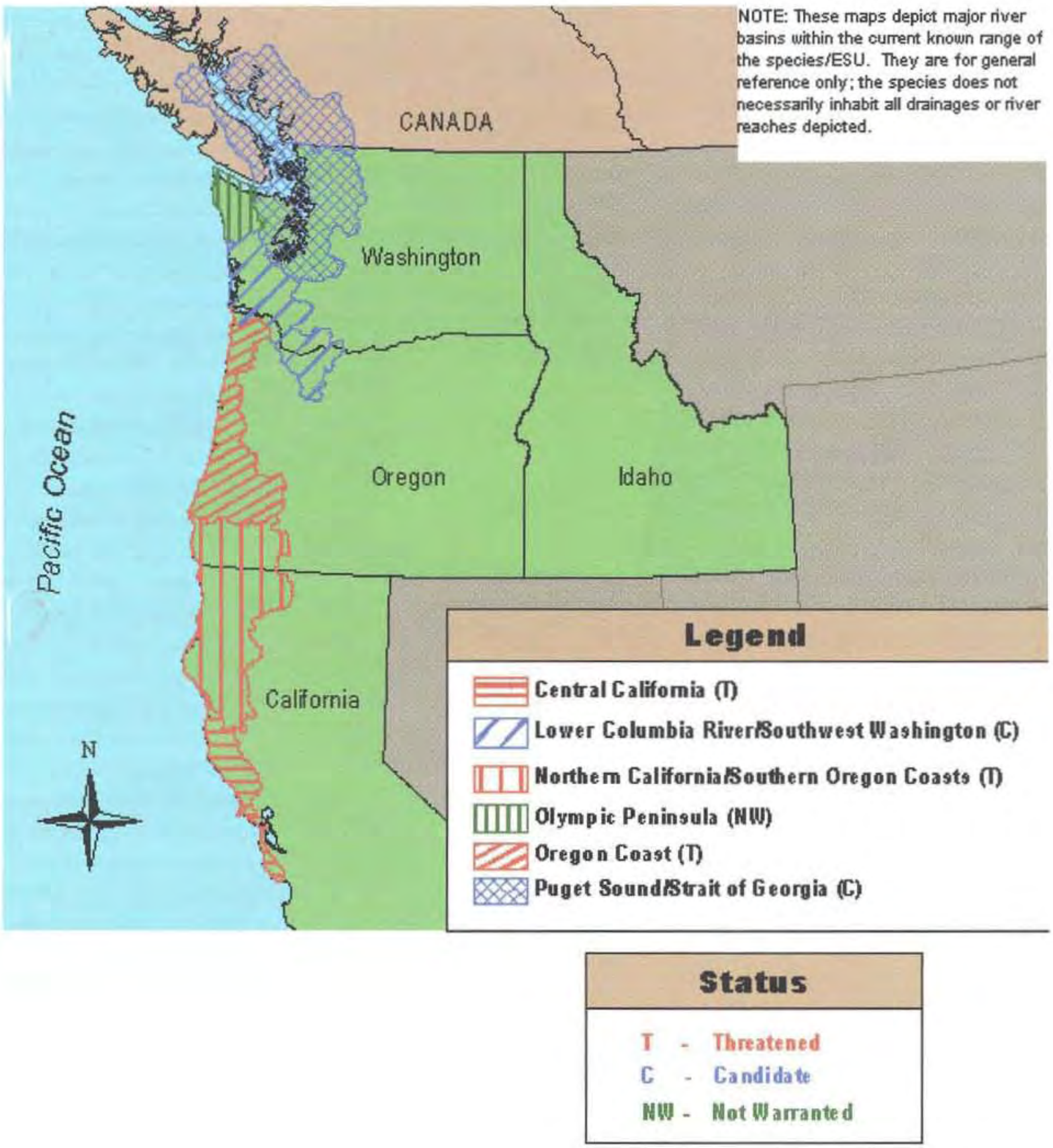
STATUS REVIEW UPDATE MEMOS:
Scientific disagreements regarding coho salmon under the ESA, 9/27/96 (0.5 mb pdf)
Conclusions regarding the updated status of west coast coho salmon, 12/20/96 (6 mb pdf)
Conclusions regarding the updated status of coho salmon from northern California and Oregon coasts, 4/3/97 (6.3 mb pdf)

FEDERAL REGISTER NOTICES:
View Federal Register Notices for Coho Salmon§

§You will need Adobe Acrobat Reader in order to view and print the detailed ESU map file and the Federal Register Notices. This program is available for free at the following link. Get Acrobat Reader

Home | Fact Sheets | Federal Register Notices | ESA Status Pages
Maps | Reports & Publications | Search | Contact Us
Updated November 16, 2000


SOUTHERN OREGON/NORTHERN CALIFORNIA
COASTS COHO SALMON ESU
Rogue
River
Grants Pass
Medford
Chetco
Smith
River
Cresent City
Klamath
River
Scott
River
Klamath
River
Salmon
River
Trinity
Eureka
River
South
Fork
Trinity
River
Eel
Mattole
River
River
Coho Salmon ESUs
Land Ownership
Federal (36%)
Private (53%)
State/Local (10%)
Tribal (1%)
United State Department of Commerce
National Oceanic & Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
HABITAT CONSERVATION DIVISION
525 N.E. Oregon St., Suite 410
Portland , OR 97232
Tel (503) 231-2223
N
SCALE:
10 0 10 20 30 Miles
10 0 10 20 30 Kilometers
MAP DATE 2/20/99
CREATED BY D.A.
HCDGIS\RGN\WS\STONE\COHO
Note: Map is for general reference only


NOTE: These maps depict major river basins within the current known range of the species/ESU. They are for general reference only; the species does not necessarily inhabit all drainages or river reaches depicted.
CANADA
Washington
Oregon
Idaho
California
Pacific Ocean
N
Legend
Central California (T)
Lower Columbia River/Southwest Washington (C)
Northern California/Southern Oregon Coasts (T)
Olympic Peninsula (NW)
Oregon Coast (T)
Puget Sound/Strait of Georgia (C)
Status
T - Threatened
C - Candidate
NW - Not Warranted

Protected Resources
NOAA Fisheries National Marine Fisheries Service

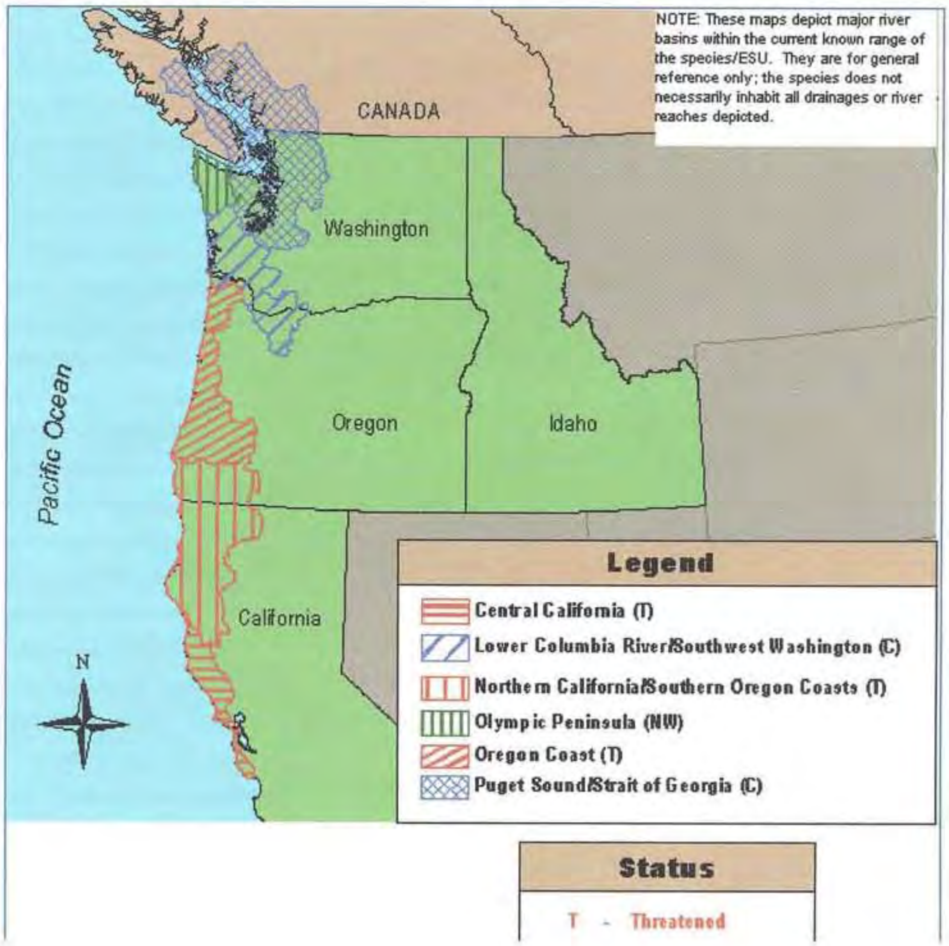
COHO SALMON

Oncorhynchus kisutch

COHO LISTING STATUS MAP

Click on an ESU or legend name below, or on the ESU name in the table provided to view a detailed map in Adobe Acrobat PDF Format.§

** An Evolutionarily Significant Unit or "ESU" is a distinctive group of Pacific salmon, steelhead, or sea-run cutthroat trout.*



ESU Name	File Size (PDF)§
Central California	267 K
Lower Columbia River/Southwest Washington	570 K
Northern California/Southern Oregon Coasts	588 K
Olympic Peninsula	367 K
Oregon Coast	514 K
Puget Sound/Strait of Georgia	515 K

§You will need Adobe Acrobat Reader in order to view and print the map files listed on this page. This program is available for free at the following link. Get Acrobat Reader

Updated November 16, 2000

NOAA Technical Memorandum NMFS-NWFSC-24

Status Review of Coho Salmon from Washington, Oregon, and California

Laurie A. Weitkamp, Thomas C. Wainwright, Gregory J. Bryant*, George B. Milner,
David J. Teel, Robert G. Kope, and Robin S. Waples

National Marine Fisheries Service
Northwest Fisheries Science Center
Coastal Zone and Estuarine Studies Division
2725 Montlake Blvd. E.
Seattle WA 98112-2097

and

***National Marine Fisheries Service**
Southwest Region
Protected Species Management Division
501 W. Ocean Blvd., Suite 4200, Long Beach, CA 90802-4213
September 1995

U.S. DEPARTMENT OF COMMERCE
Ronald H. Brown, Secretary

National Oceanic and Atmospheric Administration
D. James Baker, Administrator

National Marine Fisheries Service
Rolland A. Schmitten, Assistant Administrator for Fisheries

NOAA-NWFSC Tech Memo-24: Status Review of Coho Salmon

CONTENTS

EXECUTIVE SUMMARY

The Endangered Species Act (ESA) allows listing of distinct population segments of vertebrates as well as named species and subspecies. The policy of the National Marine Fisheries Service (NMFS) on this issue for Pacific salmon and steelhead is that a population will be considered distinct for purposes of the ESA if it represents an evolutionarily significant unit (ESU) of the species as a whole. To be considered an ESU, a population or group of populations must 1) be substantially reproductively isolated from other populations, and 2) contribute substantially to ecological/genetic diversity of the biological species. Once an ESU is identified, a variety of factors related to population abundance are considered in determining whether a listing is warranted.

In October 1993, in response to three petitions seeking protection for coho salmon under the ESA, NMFS initiated a status review of coho salmon in Washington, Oregon, and California, and formed a Biological Review Team (BRT) to conduct the review. This report summarizes biological and environmental information gathered in that process.

Proposed Coho Salmon ESUs

The BRT examined genetic, life history, biogeographic, geologic, and environmental information to identify where ESU boundaries should be located. In particular, physical environment and ocean conditions/upwelling patterns, estuarine and freshwater fish distributions, and coho salmon river entry and spawn timing and marine coded-wire-tag recovery patterns were found to be the most informative for this process. Based on this examination, the BRT identified six coho salmon ESUs in Washington, Oregon, and California. The geographic boundaries of the six proposed ESUs are as follows:

1. Central California coast. The geographic boundaries of this ESU extend from Punta Gorda in northern California south to and including the San Lorenzo River in central California, and include tributaries to San Francisco Bay, excluding the Sacramento-San Joaquin River system.
2. Southern Oregon/northern California coasts. This ESU includes coho salmon from Cape Blanco in southern Oregon to Punta Gorda in northern California.
3. Oregon coast. This ESU covers coastal drainages along most of the Oregon coast from Cape Blanco to the mouth of the Columbia River.
4. Lower Columbia River/southwest Washington coast. Historically, this ESU probably included coho salmon from all tributaries of the Columbia River below the Klickitat River on the Washington side and below the Deschutes River on the Oregon side (including Willamette River as far upriver as the Willamette Falls), as well as coastal drainages in southwest Washington between the Columbia River and Point Grenville (between the Copalis and Quinault Rivers).
5. Olympic Peninsula. The geographic boundaries of this ESU are entirely within Washington, including coastal drainages from Point Grenville to and including Salt Creek (directly west of the Elwha River).
6. Puget Sound/Strait of Georgia. This ESU includes coho salmon from drainages of Puget Sound and Hood Canal, the eastern Olympic Peninsula (east of Salt Creek), and the Strait of Georgia from the eastern side of Vancouver Island and the British Columbia mainland (north to and including Campbell and Powell Rivers), excluding the upper Fraser River above Hope.

Assessment of Extinction Risk

The ESA (section 3) defines the term endangered species as any species which is in danger of extinction throughout all or a significant portion of its range. The term threatened species is defined as any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. According to the ESA, the determination whether a species is threatened or endangered should be made on the basis of the best scientific information available regarding its current status, after taking into consideration conservation measures that are proposed or are in place. In this review, the BRT did not evaluate likely or possible effects of conservation measures and, therefore, did not make recommendations as to whether identified ESUs should be listed as threatened or endangered species; rather, the BRT drew scientific conclusions about the risk of extinction faced by identified ESUs under the assumption that present conditions will continue. The resulting conclusions for each ESU follow.

1. Central California coast. There was unanimous agreement among the BRT that natural populations of coho salmon in this ESU are presently in danger of extinction. The chief reasons for this assessment were extremely low current abundance, especially compared to historical abundance, widespread local extinctions, clear downward trends in abundance, extensive habitat degradation and associated decreased carrying capacity, and a long history of artificial propagation with the use of non-native stocks. In addition, recent droughts and current ocean conditions may have further

reduced run sizes.

2. Southern Oregon/northern California coasts. There was unanimous agreement among the BRT that coho salmon in this ESU are not in danger of extinction but are likely to become endangered in the foreseeable future if present trends continue. Current run size, the severe decline from historical run size, the frequency of local extinctions, long-term trends that are clearly downward, degraded habitat and associated reduction in carrying capacity, and widespread hatchery production using exotic stocks are all factors that contributed to the assessment. Like the central California ESU, recent droughts and current ocean conditions may have further reduced run sizes.

3. Oregon coast. The BRT concluded that coho salmon in this ESU are not in danger of extinction but are likely to become endangered in the future if present trends continue. The BRT reached this conclusion based on low recent abundance estimates that are 5-10% of historical abundance estimates, clearly downward long-term trends, recent spawner-to-spawner ratios that are below replacement, extensive habitat degradation, and widespread hatchery production of coho salmon. Drought and current ocean conditions may have also reduced run sizes.

4. Lower Columbia River/southwest Washington coast. Previously, NMFS concluded that it could not identify any remaining natural populations of coho salmon in the lower Columbia River (excluding the Clackamas River) that warranted protection under the ESA. The Clackamas River produces moderate numbers of natural coho salmon. The BRT could not reach a definite conclusion regarding the relationship of Clackamas River late-run coho salmon to the historic lower Columbia River ESU. However, the BRT did conclude that if the Clackamas River late-run coho salmon is a native run that represents a remnant of a lower Columbia River ESU, the ESU is not presently in danger of extinction but is likely to become so in the foreseeable future if present conditions continue.

   For southwest Washington coho salmon, uncertainty about the ancestry of coho salmon runs given high historical and current levels of artificial production prevented the BRT from reaching a definite conclusion regarding the relationship between coho salmon in that area and the historical lower Columbia River/southwest Washington ESU. If new information becomes available, the relationship and status of the ESU will be reexamined.

5. Olympic Peninsula. While there is continuing cause for concern about habitat destruction and hatchery practices within this ESU, the BRT concluded that there is sufficient native, natural, self-sustaining production of coho salmon that this ESU is not in danger of extinction and is not likely to become endangered in the foreseeable future unless conditions change substantially.

6. Puget Sound/Strait of Georgia. The BRT was concerned that if present trends continue, this ESU is likely to become endangered in the foreseeable future. Although current population abundance is near historical levels and recent trends in overall population abundance have not been downward, there is substantial uncertainty relating to several of the risk factors considered. These risk factors include widespread and intensive artificial propagation, high harvest rates, extensive habitat degradation, a recent dramatic decline in adult size, and unfavorable ocean conditions. Further consideration of this ESU is warranted to attempt to clarify some of these uncertainties.

ACKNOWLEDGMENTS

The status review for west coast coho salmon was conducted by a team of researchers from the National

Marine Fisheries Service (NMFS). This biological review team relied on information in the Endangered Species Act Administrative Record for West Coast Coho Salmon, which was developed pursuant to this review and includes comments, data, and reports submitted by the public and by state, tribal, and federal agencies. The authors acknowledge the efforts of all who contributed to this record, especially the Washington Department of Fish and Wildlife, Oregon Department of Fish and Wildlife, California Department of Fish and Game, U.S. Fish and Wildlife Service, and Northwest Indian Fisheries Commission.

The biological review team for this status review included: Peggy Busby, Dr. David Damkaer, Robert Emmett, Dr. Jeffrey Hard, Dr. Orlay Johnson, Dr. Robert Kope (formerly with the Southwest Fisheries Science Center), Dr. Conrad Mahnken, Gene Matthews, George Milner, Dr. Michael Schiewe, David Teel, Dr. Thomas Wainwright, William Waknitz, Dr. Robin Waples, Laurie Weitkamp, Dr. John Williams, and Dr. Gary Winans, all from the Northwest Fisheries Science Center (NWFSC), and Gregory Bryant from the NMFS Southwest Region. Craig Wingert, from the NMFS Southwest Region, and Steven Stone, from the NMFS Northwest Regional Office, also participated in the discussions and provided information on coho salmon life history and abundance.

Jason Griffith and Megan Ferguson, students from the University of Washington, were instrumental in compiling information on coho salmon hatcheries. Don Vandoornik and Dave Kuligowski (NWFSC) collected new genetic data for the status review, and Kathleen Neely (NWFSC) provided most of the graphics for this document and assisted in the completion of this status review in numerous other ways.

Return to Table of Contents

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Oregon Fish and Wildlife Office
2600 S.E. 98th Avenue, Suite 100
Portland, Oregon 97266
(503) 231-6179 FAX: (503) 231-6195

BUREAU OF RECLAMATION OFFICIAL FILE COPY
APR 18 2001
TO	INIT	DATE
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6101		

FILE April 16 2001
CC-CKORSON
WGREEN

Reply To: 8330.4031(01)
File Name: Sp403.wpd
OARS Number: 01-1688

J. Eric Glover
U.S. Bureau of Reclamation
825 NE Multnomah Street Suite 1110
Portland, OR 97232-2135

Subject: Tyler Creek Wasteway Access Upgrade and Bank Stabilization and Restoration Project (1-7-01-SP-403).

Dear Mr. Glover:

This is in response to your memorandum, dated March 15, 2001, requesting information on listed and proposed endangered and threatened species that may be present within the area of the Tyler Creek Wasteway Access Upgrade and Bank Stabilization and Restoration Project in Jackson County. The U.S. Fish and Wildlife Service (Service) received your correspondence on March 16, 2001.

We have attached a list (Attachment A) of threatened and endangered species that may occur within the area of the Tyler Creek Wasteway Access Upgrade and Bank Stabilization and Restoration Project. The list fulfills the requirement of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). U.S. Bureau of Reclamation (BR) requirements under the Act are outlined in Attachment B.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems on which they depend may be conserved. Under section 7(a)(1) and 7(a)(2) of the Act and pursuant to 50 CFR 402 *et seq.*, BR is required to utilize their authorities to carry out programs which further species conservation and to determine whether projects may affect threatened and endangered species, and/or critical habitat. A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) which are major Federal actions significantly affecting the quality of the human environment as defined in NEPA (42 U.S.C. 4332 (2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to the Biological Assessment be prepared to determine whether they may affect listed and proposed species. Recommended contents of a Biological Assessment are described in Attachment B, as well as 50 CFR 401.12.

If BR determines, based on the Biological Assessment or evaluation, that threatened and endangered species and/or critical habitat may be affected by the project, BR is required to consult with the Service following the requirements of 50 CFR 402 which implement the Act.

Attachment A includes a list of candidate species under review for listing. The list reflects changes to the candidate species list published October 25, 1999, in the Federal Register (Vol. 64, No. 205, 57534) and the addition of "species of concern." Candidate species have no protection under the Act but are included for consideration as it is possible candidates could be listed prior to project completion. Species of concern are those taxa whose conservation status is of concern to the Service (many previously known as Category 2 candidates), but for which further information is still needed.

If a proposed project may affect candidate species or species of concern, BR is not required to perform a Biological Assessment or evaluation or consult with the Service. However, the Service recommends addressing potential impacts to these species in order to prevent future conflicts. Therefore, if early evaluation of the project indicates that it is likely to adversely impact a candidate species or species of concern, BR may wish to request technical assistance from this office.

Your interest in endangered species is appreciated. The Service encourages BR to investigate opportunities for incorporating conservation of threatened and endangered species into project planning processes as a means of complying with the Act. If you have questions regarding your responsibilities under the Act, please contact Cindy Bright at (503) 231-6179, or Scott Center at (541) 957-3472. For questions regarding anadromous fish, please contact National Marine Fisheries Service, 525 NE Oregon Street, Suite 500, Portland, Oregon 97232, (503) 230-5400. All correspondence should include the above referenced file number.

Sincerely,

Nancy K. Lee

for Kemper M. McMaster
State Supervisor

Attachments
1-7-01-SP-403
cc: OFWO-ES
ODFW (nongame)
cc:Chuck Korson BR

ATTACHMENT A

FEDERALLY LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES, CANDIDATE SPECIES AND SPECIES OF CONCERN THAT MAY OCCUR WITHIN THE AREA OF THE TYLER CREEK WASTEWAY ACCESS UPGRADE AND BANK STABILIZATION AND RESTORATION PROJECT
1-7-01-SP-403

LISTED SPECIES[1/]

Birds		
Bald eagle	*Haliaeetus leucocephalus*	T
Northern spotted owl[2/]	*Strix occidentalis caurina*	CH T
Fish		
Coho salmon (S. Oregon/N. Calif. Coast)[3/]	*Oncorhynchus kisutch*	**T
Plants		
Gentner mission-bells[4/]	*Fritillaria gentneri*	E

PROPOSED SPECIES

Fish		
Steelhead (Klamath Mountains Province)[5/]	*Oncorhynchus mykiss*	PT

CANDIDATE SPECIES[6/]

Amphibians and Reptiles	
Oregon spotted frog	*Rana pretiosa*
Invertebrates	
Mardon skipper butterfly	*Polites mardon*

SPECIES OF CONCERN

Mammals	
Pallid bat	*Antrozous pallidus pacificus*
Pacific western big-eared bat	*Corynorhinus (=Plecotus) townsendii townsendii*
Silver-haired bat	*Lasionycteris noctivagans*
Pacific fisher	*Martes pennanti pacifica*
Long-eared myotis (bat)	*Myotis evotis*
Fringed myotis (bat)	*Myotis thysanodes*
Long-legged myotis (bat)	*Myotis volans*
Yuma myotis (bat)	*Myotis yumanensis*
Birds	
Northern goshawk	*Accipiter gentilis*
Band-tailed pigeon	*Columba fasciata*
Olive-sided flycatcher	*Contopus cooperi (=borealis)*
Yellow-breasted chat	*Icteria virens*
Acorn woodpecker	*Melanerpes formicivorous*
Lewis' woodpecker	*Melanerpes lewis*
Mountain quail	*Oreortyx pictus*
White-headed woodpecker	*Picoides albolarvatus*

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Amphibians and Reptiles	
Tailed frog	*Ascaphus truei*
Northwestern pond turtle	*Clemmys marmorata marmorata*
Common kingsnake	*Lampropeltis getula*
California mountain kingsnake	*Lampropeltis zonata*
Siskiyou Mountains salamander	*Plethodon stormi*
Northern red-legged frog	*Rana aurora aurora*
Foothill yellow-legged frog	*Rana boylii*
Cascades frog	*Rana cascadae*
Fish	
Pacific lamprey	*Lampetra tridentata*
Coastal cutthroat trout (S. OR/CA Coasts)	*Oncorhynchus clarki clarki*
Invertebrates	
Denning's agapetus caddisfly	*Agapetus denningi*
Franklin's bumblebee	*Bombus franklini*
Siskiyou chloealtis grasshopper	*Chloealtis aspasma*
Green Springs Mountain farulan caddisfly	*Farula davisi*
Sagehen Creek goeracean caddisfly	*Goeracea oregona*
Schuh's homoplectran caddisfly	*Homoplectra schuhi*
caddisfly (no common name)	*Moselyana comosa*
Siskiyou gazelle beetle	*Nebria gebleri siskiyouensis*
Plants	
Wayside aster	*Aster vialis*
Crenulate grape-fern	*Botrychium crenulatum*
Greene's mariposa-lily	*Calochortus greenei*
Clustered lady's-slipper	*Cypripedium fasciculatum*
Detling's microseris	*Microseris laciniata* ssp. *detlingii*

(E) - Listed Endangered *(T) - Listed Threatened* *(CH) - Critical Habitat has been designated for this species*
(PE) - Proposed Endangered *(PT) - Proposed Threatened* *(PCH) - Critical Habitat has been proposed for this species*

Species of Concern - Taxa whose conservation status is of concern to the Service (many previously known as Category 2 candidates), but for which further information is still needed.

(CF) - Candidate: National Marine Fisheries Service designation for any species being considered by the Secretary for listing for endangered or threatened species, but not yet the subject of a proposed rule.

*** Consultation with National Marine Fisheries Service required.*

[1] *U. S. Department of Interior, Fish and Wildlife Service, October 31, 2000, Endangered and Threatened Wildlife and Plants, 50 CFR 17.11 and 17.12.*

[2] *Federal Register Vol. 57, No. 10, January 15, 1992, Final Rule-Critical Habitat for the Northern Spotted Owl*

[3] *Federal Register Vol. 62, No. 87, May 6, 1997, Final Rule-Coho salmon*

[4] *Federal Register Vol. 64, No. 237, December 10, 1999, Final Rule -Fritillaria gentneri*

[5] *Federal Register Vol. 66, No. 29, February 12, 2001, Proposed Rule-Klamath Mountains Province Steelhead*

[6] *Federal Register Vol. 64, No. 205, October 25, 1999, Notice of Review-Candidate or Proposed Animals and Plants*

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ATTACHMENT B

FEDERAL AGENCIES RESPONSIBILITIES UNDER SECTION 7(a) and (c) OF THE ENDANGERED SPECIES ACT

SECTION 7(a)-Consultation/Conference

Requires:

1) Federal agencies to utilize their authorities to carry out programs to conserve endangered and threatened species;

2) Consultation with FWS when a Federal action may affect a listed endangered or threatened species to insure that any action authorized, funded or carried out by a Federal agency is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of Critical Habitat. The process is initiated by the Federal agency after they have determined if their action may affect (adversely or beneficially) a listed species; and

3) Conference with FWS when a Federal action is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed Critical Habitat.

SECTION 7(c)-Biological Assessment for Major Construction Projects[1]

Requires Federal agencies or their designees to prepare a Biological Assessment (BA) for construction projects only. The purpose of the BA is to identify proposed and/or listed species which are/is likely to be affected by a construction project. The process is initiated by a Federal agency in requesting a list of proposed and listed threatened and endangered species (list attached). The BA should be completed within 180 days after its initiation (or within such a time period as is mutually agreeable). If the BA is not initiated within 90 days of receipt of the species list, the accuracy of the species list should be informally verified with our Service. No irreversible commitment of resources is to be made during the BA process which would foreclose reasonable and prudent alternatives to protect endangered species. Planning, design, and administrative actions may be taken; however, no construction may begin.

To complete the BA, your agency or its designee should: (1) conduct and on-site inspection of the area to be affected by the proposal which may include a detailed survey of the area to determine if the species is present and whether suitable habitat exists for either expanding the existing population or for potential reintroduction of the species; (2) review literature and scientific data to determine species distribution, habitat needs, and other biological requirements; (3) interview experts including those within FWS, National Marine Fisheries Service, State conservation departments, universities, and others who may have data not yet published in scientific literature; (4) review and analyze the effects of the proposal on the species in terms of individuals and populations, including consideration of cumulative effects of the proposal on the species and its habitat; (5) analyze alternative actions that may provide conservation measures and (6) prepare a report documenting the results, including a discussion of study methods used, nay problems encountered, and other relevant information. The BA should conclude whether or not a listed species will be affected. Upon completion, the report should be forwarded to our Portland Office.

---

[1]A construction project (or other undertaking having similar physical impacts) which is a major Federal action significantly affecting the quality of the human environment as referred to in NEPA (42 U.S.C. 4332. (2)c). On projects other that construction, it is suggested that a biological evaluation similar to the biological assessment be undertaken to conserve species influenced by the Endangered Species Act.

United States Department of the Interior

BUREAU OF RECLAMATION
Pacific Northwest Region
Lower Columbia Area Office
825 NE Multnomah Street, Suite 1110
Portland, Oregon 97232-2135

IN REPLY REFER TO:
LCA-6101
ENV-7.00

OCT 22 2001

MEMORANDUM

To: State Supervisor, U.S. Fish and Wildlife Service
2600 S.E. 98th Avenue, Suite 100, Portland, OR 97266

From: David R. Nelson
Acting Area Manager, Lower Columbia Area Office

Subject: Request for Updated Threatened and Endangered Species List for Tyler Creek "Wasteway" Proposed Restoration

On March 15, 2001 the Bureau of Reclamation (Reclamation) requested a list of threatened and endangered species occurring within our proposed Tyler Creek "Wasteway" maintenance road construction and restoration project in preparation for National Environmental Policy Act (NEPA) compliance. On April 18, 2001 we received your list (number 1-7-01-SP-403). Reclamation's NEPA and other planning activities for this project are ongoing and at this time we would like to request the Fish and Wildlife Service verify the accuracy of our list and send an updated list if any changes have occurred. We request that your Endangered Species Act (ESA) species list cover the following townships:

Jackson County, Oregon   T39S: R3E S32-33
T40S: R3E S4-5

Please send your response to the address above, attention LCA-6101. If you have any questions please contact Tanya Sommer at 503-872-2795 or you can reach her by email at tsommer@pn.usbr.gov.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Oregon Fish and Wildlife Office
2600 S.E. 98th Avenue, Suite 100
Portland, Oregon 97266
(503) 231-6179 FAX: (503) 231-6195

DEC 17 2001

1000
6101
Copy to Chuck

Reply To: 8330.0791(02)
File Name: Sp079.wpd
Tracking Number: 02-440

December 13, 2001

David R. Nelson
U.S. Bureau of Reclamation
825 NE Multnomah Street, Suite 1110
Portland, OR 97232-2135

Subject: Tyler Creek "Wasteway" Maintenance Project (1-7-02-SP-079).

Dear Mr. Nelson:

This is in response to your memorandum, dated October 22, 2001, requesting information on listed and proposed endangered and threatened species that may be present within the area of the Tyler Creek "Wasteway" Maintenance Project in Jackson County. The U.S. Fish and Wildlife Service (Service) received your correspondence on October 23, 2001.

We have attached a list (Attachment A) of threatened and endangered species that may occur within the area of the Tyler Creek "Wasteway" Maintenance Project. The list fulfills the requirement of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). U.S. Bureau of Reclamation (BR) requirements under the Act are outlined in Attachment B.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems on which they depend may be conserved. Under section 7(a)(1) and 7(a)(2) of the Act and pursuant to 50 CFR 402 *et seq.*, BR is required to utilize their authorities to carry out programs which further species conservation and to determine whether projects may affect threatened and endangered species, and/or critical habitat. A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) which are major Federal actions significantly affecting the quality of the human environment as defined in National Environmental Policy Act (NEPA) (42 U.S.C. 4332 (2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to the Biological Assessment be prepared to determine whether they may affect listed and proposed species. Recommended contents of a Biological Assessment are described in Attachment B, as well as 50 CFR 402.12.

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If BR determines, based on the Biological Assessment or evaluation, that threatened and endangered species and/or critical habitat may be affected by the project, BR is required to consult with the Service following the requirements of 50 CFR 402 which implement the Act.

Attachment A includes a list of candidate species under review for listing. The list reflects changes to the candidate species list published October 30, 2001, in the Federal Register (Vol. 66, No. 210, 54808) and the addition of "species of concern." Candidate species have no protection under the Act but are included for consideration as it is possible candidates could be listed prior to project completion. Species of concern are those taxa whose conservation status is of concern to the Service (many previously known as Category 2 candidates), but for which further information is still needed.

If a proposed project may affect only candidate species or species of concern, BR is not required to perform a Biological Assessment or evaluation or consult with the Service. However, the Service recommends addressing potential impacts to these species in order to prevent future conflicts. Therefore, if early evaluation of the project indicates that it is likely to adversely impact a candidate species or species of concern, BR may wish to request technical assistance from this office.

Your interest in endangered species is appreciated. The Service encourages BR to investigate opportunities for incorporating conservation of threatened and endangered species into project planning processes as a means of complying with the Act. If you have questions regarding your responsibilities under the Act, please contact Jeff Dillon at (503) 231-6179 or Cindy Bright at (541)957-3479. All correspondence should include the above referenced file number. For questions regarding salmon and steelhead trout, please contact National Marine Fisheries Service, 525 NE Oregon Street, Suite 500, Portland, Oregon 97232, (503) 230-5400.

Sincerely,

Donald R Prognlska

for Kemper M. McMaster
State Supervisor

Attachments
1-7-02-SP-079

cc: OFWO-ES
ODFW (nongame)

Printed on 100% chlorine free/60% post-consumer content paper.

ATTACHMENT A

FEDERALLY LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES, CANDIDATE SPECIES AND SPECIES OF CONCERN THAT MAY OCCUR WITHIN THE AREA OF THE TYLER CREEK "WASTEWAY" MAINTENANCE PROJECT
1-7-02-SP-079

LISTED SPECIES[1/]

Birds		
Bald eagle[2/]	*Haliaeetus leucocephalus*	T
Northern spotted owl[3/]	*Strix occidentalis caurina*	CH T
Fish		
Coho salmon (S. Oregon/N. Calif. Coast)[4/]	*Oncorhynchus kisutch*	**T
Plants		
Gentner mission-bells[5/]	*Fritillaria gentneri*	E

PROPOSED SPECIES

None

CANDIDATE SPECIES[6/]

Amphibians and Reptiles	
Oregon spotted frog	*Rana pretiosa*
Invertebrates	
Mardon skipper butterfly	*Polites mardon*

SPECIES OF CONCERN

Mammals	
Pallid bat	*Antrozous pallidus pacificus*
Pacific big-eared bat	*Corynorhinus (=Plecotus) townsendii townsendii*
Silver-haired bat	*Lasionycteris noctivagans*
Pacific fisher	*Martes pennanti pacifica*
Long-eared myotis (bat)	*Myotis evotis*
Fringed myotis (bat)	*Myotis thysanodes*
Long-legged myotis (bat)	*Myotis volans*
Yuma myotis (bat)	*Myotis yumanensis*

Birds	
Northern goshawk	*Accipiter gentilis*
Band-tailed pigeon	*Columba fasciata*
Olive-sided flycatcher	*Contopus cooperi (=borealis)*
Yellow-breasted chat	*Icteria virens*
Acorn woodpecker	*Melanerpes formicivorous*
Lewis' woodpecker	*Melanerpes lewis*
Mountain quail	*Oreortyx pictus*
White-headed woodpecker	*Picoides albolarvatus*
Amphibians and Reptiles	
Tailed frog	*Ascaphus truei*
Northwestern pond turtle	*Clemmys marmorata marmorata*
Common kingsnake	*Lampropeltis getula*
California mountain kingsnake	*Lampropeltis zonata*
Siskiyou Mountains salamander	*Plethodon stormi*
Northern red-legged frog	*Rana aurora aurora*
Foothill yellow-legged frog	*Rana boylii*
Cascades frog	*Rana cascadae*
Northern sagebrush lizard	*Sceloporus graciosus graciosus*
Fish	
Pacific lamprey	*Lampetra tridentata*
Coastal cutthroat trout (S. OR/CA Coasts)	*Oncorhynchus clarki clarki*
Invertebrates	
Denning's agapetus caddisfly	*Agapetus denningi*
Franklin's bumblebee	*Bombus franklini*
Siskiyou chloealtis grasshopper	*Chloealtis aspasma*
Green Springs Mountain farulan caddisfly	*Farula davisi*
Sagehen Creek goeracean caddisfly	*Goeracea oregona*
Schuh's homoplectran caddisfly	*Homoplectra schuhi*
caddisfly (no common name)	*Moselyana comosa*
Siskiyou gazelle beetle	*Nebria gebleri siskiyouensis*
Plants	
Wayside aster	*Aster vialis*
Crenulate grape-fern	*Botrychium crenulatum*
Greene's mariposa-lily	*Calochortus greenei*
Clustered lady's-slipper	*Cypripedium fasciculatum*
Detling's microseris	*Microseris laciniata* ssp. *detlingii*

(E) - Listed Endangered *(T) - Listed Threatened* *(CH) - Critical Habitat has been designated for this species*

(PE) - Proposed Endangered *(PT) - Proposed Threatened* *(PCH) - Critical Habitat has been proposed for this species*

Species of Concern - Taxa whose conservation status is of concern to the Service (many previously known as Category 2 candidates), but for which further information is still needed.

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** *Consultation with National Marine Fisheries Service may be required.*

1/ *U. S. Department of Interior, Fish and Wildlife Service, October 31, 2000, Endangered and Threatened Wildlife and Plants, 50 CFR 17.11 and 17.12*

2/ *Federal Register Vol. 60, No. 133, July 12, 1995 - Final Rule - Bald Eagle*

3/ *Federal Register Vol. 57, No. 10, January 15, 1992, Final Rule-Critical Habitat for the Northern Spotted Owl*

4/ *Federal Register Vol. 62, No. 87, May 6, 1997, Final Rule-Coho salmon*

5/ *Federal Register Vol. 64, No. 237, December 10 , 1999, Final Rule -Fritillaria gentneri*

6/ *Federal Register Vol. 66, No. 210, October 30, 2001, Notice of Review - Candidate or Proposed Animals and Plants*

United States Department of the Interior

BUREAU OF RECLAMATION
Pacific Northwest Region
Lower Columbia Area Office
825 NE Multnomah Street, Suite 1110
Portland, Oregon 97232-2135

IN REPLY REFER TO:

LCA-6500
ENV-7.00

MAY - 1 2003

VIA FACSIMILE AND U.S. MAIL

MEMORANDUM

To: State Supervisor, U.S. Fish and Wildlife Service, Oregon State Office
2600 S.E. 98th Avenue, Suite 100, Portland, OR 97266
Attn: Kemper M. McMaster

From: Karen A. Blakney *Karen A. Blakney*
ESA Program Manager

Subject: Request for Updated Threatened and Endangered Species List for Tyler Creek "Wasteway" Stabilization Project

On March 15, 2001 and again on October 22, 2001 the Bureau of Reclamation requested a list of threatened and endangered species occurring within our proposed Tyler Creek "Wasteway" Stabilization Project in Jackson County. We received your lists numbered 1-7-01-SP-403 and 1-7-02-SP-079 on April 18, 2001 and December 17, 2001, respectively.

We are nearing completion of our draft environmental assessment, prepared for National Environmental Policy Act (NEPA) Compliance. We request an updated Endangered Species Act (ESA) list for the following townships:

Jackson County, Oregon	T39S: R3E S32-33
	T40S: R3E S4-5

We would appreciate receiving the ESA species list at your earliest convenience. If you have questions regarding this NEPA review, please contact me at (503) 872-2798.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Oregon Fish and Wildlife Office
2600 S.E. 98th Avenue, Suite 100
Portland, Oregon 97266
(503) 231-6179 FAX: (503) 231-6195

Reply To: 8330.03701(03)
File Name: Sp0370.wpd
TS Number: 03-3383

May 16, 2003

Karen Blakney
U.S. Bureau of Reclamation
825 NE Multnomah Street, Suite 1110
Portland, OR 97232-2135

Subject: Tyler Creek Wasteway Stabilization Project
USFWS Reference # (1-7-03-SP-0370)

Dear Ms. Blakney:

This is in response to your memorandum, dated May 1, 2003, requesting information on listed and proposed endangered and threatened species that may be present within the area of the Tyler Creek Wasteway Stabilization Project in Jackson County. The U.S. Fish and Wildlife Service (Service) received your correspondence on May 1, 2003.

We have attached a list (Attachment A) of threatened and endangered species that may occur within the area of the Tyler Creek Wasteway Stabilization Project. The list fulfills the requirement of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). U.S. Bureau of Reclamation (BR) requirements under the Act are outlined in Attachment B.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems on which they depend may be conserved. Under section 7(a)(1) and 7(a)(2) of the Act and pursuant to 50 CFR 402 *et seq.*, BR is required to utilize their authorities to carry out programs which further species conservation and to determine whether projects may affect threatened and endangered species, and/or critical habitat. A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) which are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (NEPA) (42 U.S.C. 4332 (2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to the Biological Assessment be prepared to determine whether they may affect listed and proposed species. Recommended contents of a Biological Assessment are described in Attachment B, as well as 50 CFR 402.12.

If BR determines, based on the Biological Assessment or evaluation, that threatened and endangered species and/or critical habitat may be affected by the project, BR is required to consult with the Service following the requirements of 50 CFR 402 which implement the Act.

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Attachment A includes a list of candidate species under review for listing. The list reflects changes to the candidate species list published June 13, 2002, in the Federal Register (Vol. 67, No. 114, 40657) and the addition of "species of concern." Candidate species have no protection under the Act but are included for consideration as it is possible candidates could be listed prior to project completion. Species of concern are those taxa whose conservation status is of concern to the Service (many previously known as Category 2 candidates), but for which further information is still needed.

If a proposed project may affect only candidate species or species of concern, BR is not required to perform a Biological Assessment or evaluation or consult with the Service. However, the Service recommends addressing potential impacts to these species in order to prevent future conflicts. Therefore, if early evaluation of the project indicates that it is likely to adversely impact a candidate species or species of concern, BR may wish to request technical assistance from this office.

Your interest in endangered species is appreciated. The Service encourages BR to investigate opportunities for incorporating conservation of threatened and endangered species into project planning processes as a means of complying with the Act. If you have questions regarding your responsibilities under the Act, please contact Stacy Sroufe at (503) 231-6179. All correspondence should include the above referenced file number. For questions regarding salmon and steelhead trout, please contact National Marine Fisheries Service, 525 NE Oregon Street, Suite 500, Portland, Oregon 97232, (503) 230-5400.

Sincerely,

Larry Rasmussen

for Kemper M. McMaster
State Supervisor

Attachments
1-7-03-SP-0370

cc: OFWO-ES
ODFW (nongame)

ATTACHMENT A

FEDERALLY LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES, CANDIDATE SPECIES AND SPECIES OF CONCERN THAT MAY OCCUR WITHIN THE AREA OF THE TYLER CREEK WASTEWAY STABILIZATION PROJECT
1-7-03-SP-0370

LISTED SPECIES[1/]

Birds		
Bald eagle[2/]	*Haliaeetus leucocephalus*	T
Northern spotted owl[3/]	*Strix occidentalis caurina*	CH T
Plants		
Gentner mission-bells[4/]	*Fritillaria gentneri*	E

PROPOSED SPECIES

None

CANDIDATE SPECIES[5/]

Amphibians and Reptiles	
Oregon spotted frog	*Rana pretiosa*
Invertebrates	
Mardon skipper butterfly	*Polites mardon*
Plants	
Siskiyou mariposa lily	*Calochortus persistens*

SPECIES OF CONCERN

Mammals	
Pallid bat	*Antrozous pallidus pacificus*
Pacific western big-eared bat	*Corynorhinus (=Plecotus) townsendii townsendii*
Silver-haired bat	*Lasionycteris noctivagans*
Pacific fisher	*Martes pennanti pacifica*
Long-eared myotis (bat)	*Myotis evotis*
Fringed myotis (bat)	*Myotis thysanodes*
Long-legged myotis (bat)	*Myotis volans*
Yuma myotis (bat)	*Myotis yumanensis*
Birds	
Northern goshawk	*Accipiter gentilis*
Band-tailed pigeon	*Columba fasciata*
Olive-sided flycatcher	*Contopus cooperi (=borealis)*
Yellow-breasted chat	*Icteria virens*
Acorn woodpecker	*Melanerpes formicivorous*
Lewis' woodpecker	*Melanerpes lewis*
Mountain quail	*Oreortyx pictus*
White-headed woodpecker	*Picoides albolarvatus*
Purple martin	*Progne subis*

<u>Amphibians and Reptiles</u>	
Tailed frog	*Ascaphus truei*
Northwestern pond turtle	*Emys (=Clemmys) marmorata marmorata*
Common kingsnake	*Lampropeltis getula*
California mountain kingsnake	*Lampropeltis zonata*
Siskiyou Mountains salamander	*Plethodon stormi*
Northern red-legged frog	*Rana aurora aurora*
Foothill yellow-legged frog	*Rana boylii*
Cascades frog	*Rana cascadae*
<u>Fish</u>	
Coastal cutthroat trout (S. OR/CA Coasts)	*Oncorhynchus clarki clarki*
<u>Invertebrates</u>	
Denning's agapetus caddisfly	*Agapetus denningi*
Franklin's bumblebee	*Bombus franklini*
Siskiyou chloealtis grasshopper	*Chloealtis aspasma*
Green Springs Mountain farulan caddisfly	*Farula davisi*
Sagehen Creek goeracean caddisfly	*Goeracea oregona*
Schuh's homoplectran caddisfly	*Homoplectra schuhi*
caddisfly (no common name)	*Moselyana comosa*
Siskiyou gazelle beetle	*Nebria gebleri siskiyouensis*
<u>Plants</u>	
Clustered lady's-slipper	*Cypripedium fasciculatum*

(E) - Listed Endangered *(T) - Listed Threatened* *(CH) - Critical Habitat has been designated for this species*
(PE) - Proposed Endangered *(PT) - Proposed Threatened* *(PCH) - Critical Habitat has been proposed for this species*
(S) - Suspected *(D) - Documented*

Species of Concern - Taxa whose conservation status is of concern to the Service (many previously known as Category 2 candidates), but for which further information is still needed.

** *Consultation with National Marine Fisheries Service may be required.*

1/ *U. S. Department of Interior, Fish and Wildlife Service, October 31, 2000, <u>Endangered and Threatened Wildlife and Plants</u>, 50 CFR 17.11 and 17.12*
2/ *Federal Register Vol. 60, No. 133, July 12, 1995 - Final Rule - Bald Eagle*
3/ *Federal Register Vol. 57, No. 10, January 15, 1992, Final Rule-Critical Habitat for the Northern Spotted Owl*
4/ *Federal Register Vol. 64, No. 237, December 10 , 1999, Final Rule -Fritillaria gentneri*
5/ *Federal Register Vol. 67, No. 114, June 13, 2002, Notice of Review - Candidate or Proposed Animals and Plants*

ATTACHMENT B

FEDERAL AGENCIES RESPONSIBILITIES UNDER SECTION 7(a) and (c) OF THE ENDANGERED SPECIES ACT

SECTION 7(a)-Consultation/Conference

Requires:

1) Federal agencies to utilize their authorities to carry out programs to conserve endangered and threatened species;

2) Consultation with FWS when a Federal action may affect a listed endangered or threatened species to insure that any action authorized, funded or carried out by a Federal agency is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of Critical Habitat. The process is initiated by the Federal agency after they have determined if their action may affect (adversely or beneficially) a listed species; and

3) Conference with FWS when a Federal action is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed Critical Habitat.

SECTION 7(c)-Biological Assessment for Major Construction Projects[1]

Requires Federal agencies or their designees to prepare a Biological Assessment (BA) for construction projects only. The purpose of the BA is to identify proposed and/or listed species which are/is likely to be affected by a construction project. The process is initiated by a Federal agency in requesting a list of proposed and listed threatened and endangered species (list attached). The BA should be completed within 180 days after its initiation (or within such a time period as is mutually agreeable). If the BA is not initiated within 90 days of receipt of the species list, the accuracy of the species list should be informally verified with our Service. No irreversible commitment of resources is to be made during the BA process which would foreclose reasonable and prudent alternatives to protect endangered species. Planning, design, and administrative actions may be taken; however, no construction may begin.

To complete the BA, your agency or its designee should: (1) conduct an on-site inspection of the area to be affected by the proposal which may include a detailed survey of the area to determine if the species is present and whether suitable habitat exists for either expanding the existing population or for potential reintroduction of the species; (2) review literature and scientific data to determine species distribution, habitat needs, and other biological requirements; (3) interview experts including those within FWS, National Marine Fisheries Service, State conservation departments, universities, and others who may have data not yet published in scientific literature; (4) review and analyze the effects of the proposal on the species in terms of individuals and populations, including consideration of cumulative effects of the proposal on the species and its habitat; (5) analyze alternative actions that may provide conservation measures and (6) prepare a report documenting the results, including a discussion of study methods used, any problems encountered, and other relevant information. The BA should conclude whether or not a listed species will be affected. Upon completion, the report should be forwarded to our Portland Office.

---

[1] A construction project (or other undertaking having similar physical impacts) which is a major Federal action significantly affecting the quality of the human environment as referred to in NEPA (42 U.S.C. 4332. (2)c). On projects other that construction, it is suggested that a biological evaluation similar to the biological assessment be undertaken to conserve species influenced by the Endangered Species Act.

Attachment B — National Historic Preservation Act Correspondence

- September 9, 2002, Reclamation's letter to Oregon State Historic Preservation Office and their October 17, 2002, concurrence

ENV
G

United States Department of the Interior

BUREAU OF RECLAMATION
Pacific Northwest Region
1150 North Curtis Road, Suite 100
Boise, Idaho 83706-1234

IN REPLY REFER TO:

PN-6511
PRJ-26.00

SEP 09 2002

Dr. Leland Gilsen
Oregon State Historic Preservation Office
State Parks and Recreation Department
1115 Commercial Street NE, Suite 2
Salem OR 97301-1012

Subject: Test Excavations, Tyler Creek Wasteway Access Road Right-of-Way

Dear Dr. Gilsen:

In a letter dated May 4, 2001, the Bureau of Reclamation (Reclamation) notified you of our intention to develop an access to Tyler Creek Wasteway, and that three archeological sites (35JA492, JA493, and JA494) had been recorded within the access right-of-way (ROW). In May 2001, Reclamation awarded a test excavation contract to Heritage Research Associates (HRA). In June, 2002, HRA completed the test excavations, working under state permit AP-477. The testing methodology and results are described in the enclosed report entitled "Evaluation of Three Archaeological Sites in the Tyler Creek Wasteway Access Easement, Jackson County, Oregon."

As the sites are on private land, the test excavations were confined to the ROW corridor, which is a 60-foot wide easement. All of the following discussions about site eligibility address only the portion of each site lying within that easement ROW. All three of the sites extend beyond the ROW.

HRA has recommended that the portion of the three sites within the ROW be determined "not eligible" to the National Register of Historic Places. Reclamation agrees with that assessment. At site 35JA492, subsurface materials was largely confined to a very small area consistent with the surface artifact concentration, and all material was confined to the top 10 cm of soil. A projectile point mid-section was noted during survey, and was of a style commonly used during the last 2,200 years. No features were noted. Most all cultural materials found were unmodified flakes. The site appears to be a low-density surface artifact scatter with little potential to yield additional information. We ask that you concur that this site is not eligible.

Site 35JA493 is located on a small terrace, and may be the west edge of a larger site. Testing indicates that, at least within the ROW, the site is a rather sparse lithic scatter with most of the material confined to the surface and top 20 cm of soil. Only lithic debitage and two square nails were found. The site appears to have been plowed in the past. The site deposits within the ROW appear to have little potential to yield significant information that would increase our understanding of prehistoric life in the area or region. The two square nails do not appear to be associated with an identifiable early historic period feature within the ROW. We ask that you concur that the portion of site 35JA493 located within Reclamation's ROW is not eligible to the National Register.

concur

Site 35JA494 again appears to be a small section of what may be a larger site. Much more cultural material, extending to a greater depth, was found at this site. However, again the material was essentially limited to unmodified lithic debitage; 236 flakes were recovered, one core, one biface fragment, and one animal bone fragment. There was no evidence of features, either prehistoric or historic period in origin. Also, the site appears to be rather disturbed within the ROW. Mottled soils were interpreted to mean that some leveling or soil redistribution had occurred at the site. This interpretation is supported by discovery of a glass fragment between 10 and 20 cm below surface and a button between 30 and 40 cm below surface. Although material density indicates that this site may have significant deposits outside of the ROW, it appears that deposits within the ROW have limited physical integrity and lack the kind and variety of materials that could provide significant new information about area history or prehistory. We ask that you concur that the portion of site 35JA494 located within the ROW is not eligible to the National Register.

concur

Reclamation will be using the ROW with only limited modifications. Principally, we must place a culvert in the creek crossing and do some amount of bank cutting to allow passage across Schoolhouse Creek. This will occur within the ROW immediately south of 35JA493. Although the test excavations indicate the site is not eligible within the ROW, Reclamation will monitor initial soil excavation at that location to ensure immediate detection in the unlikely event of discovery of potentially significant subsurface deposits that were not revealed during test excavations. We do not anticipate any construction in the ROW across 35JA494, other than sinking several post holes to allow installation of a gate at the road. If any construction occurs in the vicinity of 35JA492 it is likely to be limited additional leveling of the existing old road track through that area.

If you have questions, please call Lynne MacDonald at (208) 378-5316 or contact her via e-mail at lmacdonald@pn.usbr.gov. Thank you for your assistance.

Sincerely,

Kerry Whitford
Acting Manager, Ecosystems Analysis

NOTED L. GILSEN

Historic Preservation
Oregon State Parks & Recreation
1115 Commercial St., NE Ste #2
Salem, ...

Enclosure

Attachment C — Tribal Consultation

- September 9, 2002, Reclamation letter to the Confederated Tribes of the Grand Ronde Community of Oregon
- September 18, 2002, Reclamation letter to the Confederated Tribes of the Siletz Indians
- September 18, 2002, Reclamation letter to the Cow Creek Band of the Umpqua Tribe of Indians
- September 20, 2002, Reclamation letter to the Klamath Tribes
- October 28, 2002, letter from The Confederated Tribes of the Grand Ronde Community of Oregon

United States Department of the Interior

BUREAU OF RECLAMATION
Pacific Northwest Region
1150 North Curtis Road, Suite 100
Boise, Idaho 83706-1234

IN REPLY
REFER TO:

SEP 0 9 2002

PN-6511
PRJ-26.00

Ms. Connie Schultz
Cultural Protection Specialist
The Confederated Tribes of the
Grand Ronde Community of Oregon
9615 Grand Ronde Road
Grand Ronde OR 97347

Subject: Test Excavations, Tyler Creek Wasteway Access Road Right-of-Way

Dear Ms. Schultz:

The Bureau of Reclamation (Reclamation) operates Green Springs Powerplant, located about 8 miles southeast of Ashland, Oregon. When the plant is not in operation, the water that would otherwise have gone through the powerplant is diverted into a channel referred to as the Tyler Creek Wasteway. Several years ago, Reclamation purchased an easement across private lands to use as an access route to Tyler Creek Wasteway. Subsequently, three archeological sites (35JA492, JA493, and JA494) were recorded within the access Right-Of-Way (ROW). In May 2001, Reclamation awarded a contract to Heritage Research Associates (HRA) to complete test excavations at those three sites to determine if they were eligible to the National Register of Historic Places. Potentially interested tribes were informed of the proposed testing during the review period for the state permit. As part of the permit review process, you informed HRA that the Grand Ronde were interested in remaining informed about the testing outcome.

With this letter we would like to bring you up to date on actions since May. With this letter we also request your comment, pursuant to 36 CFR 800.4, on the eligibility of the sites to the National Register of Historic Places (Register).

In June, 2002, HRA completed the test excavations, working under state permit AP-477. The testing methodology and results are described in the enclosed report entitled "Evaluation of Three Archaeological Sites in the Tyler Creek Wasteway Access Easement, Jackson County, Oregon." As the sites are on private land, the test excavations were confined to the ROW corridor, which is a 60-foot wide easement. All discussions about site eligibility address only the portion of each site lying within that easement ROW. All three of the sites extend beyond the ROW.

Concurrent with this letter, on September 5, 2002, Reclamation initiated consultations with the State Historic Preservation Office (SHPO) about the eligibility of the three sites to the Register. HRA has recommended that the portion of the three sites within the ROW be determined "not eligible" to the Register. Reclamation agrees with that assessment. The basis for that assessment is outlined below.

At site 35JA492, subsurface materials were largely confined to a very small area consistent with the surface artifact concentration, and all material was confined to the top 10 cm of soil. A projectile point mid-section was noted during survey, and was of a style commonly used during the last 2,200 years. No features were noted. Most of the cultural material found was unmodified flakes. The site appears to be a low-density surface artifact scatter with little potential to yield additional information.

Site 35JA493 is located on a small terrace, and may be the west edge of a larger site. Testing indicates that, at least within the ROW, the site is a rather sparse lithic scatter with most of the material confined to the surface and top 20 cm of soil. Only lithic debitage and two square nails were found. The site appears to have been plowed in the past. The site deposits within the ROW appear to have little potential to yield significant information that would increase our understanding of prehistoric life in the area or region. The two square nails do not appear to be associated with an identifiable early historic period feature within the ROW.

Site 35JA494 again appears to be a small section of what may be a larger site. Much is more cultural material, extending to a greater depth, was found at this site. However, again the material was essentially limited to unmodified lithic debitage; 236 flakes were recovered, one core, one biface fragment, and one animal bone fragment. There was no evidence of features, either prehistoric or historic period in origin. Also, the site appears to be rather disturbed within the ROW. Mottled soils were interpreted to mean that some leveling or soil redistribution had occurred at the site. This interpretation is supported by discovery of a glass fragment between 10 and 20 cm below surface and a button between 30 and 40 cm below surface. Although material density indicates that this site may have significant deposits outside of the ROW, it appears that deposits within the ROW have limited physical integrity and lack the kind and variety of materials that could provide significant new information about area history or prehistory.

For your information, Reclamation will make only limited modifications to make the ROW usable as an access route. Principally, we must place a culvert at the creek crossing and do some amount of bank cutting to allow passage across Schoolhouse Creek. This will occur within the ROW immediately south of 35JA493. Although the test excavations indicate the site is not eligible within the ROW, Reclamation will monitor initial soil excavation at that location to ensure immediate detection in the unlikely event of discovery of potentially significant subsurface deposits that were not revealed during test excavations. We do not anticipate any construction in the ROW across 35JA494, other than sinking several post holes to allow installation of a gate at the road. If any construction occurs in the vicinity of 35JA492 it is likely to be limited additional leveling of the existing old road track through that area. We will drive on the access road only under "fair weather" conditions; our easement agreement prohibits motorized access when the ground is soft. Therefore, we anticipate that our use of the access will not cause further damage to the landscape or the resources on that land.

If you have questions, please call Lynne MacDonald at (208) 378-5316 or contact her via e-mail at lmacdonald@pn.usbr.gov. Written comments can be addressed to Ms. MacDonald at the address on the letterhead. Thank you for your assistance.

Sincerely,

/s/ Kerry Whitford

Kerry Whitford
Acting Manager, Ecosystems Analysis

Enclosure

bc: PN-3248 (Green)
(w/o encl)

WBR:LMacDonald:ms:09-05-02:5316
h:\common\pn6500\lynne\Tyler tribal consult GR.wpd

United States Department of the Interior

BUREAU OF RECLAMATION
Pacific Northwest Region
1150 North Curtis Road, Suite 100
Boise, Idaho 83706-1234

IN REPLY REFER TO:

PN-6511
PRJ-26.00

SEP 18 2002

Mr. Robert Kenta
Cultural Resources Manager
The Confederated Tribes of the
Siltez Indians
PO Box 549
Siletz OR 97380

Subject: Test Excavations, Tyler Creek Wasteway Access Road Right-of-Way

Dear Mr. Kenta:

The Bureau of Reclamation (Reclamation) operates Green Springs Powerplant, located about 8 miles southeast of Ashland, Oregon. When the plant is not in operation, the water that would otherwise have gone through the powerplant is diverted into a channel referred to as the Tyler Creek Wasteway. Several years ago, Reclamation purchased an easement across private lands to use as an access route to Tyler Creek Wasteway. Subsequently, three archeological sites (35JA492, JA493, and JA494) were recorded within the access Right-Of-Way (ROW). In May 2001, Reclamation awarded a contract to Heritage Research Associates (HRA) to complete test excavations at those three sites to determine if they were eligible to the National Register of Historic Places. Potentially interested tribes were informed of the proposed testing during the review period for the state permit. This included the Siltez Tribes.

With this letter we would like to bring you up to date on actions since May. With this letter we also invite you to comment, pursuant to 36 CFR 800.4, on the eligibility of the sites to the National Register of Historic Places (Register).

In June, 2002, HRA completed the test excavations, working under state permit AP-477. The testing methodology and results are described in the enclosed report entitled "Evaluation of Three Archaeological Sites in the Tyler Creek Wasteway Access Easement, Jackson County, Oregon." As the sites are on private land, the test excavations were confined to the ROW corridor, which is a 60-foot wide easement. All discussions about site eligibility address only the portion of each site lying within that easement ROW. All three of the sites extend beyond the ROW.

On September 9, 2002, Reclamation initiated consultations with the State Historic Preservation Office (SHPO) about the eligibility of the three sites to the Register. HRA has recommended that the portion of the three sites within the ROW be determined "not eligible" to the Register. Reclamation agrees with that assessment. The basis for that assessment is outlined below.

At site 35JA492, subsurface materials were largely confined to a very small area consistent with the surface artifact concentration, and all material was confined to the top 10 cm of soil. A projectile point mid-section was noted during survey, and was of a style commonly used during the last 2,200 years. No features were noted. Most of the cultural material found was unmodified flakes. The site appears to be a low-density surface artifact scatter with little potential to yield additional information.

Site 35JA493 is located on a small terrace, and may be the west edge of a larger site. Testing indicates that, at least within the ROW, the site is a rather sparse lithic scatter with most of the material confined to the surface and top 20 cm of soil. Only lithic debitage and two square nails were found. The site appears to have been plowed in the past. The site deposits within the ROW appear to have little potential to yield significant information that would increase our understanding of prehistoric life in the area or region. The two square nails do not appear to be associated with an identifiable early historic period feature within the ROW.

Site 35JA494 again appears to be a small section of what may be a larger site. Much more cultural material, extending to a greater depth, was found at this site. However, again the material was essentially limited to unmodified lithic debitage; 236 flakes were recovered, one core, one biface fragment, and one animal bone fragment. There was no evidence of features, either prehistoric or historic period in origin. Also, the site appears to be rather disturbed within the ROW. Mottled soils were interpreted to mean that some leveling or soil redistribution had occurred at the site. This interpretation is supported by discovery of a glass fragment between 10 and 20 cm below surface and a button between 30 and 40 cm below surface. Although material density indicates that this site may have significant deposits outside of the ROW, it appears that deposits within the ROW have limited physical integrity and lack the kind and variety of materials that could provide significant new information about area history or prehistory.

For your information, Reclamation will make only limited modifications to make the ROW usable as an access route. Principally, we must place a culvert at the creek crossing and do some amount of bank cutting to allow passage across Schoolhouse Creek. This will occur within the ROW immediately south of 35JA493. Although the test excavations indicate the site is not eligible within the ROW, Reclamation will monitor initial soil excavation at that location to ensure immediate detection in the unlikely event of discovery of potentially significant subsurface deposits that were not revealed during test excavations. We do not anticipate any construction in the ROW across 35JA494, other than sinking several post holes to allow installation of a gate at the road. If any construction occurs in the vicinity of 35JA492 it is likely to be limited additional leveling of the existing old road track through that area. We will drive on the access road only under "fair weather" conditions; our easement agreement prohibits motorized access when the ground is soft. Therefore, we anticipate that our use of the access will not cause further damage to the landscape or the resources on that land.

If you have questions, please call Lynne MacDonald at (208) 378-5316 or contact her via e-mail at lmacdonald@pn.usbr.gov. Written comments can be addressed to Ms. MacDonald at the address on the letterhead. Thank you for your assistance.

Sincerely,

ACTING FOR Stephen Dilsaver

Kerry Whitford
Acting Manager, Ecosystems Analysis

Enclosure

bc: PN-3248 (Green)
(w/o encl)

WBR:LMacDonald:ms:09-17-02:5316
h:\common\pn6500\lynne\Tyler tribal consult siltez.wpd

returned 10/4 undeliverable

SEP 1 8 2002

PN-6511
PRJ-26.00

Ms. Sherri Shaffer
Cultural Resource Manager
Cow Creek Band of the Umpqua
Tribe of Indians
2400 Stewart Parkway, Suite 300
Roseburg OR 97470

Subject: Test Excavations, Tyler Creek Wasteway Access Road Right-of-Way

Dear Ms. Shaffer:

The Bureau of Reclamation (Reclamation) operates Green Springs Powerplant, located about 8 miles southeast of Ashland, Oregon. When the plant is not in operation, the water that would otherwise have gone through the powerplant is diverted into a channel referred to as the Tyler Creek Wasteway. Several years ago, Reclamation purchased an easement across private lands to use as an access route to Tyler Creek Wasteway. Subsequently, three archeological sites (35JA492, JA493, and JA494) were recorded within the access Right-Of-Way (ROW). In May 2001, Reclamation awarded a contract to Heritage Research Associates (HRA) to complete test excavations at those three sites to determine if they were eligible to the National Register of Historic Places. Potentially interested tribes were informed of the proposed testing during the review period for the state permit. The Cow Creek Band were contacted at that time.

With this letter we would like to bring you up to date on actions since May. With this letter we also invite you to comment, pursuant to 36 CFR 800.4, on the eligibility of the sites to the National Register of Historic Places (Register).

In June, 2002, HRA completed the test excavations, working under state permit AP-477. The testing methodology and results are described in the enclosed report entitled "Evaluation of Three Archaeological Sites in the Tyler Creek Wasteway Access Easement, Jackson County, Oregon." As the sites are on private land, the test excavations were confined to the ROW corridor, which is a 60-foot wide easement. All discussions about site eligibility address only the portion of each site lying within that easement ROW. All three of the sites extend beyond the ROW.

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At site 35JA492, subsurface materials were largely confined to a very small area consistent with the surface artifact concentration, and all material was confined to the top 10 cm of soil. A projectile point mid-section was noted during survey, and was of a style commonly used during the last 2,200 years. No features were noted. Most of the cultural material found was unmodified flakes. The site appears to be a low-density surface artifact scatter with little potential to yield additional information.

Site 35JA493 is located on a small terrace, and may be the west edge of a larger site. Testing indicates that, at least within the ROW, the site is a rather sparse lithic scatter with most of the material confined to the surface and top 20 cm of soil. Only lithic debitage and two square nails were found. The site appears to have been plowed in the past. The site deposits within the ROW appear to have little potential to yield significant information that would increase our understanding of prehistoric life in the area or region. The two square nails do not appear to be associated with an identifiable early historic period feature within the ROW.

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Sincerely,

Steve Dunn

for Kerry Whitford
Acting Manager, Ecosystems Analysis

Enclosure

bc: PN-3248 (Green)
(w/o encl)

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SEP 2 0 2002

PN-6511
PRJ-26.00

Mr. Gerald Skelton
Cultural Resource Protection Specialist
The Klamath Tribes
PO Box 436
Chiloquin OR 97624

Subject: Test Excavations, Tyler Creek Wasteway Access Road Right-of-Way

Dear Mr. Skelton:

The Bureau of Reclamation (Reclamation) operates Green Springs Powerplant, located about 8 miles southeast of Ashland, Oregon. When the plant is not in operation, the water that would otherwise have gone through the powerplant is diverted into a channel referred to as the Tyler Creek Wasteway. Several years ago, Reclamation purchased an easement across private lands to use as an access route to Tyler Creek Wasteway. Subsequently, three archeological sites (35JA492, JA493, and JA494) were recorded within the access Right-Of-Way (ROW). In May 2001, Reclamation awarded a contract to Heritage Research Associates (HRA) to complete test excavations at those three sites to determine if they were eligible to the National Register of Historic Places. Potentially interested tribes were informed of the proposed testing during the review period for the state permit. The Klamath Tribes were contacted at that time.

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Sincerely,

ACTING FOR David Zimmer

Kerry Whitford
Acting Manager, Ecosystems Analysis

Enclosure

bc: PN-3248 (Green)
(w/o encl)

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LND-3.00
GF

The Confederated Tribes of the Grand Ronde Community of Oregon

Cultural Resources
(503) 879-5211 • FAX (503) 879-2263
1-800-422-0232

9615 Grand Ronde Road
Grand Ronde, Oregon 9734

Umpqua • Molalla • Rogue River • Kalapuya • Chasta

BUREAU OF RECLAMATION
OFFICIAL FILE COPY
OCT 31 '02

TO	INIT	DATE
6511	LM	10/31

CONTROL #: 2-6432
FOLDER #: 7152-3

October 28, 2002

Lynne MacDonald
Bureau of Reclamation
Pacific Northwest Region
1150 North Curtis Road, Suite 100
Boise, ID 83706-1234

RE: Test Excavations, of Tyler Creek Wasteway Access Road Right-of-Way

Dear Ms. MacDonald:

The Cultural Resource Department has reviewed the report from Heritage Research Associates, No. 258, for the Tyler Creek Wasteway Access Road Right-of-Way.

It is noted that all three of the ROW sites are not recommended eligible for the NRHP due to the low density of artifacts, and previous soil disturbance. However, the Tribe considers these sites culturally significant, with a high possibility of an inadvertent discovery during any ground-disturbance.

The report from Heritage Research Associates does not indicate Tribal consultation in the event of an inadvertent discovery. However, should the project require any changes, or ground-disturbing activity not previously surveyed, or inadvertently discover cultural resources, the Tribe will request immediate notification. At such a time, the Tribe will reevaluate for inclusion in the NRHP.

If you have any questions, please contact me at 1-800-422-0232, ext. 2185.

Respectfully,

Connie Schultz,
Cultural Protection Specialist

Attachment D — Mail Distribution List

HAL MACY
APPLEGATE WATERSHED COUNCIL
1800 CHINA GULCH RD.
JACKSONVILLE, OR 97530

JACK SHIPLEY
APPLEGATE WATERSHED COUNCIL
1340 MISSOURI FLAT RD.
GRANTS PASS, OR 97527

JAN PERTTU
APPLEGATE WATERSHED COUNCIL
2816 UPPER APPLEGATE
JACKSONVILLE, OR 97530

ASHLAND DAILY TIDINGS
1661 SISKIYOU BLVD.
ASHLAND, OR 97520

ASSOCIATION OF NORTHWEST STEELHEADERS
PO BOX 22065
MILWAUKEE OR 97222

BEAR CREEK WATERSHED COUNCIL
C/O ROGUE VALLEY COUNCIL OF GOVERNMENTS
155 NORTH FIRST STREET
CENTRAL POINT OR 97502

CHERYL GRUENTHAL
BOISE CASCADE
P.O. BOX 100
MEDFORD, OR 97501

KIM TEISING
BOISE CASCADE
P.O. BOX 100
MEDFORD, OR 97501

MR JACK VAN SYOC
BROKEN ARROWHEAD RANCH
18290 WHY 238
GRANTS PASS OR 97527

AARON HORTON
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT OFFICE
3040 BIDDLE RD
MEDFORD OR 97501

DAVE JONES
BUREAU OF LAND MANAGEMENT
3040 BIDDLE RD.
MEDFORD, OR 97501

MR. DAVE SQUYRES
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT OFFICE
3040 BIDDLE ROAD
MEDFORD OR 97504

MS. JEANNINE ROSSA
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT OFFICE
3040 BIDDLE ROAD
MEDFORD OR 97504

MS. LAURIE LINDELL
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT OFFICE
3040 BIDDLE ROAD
MEDFORD OR 97504

JIM NEW
C/O WATER PROJECT
10015 TERWILLIGER BLVD.
PORTLAND, OR 97219

ANN DONNELLY
C/O WATERSHED ASSOCIATION
P.O. BOX 5860
CHARLESTON, OR 97420

CENTRAL POINT BRANCH LIBRARY
226 E. PINE
CENTRAL POINT, OR 97502

MR. BRIAN ALMQUIST
CITY ADMINISTRATOR
CITY HALL
ASHLAND, OR 97520

PAUL NOLTE
CITY ATTORNEY
20 EAST MAIN STREET
ASHLAND, OR 97520

PAULA C. BROWN, PE, PUBLIC WORKS DIRECTOR
CITY OF ASHLAND
20 EAST MAIN STREET
ASHLAND, OR 97520

CATHERINE M. SHAW
CITY OF ASHLAND-MAYOR
886 OAK STREET
ASHLAND, OR 97520

JOYCE HAILICKA
CITY OF BUTTE FALLS
P.O. BOX 11
BUTTE FALLS, OR 97522

MARLYN SCHAEFER, MAYOR
CITY OF GOLD BEACH
510 S. ELLENSBURG
GOLD BEACH, OR 97444

DAVE WHEATON
CITY OF GRANTS PASS
101 NW “A” ST.
GRANTS PASS, OR 97526

DOUG SMITH
CITY OF GRANTS PASS
P.O. BOX 166
GRANTS PASS, OR 97526

BILL MANSFIELD
CITY OF MEDFORD
P.O. BOX 1721
MEDFORD, OR 97501

BILL MOORE
CITY OF MEDFORD
1359-B MAPLE LEAF COURT
MEDFORD, OR 97504

LISA SHAPIRO
CITY OF TALENT
1712 TALENT AVE.
TALENT, OR 97540

TONY PAXTON
CITY OF TALENT
204 E. MAIN
TALENT, OR 97540

CAROLYN SLYTER, CHAIRMAN
CONFEDERATED TRIBES OF COOS,
LOWER UMPQUA, & SIUSLAW TRIBES
1245 FULTON AVE
COOS BAY OR 97420

ED METCALF, CHAIRMAN
COQUILLE INDIAN TRIBE
PO BOX 1435
COOS BAY OR 97420-0330

COQUILLE WATERSHED ASSOCIATION
450 HWY 42E
COQUILLE, OR 97423

MS. SHERRI SHAFFER, CULTURAL
RESOURCE MANAGER
COW CREEK BAND OF THE UMPQUA
TRIBE OF INDIANS
2400 STEWART PARKWAY, SUITE 300
ROSEBURG OR 97470

SUE SHAFFER, CHAIRWOMAN
COW CREEK BAND OF UMPQUA TRIBE
2371 NE STEPHENS STE 100
ROSEBURG OR 97470-1338

CURRY COUNTY COMMISSIONERS
P.O. BOX 746
GOLD BEACH, OR 97444

EAGLE POINT BRANCH LIBRARY
P O BOX 459
EAGLE POINT, OR 97524

HAZEL BROWN, MANAGER
EAGLE POINT IRRIGATION DISTRICT
P O BOX 157
EAGLE POINT OR 97524

BARBARA URE
FRED HOEFNAGEL
5292 LOST CRK RD
EAGLE POINT OR 97524

FRIENDS OF THE GREENSPRINGS
15097 HWY 66
ASHLAND OR 97520

GRANTS PASS DAILY COURIER
409 SE 7TH
GRANTS PASS, OR 97526

RICHARD HART
HEADWATERS
PO BOX 729
ASHLAND OR 97520

ILLINOIS VALLEY NEWS
319 S. REDWOOD HIGHWAY
CAVE JUNCTION, OR 97523

ILLINOIS VALLEY SOIL & WATER
CONSERVATION DISTRICT
P.O. BOX 352
CAVE JUNCTION, OR 97523

BOB PERGESON
ILLINOIS VALLEY WATERSHED COUNCIL
1936 ALTHOWSE CR.
CAVE JUNCTION, OR 97523

GLEN GINTER
ILLINOIS VALLEY WATERSHED COUNCIL
P.O. BOX 352
CAVE JUNCTION, OR 97523

WALT FREEMAN
ILLINOIS VALLEY WATERSHED COUNCIL
P.O. BOX 344
CAVE JUNCTION, OR 97523

JACK WALKER
JACKSON COUNTY COMMISSIONER
COURTHOUSE
10 S. OAKDALE
MEDFORD, OR 97501

RIC HOLT
JACKSON COUNTY COMMISSIONER
COURTHOUSE
10 S. OAKDALE
MEDFORD, OR 97501

SUE KUPILLAS
JACKSON COUNTY COMMISSIONER
COURTHOUSE
10 S. OAKDALE
MEDFORD, OR 97501

JACKSON COUNTY SOIL & WATER
CONSERVATION DISTRICT
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Attachment E — Public Involvement

- **Public Involvement Plan**
  includes list of agencies, organizations, and persons Reclamation contacted throughout the NEPA process

- **Reclamation's responses to public comments**

- **Summary of Comments Received Prior to Release of the June 30, 2003, Draft Environmental Assessment**

- **Comments Generated by the June 30, 2003, Draft Environmental Assessment**
  - 7-19-03 letter from Ty and Lauren Hisatomi
  - 7-28-03 letter from Catherine Edwards
    - 5-14-01 letter from Catherine Edwards
    - -- map
    - 11-17-01 letter from Catherine Edwards
  - 8-1-03 letter from Daphne Stewart and Bob Woods
  - 8-4-03 email and letter from Bureau of Land Management

Public Involvement Plan

Tyler Creek Wasteway Stabilization

Public Involvement Plan

December 1, 2001

Prepared for the

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TYLER CREEK WASTEWAY STABILIZATION PUBLIC INVOLVEMENT PLAN

Section 1: Introduction

Background

Tyler Creek Wasteway (wasteway) is a component of Talent Division of Rogue River Basin Project located southeast of Ashland, Oregon. The wasteway is the only means of delivering irrigation water from Keene Creek Reservoir to Talent Irrigation District lands when Green Springs Power Plant is out of service for maintenance or repair during irrigation season. It is managed by the Bureau of Reclamation (Reclamation).

In 1993, repair and maintenance activities required the use of the wasteway for an extended time. It bypassed the power plant and ensured the availability of irrigation water in keeping with the wasteway's intended use. This extended use damaged wasteway banks and some property outside the Reclamation right-of-way.

Reclamation is proposing to upgrade access to the wasteway and conduct bank stabilization and restoration activities.

Reclamation will make a formal decision about pursuing stabilization and access activities following a National Environmental Policy Act (NEPA) review of the federal action and evaluation of reasonable alternatives. In accordance with NEPA, Reclamation will identify environmental and social issues that may be of concern or potentially significant in the proposed area.

The resulting Environmental Assessment (EA) process will guide Reclamation to a decision that includes either: 1) a Finding of No Significant Impact (FONSI) and action can proceed, or 2) the discovery of significant impact, following which Reclamation would initiate or transition to an Environmental Impact Statement (EIS) process.

Project Summary

In 1993, Reclamation worked with stakeholders to develop a proposed action to stabilize wasteway banks adversely impacted by its extended use in 1993 and provide for access in newly acquired right-of-way.

A torte claim filed by one landowner delayed any action on the project until its resolution in 2001. During that time, Reclamation worked with landowners and acquired permanent right-of-way to facilitate construction of an access road, proposed stabilization, and ongoing maintenance.

During the spring of 2001, Reclamation initiated scoping to identify issues to consider and address in its EA. Reclamation sought public assistance to identify possible environmental impacts and concerns about the proposed action. Stakeholders responded by outlining requests and studies that exceeded Reclamation's proposal. In response to this input, Reclamation chose to enhance its scoping effort. As a result, Reclamation has developed and is pursing implementation of this Public Involvement Plan.

Project Purpose and Need

A critical step in the NEPA environmental process is the development of a Purpose and Need Statement for the project. Reclamation has identified the following purpose and need for this EA.

Purpose of Action:

The *purpose* of this activity is to

- Correct existing streambank damage
- Prevent future streambank erosion and degradation
- Provide future maintenance of the wasteway

to fill the *need* to stabilize Tyler Creek Wasteway.

Proposed Action

The action proposed to address this purpose and need includes:

- Reinforce streambanks using standard engineering and bio-engineering techniques
- Construct access road within right-of-way
- Acquire new right-of-way/access as needed in the future.

What Happens if Nothing is Done?

If no action is taken to construct the access road, Reclamation's ability to stabilize the banks will be limited and further degradation will likely occur when the wasteway is in use.

Section 2: Public Involvement Objectives, Messages, Audiences

Reasons for Public Involvement

Reclamation is engaging in public involvement on this project to improve its decision making process by considering public input and to meet its legal requirements under NEPA.

Public Involvement Objectives

The objectives of this public involvement effort are to:

- Communicate Reclamation's responsibility for and capability to repair the Tyler Creek Wasteway.
- Implement an open and inclusive process that generates optimum understanding of project scope, need, issues and impacts.
- Engage the public in a process that clarifies information and generates inter-stakeholder understanding of the process and the project.
- Provide timely, accurate, consistent information.
- Solicit, recognize, consider, and address public concerns and issues.

Messages

Project messages, incorporated into all project communications written and oral, ensure consistent and accurate presentation of key issues throughout the project. Project messages are:

- Reclamation is ready and able to complete this project.
- This effort specifically focuses on Tyler Creek Wasteway Stabilization.
- Public involvement is important. Please participate in our process.
- Our intent is to repair the banks and create the most natural condition possible.
- Access is important for purposes of conducting the repair and ongoing maintenance.
- Reclamation will make a decision based on many factors, among them environmental, public input, feasibility, authority and cost.

Audiences

A Correll WordPerfect file contains the Tyler Creek Wasteway database. That database is maintained in the Lower Columbia Area Office. A copy is included as Appendix A.

Each individual or organization on the database will receive copies of publications, announcements and the EA. It will be updated regularly. Tyler Creek Wasteway audience types include:

- Local citizens
- Adjacent Landowners
- Jackson County officials
- Ashland City Government
- Irrigation Districts
- Elected Officials
- Resource Agencies
- Special Interest Groups
- Public-at-large
- Environmental Organizations
- Tribes
- Local media
- Individuals who participate in the public involvement process

Issues

Key to an effective project and public involvement plan is an understanding of the issues raised by the various publics involved with or affected by the project. Such issues will be addressed in the document. Many of those issues as raised by stakeholders during the May, 2001 public involvement effort are listed in Appendix B. These were used as a reference for creating this Public Involvement Plan.

These and other issues raised during the public workshop, letters from stakeholders, and comment response forms, will be collected and addressed in the EA.

Section 3: Public Involvement Strategy

Approach

For planning purposes, this project has been divided into two phases. Within each phase of the project, involvement activities and communication tools will be used to support the public involvement plan objectives. These include:

Phase 1: November – December, 2001

Additional Scoping.

Communicate project scope and process; document public concerns; engage stakeholders in understanding the scope, discussing issues and articulating recommendations in as collective a manner as possible. Solicit input from those who do not participate in the standard meeting process by inviting written comments.

Methods:

- Media Release
- Stakeholder letter/invitation mailing
- Background paper mailing
- Public Workshop generating stakeholder recommendations
- Solicit comment/feedback from stakeholders
- Address public input in the EA

Phase 2: March, 2002 – April 2002

Present conclusions of the EA and communicate next steps.

- Media release
- Stakeholder letter mailing, including a copy of the EA
- Public meeting if appropriate
- 30-day comment period

Further activities will be pursued, developed and implemented as appropriate according to public need and project nuances.

Schedule of Activities

A specific project schedule outlining activities that support each of the public involvement milestones listed above is included as Appendix C.

APPENDICES

Appendix A: Public Issues

Appendix B: Contact List (Database printout)

Appendix C: Project Schedule

Appendix A: Public Issues

Appendix A: Public Issues

Potential Issues Based on Actual Scoping Comments

The following were identified as issues of concerns by those interested in the project as reflected in letters of response to the initial 2001 scoping process.

1. Non-compliance to Bear Creek Water Shed Assessment Guidelines drinking water and contributes to phosphorus exceedances. Needs more work than planting a few willow trees. Riparian shade and civil engineering work with the soils is required.
2. Return channel to its original state as a natural stream. It was never designed to function as a wasteway and to handle this amount of water release.
3. Do a complete stream profile look at the terraces from the bottom to the top, from the power plant to the release valves and note the direction of the flows of land and water. Cross section across channel for sumpage.
4. Structure a design to handle the flow of water that is appropriate.
5. Compare to similar streams not affected by the BOR release. Correct the wasteway from more erosion.
6. Use only native vegetation in all planting.
7. Build a multi-seasonal road with gravel and trenching and sound enough to haul out timbers. Leave timbers for landowners to pick up.
8. Proposed action is temporary in nature, and requires that entire section, from Highway 66 to Tyler Creek road, be evaluated. Does not truly mitigate the current and future potential for adverse watershed cumulate effects.
9. Concern about damage to my bridge and property and compromising my water supply.
10. Problem could be solved by no future releases, controlling the amount/velocity of water released, augmenting, redesigning the existing wasteway in an environmentally sound fashion that does not damage area or jeopardize right of way.
11. Damage to in-stream aquatic life over the past 10 years.
12. Consider the first mile of the wasteway from the outlet to the confluence of School House Creek.
13. Consider alternative wasteways. Discharge through tunnel may require permits, and are not consistent with the Aquatic Conservation Strategy of the Northwest Forest Plan because it results in landsliding, bank erosion and gullying.
14. Unless properly constructed, the proposed road could result in being a pathway for future stream diversions.
15. Stream channel must be stabilized to prevent future erosions. Requires keeping channel deep and debris free, but fallen trees must not be removed, as they stabilize existing nickpoints and raise the channel beds.
16. Tributary channels and swales need stabilization.
17. Stabilize top slopes near the stream edge to prevent debris slides into the stream from adjacent steep banks.
18. Request full Environmental Assessment. The scale of social, economic and environmental impacts from plant operations request that a broad range of alternatives be considered.

19. Need more information, particularly about locations and ownerships impacted, specifically location of private and federal property on Tunnel Creek, Schoolhouse Creek, Tyler Creek and impacts on Emigrant Lake and Rogue River drinking water quality.
20. Consider earth flow as an issue addressed in the EA.
21. More residences imply altered surface water flow. Existing stream profiles and cross sections ought to be documented and stream segments analyzed.
22. Consider alternatives that include whether it is appropriate to continue us of the wasteway system during period of power plant closure.
23. Consider alternatives that include running seasonal excess flow down Keene Creek, installing an energy dissipater and diversion structure.
24. Stabilization, restoration and mitigation of the currently degraded channels is needed.
25. Project area from Tyler Creek at Buckhorn Road to armored revetment where water from Keen Creek Reservoir is discharged.
26. What is the extent of engineering, geologic and geotechnical studies? These issues should be addressed before any stabilization or mitigation efforts are undertaking.
27. Avoid impacts to wetlands, and provide for mitigation.
28. Support actions that improve Tyler Creek as a 303(d) listed stream.
29. Include the District in planning and comply with the Aquatic Conservation Strategy.
30. Comply with ESA.
31. Schoolhouse and Tyler Creeks exceed temperature standards and subject to listing for phosphorous and sediment.
32. Address customary access to private lands in EA.
33. Future development may have future impacts.
34. Avoid introducing noxious weeds.

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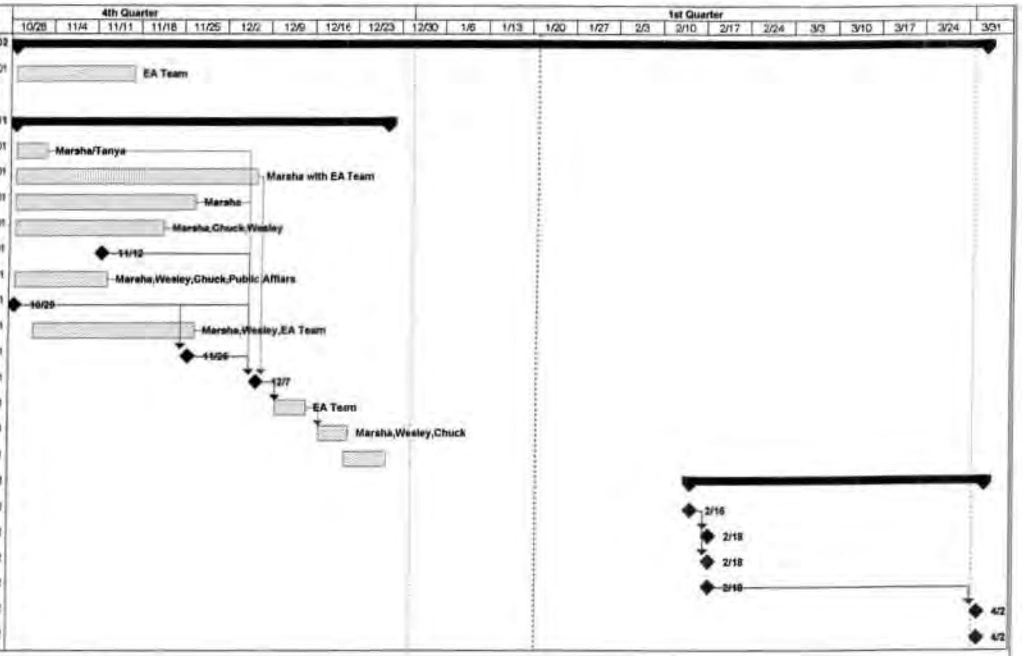
Appendix C: Project Schedule

ID	Task Name	Duration	Start	Finish
1	**TYLER CREEK STABILIZATION**	**112d**	**10/29/01**	**4/2/02**
2	Draft and deliver public involvement plan	15d	10/29/01	11/16/01
3				
4	**Phase 1**	**44d**	**10/29/01**	**12/27/01**
5	Confirm mailing list/database	5d	10/29/01	11/2/01
6	Schedule and prepare for public meeting :	29d	10/29/01	12/6/01
7	Develop facilitation process	21d	10/29/01	11/26/01
8	Conduct meeting logistics	18d	10/29/01	11/21/01
9	Media release	1d	11/12/01	11/12/01
10	Prepare backgrounder for distribution with	11d	10/29/01	11/12/01
11	Send Stakeholder letter with backgrounde	1d	10/29/01	10/29/01
12	Power Point presentation	18d	11/1/01	11/26/01
13	Dry run	1d	11/26/01	11/26/01
14	Meeting #1	1d	12/7/01	12/7/01
15	Review results/participation	5d	12/10/01	12/14/01
16	Solicit comments	5d	12/17/01	12/21/01
17	Produce summary documentation	5d	12/21/01	12/27/01
18	**Phase 2**	**33d**	**2/18/02**	**4/2/02**
19	Issue EA for public comment	1d	2/15/02	2/15/02
20	Media release	1d	2/18/02	2/18/02
21	Stakeholder letter send with EA	1d	2/18/02	2/18/02
22	Public Comment period	30d	2/18/02	3/29/02
23	Stakeholder letter--decision	1d	4/2/02	4/2/02
24	Media release as appropriate	1d	4/2/02	4/2/02



Project: Date: 1/21/02	Task		Milestone	◆	Rolled Up Task		Rolled Up Progress
	Progress		Summary		Rolled Up Milestone ◇		

3 **Draft and deliver public involvement plan**
Develop a common understanding of the objectives, schedule and process for the public involvement portion of thee project. Incorporate environmental considerations as appropriate. Follow the plan

4 **Phase 1**
The objective of this phase is to set up the communications and provide information for decisionmaking. Communicate project scope and process; solicit public comment; engage stakeholders in understanding the scope and articulating their issues and informational needs in as collective a manner as possible. Solicit input from those who do not participate in the standard meeting process by soliciting comments respective to process results.

5 **Confirm mailing list/database**
Review mailing list

6 **Schedule and prepare for public meeting #1**
Schedule meeting date and conduct preparatory activities.

7 **Develop facilitation process**
Design and refine facilitation process for meeting #1, the objective of which is to provide the scope, the sideboards, and engage stakeholders in discussions about the issues, solicit recommendations.

8 **Conduct meeting logistics**
Secure meeting room, supplies and materials, prepare display boards

9 **Media release**
Draft, area office and public affairs review, release to local media

10 **Prepare backgrounder for distribution with stakeholder newsletter**
Draft and send to all stakeholders/media with the stakeholder letter to ensure all have consistent information about the project and the meeting

11 **Send Stakeholder letter with backgrounder**
Draft, send for area office review, send with background information

12 **Power Point presentation**
Detailed attention to power point presentation, displays to provide the baseline information for the meeting discussion.

13 **Dry run**
Entire team to practice meeting process.

14 **Meeting #1**
Objectives: 1. Communicate proejct scope; 2. Generate stakeholder discussions about issues and options; 3. Collect stakeholder-generated ifnromational needs for providing follow-up information; 4. Provide direction for forwarding out-of-scope comments.

15 **Review results/participation**
Review results and participation for consideration in EA and next steps

16 **Solicit comments**
Solicit public scoping comments during this time

18 **Phase 2**
Official NEPA notifications; announce availability of Draft EA, notifications and public hearing, take comments and then issue final EA. Requires strict attention to NEPA requirements...help from Lois and others on EA team...

20 **Media release**
Announce EA availability and comment period

21 **Stakeholder letter send with EA**
Send EA to all on database and announce 30-day comment period, solicit feedback

22 **Public Comment period**
Offer and complete 30-day comment period

23 **Stakeholder letter--decision**
Announce decision--FONSI or EA--and next steps

24 **Media release as appropriate**
Announce decision--FONSI or EA--and next steps

Reclamation's Responses to Public Comments

Reclamation Responses to Public Comments

The Tyler Creek Wasteway Stabilization Final EA is designed and written to address public issues that are within the scope of the stabilization effort.

This attachment contains categorized and summarized comments received throughout the public involvement process and prior to release of the Draft EA. Each comment category is followed by Reclamation responses.

This attachment also contains a copy of each letter commenting on the Draft EA followed by a summary table of issues raised in that letter and Reclamation's responses to those issues. Each table also references specific sections of the Final EA where you can find further discussion on the topic. The *Contents* section at the front of the Final EA will also assist you in locating particular topics of interest.

Summary of Comments Received Prior to Release of the June 30, 2003, Draft Environmental Assessment

Categorized and Summarized Comments Received Prior to Release of the Draft EA

The issues and concerns raised throughout the public involvement process and prior to release of the Draft EA are categorized and summarized, together with Reclamation's responses, as follows:

Land Ownership and Access

Summarized Comments: Landowners are concerned about damage to their property caused by Reclamation's use of the wasteway. They expect Reclamation to repair their land. They want Reclamation to obtain easements through their property. They want to be involved in how their land is repaired. They are concerned about losing their right to privacy.

Reclamation Responses: This EA is about stabilizing the wasteway to attain minimal erosion and transport of sediments from the wasteway channel. With cooperation from landowners, Reclamation could construct stabilizing structures and repair channel damage throughout the wasteway. Reclamation will involve individual landowners in acquisition of rights-of-way/flowage easements, types of easements, site-specific stabilization efforts, and disposal of construction debris. Adjacent landowners will remain on Reclamation's call list to notify them prior to use of the wasteway.

Since this is a programmatic EA, site-specific environmental compliance will be accomplished prior to initiating stabilization or major surface disturbing activities.

A locked gate will block the entrance of the access road at Tyler Creek Road.

Geologic Features

Summarized Comments: The public is concerned with the unstable soils present in the wasteway, the loss of those soils, the long-term degradation of the landscape, and the effect erosion has on downstream resources. There is concern that using the wasteway could reactivate an ancient landslide. The public is concerned with the volume of water and the duration of the flow. They suggested a channel survey and design criteria that Reclamation incorporated into the preferred alternative. They offered suggestions on detailed studies and developing an alternate bypass, all of which are outside the purposes of and need for action.

Reclamation Responses: The geologic features of the Western Cascades are such that the Tyler Creek watershed lies in an area of weak, fragmented, and landslide-prone ashflow and decomposed volcanic ash beds. Some of the soils are highly susceptible to landslide. Landslides are likely to occur on this type of geologic features, even if Reclamation does not use the wasteway.

The entire EA is about stabilizing the wasteway so it can continue to function, as it has for the past 43 years, as a water delivery bypass when Green Springs Powerplant is out of service. A goal of the preferred alternative is to attain minimal erosion with the volumes of flow needed to meet downstream water delivery obligations. Stabilizing the wasteway should help reduce the likelihood of reactivating an ancient landslide.

Reclamation must acquire rights-of-way/flowage easements before stabilization work on private land can proceed and will negotiate with individual landowners of those wasteway areas where flow has exceeded or could exceed the natural channel. The exact repair method for any particular eroded area will depend on what Reclamation and the landowner agree to following negotiations on rights-of-way/flowage easements and stabilization methods. Until these negotiations take place, site-specific stabilization descriptions are not available. Reclamation will analyze site-specific conditions and, based on professional judgment, site-specific conditions (including flow velocity), and landowner negotiations, will make the final decision on which areas to stabilize and how. The required permits will further dictate working conditions.

Reclamation will use best management practices (as outlined in the construction contract specifications) to minimize environmental consequences caused by stabilizing activities or constructing the access road. All standard and reasonable precautions will be taken to reduce erosion and limit sedimentation during and after construction. Proper planning will produce efficiency and timely completion of construction activities with the least amount of people and heavy equipment working at any given time.

On the basis of a thorough review of the comments received, analysis of environmental impacts as presented in the Programmatic Final EA, mitigation measures, and implementation of all environmental commitments identified in the Final EA, Reclamation has concluded that implementation of the preferred alternative would have no significant impact on the quality of the human environment or the natural and cultural resources of the area. Reclamation commits to all necessary site-specific environmental clearances and permits before stabilization or major surface disturbing activities.

Regardless of whether or not a bypass valve at Green Springs Powerplant may prove to be technically, economically, and environmentally viable, Reclamation will still upgrade access to the wasteway and stabilize localized areas of the wasteway channel.

Water

Summarized Comments: The public is concerned about how using the wasteway affects downstream water quality.

Reclamation Responses: Wasteway use is expected infrequently, based on only about five periods of use in the 43-year history of the wasteway. The preferred alternative should improve water quality by reducing sedimentation and somewhat lowering the wasteway water temperature.

Most years, the city of Ashland gets its drinking water supply from the East Fork Ashland Creek which is unaffected by wasteway or Ashland Lateral flows. During those infrequent times when Ashland gets its drinking water from Ashland Lateral, it is most likely that sedimentation from the wasteway would not enter the city’s water supply.

The flow measurement weir placed near the wasteway outlet pipe measures the volume of flow released through the wasteway channel.

Vegetation

Summarized Comments: The public wants the natural vegetated state of the channel returned and maintained with native plantings, increased riparian shade, and protection of wetlands.

Reclamation Responses: Reclamation will analyze individual erosion sites and negotiate with private and Federal landowners on where vegetation cuttings will be made, from which plants, and whether specific vegetation will be removed. Efforts will be made to limit disruption of existing riparian habitat. Cuttings of live brush within existing rights-of-way or with the landowner permission will likely be necessary to construct stabilizing structures. As the plants grow, the amount of riparian habitat will likely increase. Native vegetation plantings and use of best management practices will reduce the likelihood of introducing noxious weeds.

Reclamation will use best management practices (as identified in the construction contract specifications) to minimize environmental consequences caused by stabilizing activities or constructing the access road. A goal of the preferred alternative is to preserve the local wetland ecosystem. Reclamation will obtain a removal/fill permit from ODSL and a CWA 404 permit from the Corps prior to road construction. The permit application will specify quantities of material to be removed and fill material to be placed while installing the culverts. The road alignment will minimize wetland impacts to the extent possible while remaining within the Reclamation rights-of-way. The permits could be conditional on mitigation, timing of work, and other construction limitations at the discretion of the Corps and ODSL. No quantifiable wetland impacts should occur along the access road or in the way the wetland functions. Streambank stabilization efforts within the wasteway will not affect emergent wetlands.

Vegetation and live trees within the wasteway channel will likely be removed if the flow around them causes bank erosion. Live trees will also likely be removed if they are about to fall into the flow channel. Minimal existing vegetation may be removed where concrete and metal components would be placed. Efforts will be made to build stabilizing structures from already downed trees, especially those in the flow channel and along the banks. To avoid cutting live trees, Reclamation will acquire untreated wooden logs if additional logs are needed to build the stabilizing structures.

Other already downed timber will be left or rearranged and anchored in the wasteway to serve as energy dissipaters. Disposal of cut trees, slash, and debris created during construction will comply with negotiated agreements with private and Federal landowners.

Fish, Wildlife, and Aquatic Resources

Summarized Comments: The public is concerned about what sedimentation does to the downstream aquatic environment and species. They request analysis for special status species.

Reclamation Responses: The preferred alternative will reduce erosion along the channel banks, reduce sediment and nutrients released downstream, increase vegetation and riparian shade along the wasteway, and slightly lower water temperatures. Improved aquatic conditions should benefit aquatic, semi-aquatic, and upland species.

The access road culverts should not affect aquatic species since these structures will be sized appropriately for expected runoff, to not impede flow, and to have the least impact on drainage characteristics surrounding the wetlands. They will be placed to allow for passage of aquatic species.

The analysis of threatened and endangered species found that reduced sediments and nutrients should reduce harmful effects but should have no adverse effect on Gentner's mission-bells, the bald eagle, the northern spotted owl, Southern Oregon/Northern California Coasts ESU coho salmon, or essential fish habitat. Effects on special status species would likely be similar.

Social Aspects

Summarized Comments: Public concerns include quality of human life, health, and safety. Landowners are concerned that erosion is destroying the value of their investments and causing an unsightly landscape. They are concerned about the possibility of reactivating a major landslide causing the loss of their property, homes, and human life. As a result, their peace of mind is impaired.

Reclamation Responses: The geologic features of the Western Cascades are such that the Tyler Creek watershed, and adjacent properties, lie in an area of weak, fragmented, and landslide-prone ashflow and decomposed volcanic ash beds. Some of the soils are highly susceptible to landslide. Landslides are likely to occur on these types of geologic features, even if Reclamation did not use the wasteway. The entire EA is about stabilizing the wasteway so it can continue to function, as it has for the past 43 years, as a water delivery bypass when Green Springs Powerplant is out of service. The preferred alternative is designed to stabilize the channel banks and attain minimal erosion. Stabilizing the channel banks should reduce erosion, minimize further degradation of the wasteway and its banks, and reduce the likelihood of reactivating an ancient landslide.

Alternatives and Study Types

Summarized Comments: The public wants thorough analysis of current conditions and impacts using the best science available to develop a broad range of alternatives.

Reclamation Responses: This is a Programmatic Final Environmental Assessment which provides coverage for implementing general provisions (for which site-specific layout and design have not yet taken place) to upgrade access to the wasteway and stabilize localized areas of the wasteway channel. This EA examines a reasonable range of alternatives that are based on current engineering practices and input from landowners and the public. As required by NEPA, the EA examines the existing physical, biological, and natural resources that could be affected by the proposed action, and it identifies potential impacts to those resources. It also describes cumulative effects of the alternatives and mitigation measures for each resource. It explains that site-specific environmental compliance will be accomplished prior to initiating stabilization or major surface disturbing activities.

Management and Infrastructure

Summarized Comments: Concerns range from wanting to see first-hand and discuss the wasteway damage to lack of trust in Reclamation's actions to offering assistance.

Reclamation Responses: Reclamation acknowledges these comments and has included them in the EA. All interested parties and individuals have been encouraged and invited to participate throughout the public involvement process and to review and comment on the Draft EA.

Issues Outside the Purposes of and Need for Action

Summarized Comments: Several public comments and requests pertain to issues unrelated to stabilizing the wasteway:

- General engineering, geomorphic, geologic, and geotechnical studies not specific to stabilization
- Cost, benefits, and cumulative effects on whole river system
- Dependable irrigation water delivery
- Drinking water in City of Rogue River
- Permanently abandon the wasteway
- Return the stabilized wasteway to a natural channel
- Observe other streams not affected by Reclamation releases
- Stream profiles and cross sections on tributaries
- Stabilize tributary channels and swales
- Extend the study area from the pipe outlet to Buckhorn Springs Road
- Alternate way to bypass powerplant
- Significant offsite impacts beyond the scope of the proposed action
- Long-term impact and cost analysis of wasteway versus an alternate bypass
- Revisit Sampson Creek as wasteway channel
- Cleaning sedimentation from sprinkler systems
- Deliver irrigation water without degraded water quality or social, economic, or environmental damage

Reclamation Responses: Reclamation acknowledges and has documented local interest in conducting watershed studies and undertaking efforts that exceed the need to stabilize the wasteway. However, these issues are outside the scope of the stabilization effort.

How These Comments Influenced The Alternatives

As required by NEPA, Reclamation developed a preliminary range of alternatives to stabilize the wasteway taking into consideration the existing wasteway channel degradation, the steep terrain, and the goal to maintain the environmental integrity of the channel. An ongoing and open public and agency scoping process identified the issues to be addressed in this EA. Reclamation gathered information through public outreach efforts, talking with stakeholders, and ongoing contacts with local, State, and Federal agencies. An initial scoping letter, in April 2001, requested public assistance in identifying environmental impacts and concerns or suggestions on the alternatives. The public submitted eight response letters. These letters helped refine the purposes of and need for action.

The preliminary alternatives were discussed at a May 21, 2001, tour of the wasteway channel attended by BLM, landowners, Friends of the Greensprings, and two private consultants. The participants agreed that a natural stream should be maintained rather than building a man-made canal. They also agreed that bioengineering techniques using native vegetation would offer the best solution.

Then, these preliminary alternatives were presented at a public workshop on December 6, 2001, in Ashland. Reclamation received three letters and comment forms before and eight letters following the meeting attended by fourteen stakeholders. The workshop offered another forum for public input on the alternatives. Those comments that fell within the scope of stabilizing the wasteway and that were not already incorporated into the alternatives were given consideration.

Public comments and preferences identified throughout the scoping process helped to refine the alternatives described and evaluated in this EA. They also led to the extension of the work area from the wasteway outlet pipe downstream to the confluence of Tyler Creek at Emigrant Creek.

Reclamation Will Remain in Contact With Adjacent Landowners

Reclamation would continue consulting and negotiating with adjacent landowners to acquire rights-of-way/flowage easements and to accomplish wasteway stabilization. The adjacent landowners will remain on Reclamation's call list for notification prior to diverting water through the wasteway. When called, they will each receive information concerning why the wasteway will be used and approximately how long released water will be diverted through the wasteway. They will also be notified that someone will be on site to inspect the wasteway during flows.

Comments Generated by the June 30, 2003, Draft Environmental Assessment

Email from Lauren Hisatomi: hisatomi2@earthlink.net 07-19-03 10:05PM

July 19, 2003

Mr. Ronald J. Eggers
Bureau of Reclamation, LCA-6101
Lower Columbia Area Office
825 N.E. Multnomah Street, Suite 1110
Portland, OR 97232-2123

Dear Mr. Eggers,

Thank you for the opportunity to comment on the Draft Environmental Assessment (EA) for Tyler Creek Wasteway Stabilization, Talent Division Rogue River Basin Project, dated June 30, 2003. As residents and property owners downstream from the proposed plan, we have concerns regarding the Bureau of Reclamation's (BOR) proposal. We find the analysis to be incomplete and inaccurate. It fails to adequately address the issues raised at the December 6, 2001 scoping meeting held at Ashland Middle School, as well as the issues raised in our scoping letter to Ms. Tonya Sommer, May 20, 2001.

The greatest flaw in the analysis is lack of acknowledgement of the adverse cumulative effects of sustained water releases down the wasteway by the BOR. The analysis makes direct reference to the area upstream negatively affected by the BOR's release of 60 cfs during the summer of 1993, specifically section 5. The EA does not examine the entire section of the wasteway (Highway 66 to Tyler Creek Road) including our property. The damage of this event cannot be isolated to a generalized area. Clearly, the BOR must recognize that areas downstream run similar, if not greater, risk of the massive erosion caused by these unnatural releases of water down the wasteway.

Participants at the scoping session urged the BOR to develop a proposal, which would (1) ***stabilize*** the affected area from further erosion, (2) ***restore*** the areas damaged by erosion and, (3) ***mitigate*** for present and future problems. I fail to see prudent application or utilization of these basic concepts in the alternatives proposed in the EA. Unfortunately, I see the BOR's proposed actions to be shortsighted, based on convenience, and focused on the least expense and greatest expediency. The EA does not address the very root of problem: too much water (volume and speed) going down the wasteway without scientific analysis of potential adverse affects to private property owners and the ecosystem as a whole.

Further analysis is needed to move forward. Specifically:

Private Property Rights

Currently, the BOR has no easement or right of way to operate on private property as they are. As the owners of the bridge (Pg. 19. Figure 2-12 of the EA) the proposed releases of water could damage if not destroy the bridge. The bridge provides access to and is a conduit for our domestic water supply from our well located across the wasteway. If BOR continues to release water down the wasteway, it will compromise our domestic water supply. The damage and devaluation of our property and others' caused by sustained releases by the BOR needs to be addressed. The EA makes no definitive proposal or commitment to property owners whose property will be adversely affected downstream. It needs to address this before any action is taken.

Absence of Operating Plan
The EA makes no mention of an operating plan for water flows down the wasteway in any of the 4 Alternatives proposed. Will there be determination of maximum flow allowed down the wasteway? What monitoring will be done? Who will do it? The lack of a detailed operating plan is a gross oversight to any proposed action.

Cumulative Effects of Sustained "Unnatural Flows"
The EA omits discussion or analysis of what water capacity the wasteway can carry. Has the BOR studied and determined what capacity the wasteway can sustain before negative effects occur? A prudent, maximum flow level must be determined, one that not only considers what is manually released at the valve upstream, but also includes the combined flow from natural weather events such as rain or snow melt.

Water Quality
I believe it is misleading to state, "The Wasteway has no effect whatsoever on Ashland Creek or on its water quality," (Pg. 35). When the power generator is under repair, water from the wasteway is diverted directly to the Ashland Lateral. During some years, Ashland relies on this water to supplement its domestic water supply. This is critical, because according to the Oregon 319 Program Final Report on the Tyler Creek Monitoring Project, prepared by The Friends of the Greensprings, April 20, 2000, there are water quality issues pertaining to continued releases of water down the wasteway. The study concluded that "mass wasting in the unrestored TID/BOR wasteway channel contributes year-round phosphorus exceedences in the Bear Creek system."

It appears that this EA lacks analysis of substantive issues addressed at the scoping meeting and in subsequent letters from affected parties. It falls short of offering a broad range of alternatives leading to stabilization of the Tyler Creek Wasteway and addresses only a short term fix to a portion of the affected area. Unfortunately this assessment was released when some property owners are on vacation and unavailable to comment. We urge the BOR to extend the comment period so that affected parties have the opportunity to comment on the important nature of this proposal. Also, we believe further analysis and comments from resources such as the Rogue Valley Technical Pool, who have already been involved with water issues at the request of Tyler Creek residents, should review the document and comment on the proposed plan.

Thank you for the opportunity to comment. We look forward to your response.

Sincerely,

Ty and Lauren Hisatomi

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P.O. Box 3546
Ashland, OR 97520
(541) 482-0113
hisatomi2@earthlink.net

Reclamation's Responses to the 7-19-03 comments from Ty and Lauren Hisatomi:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
no definitive proposal or commitment to property owners	Text is changed to clarify why the alternatives are described in general terms rather than in terms of site-specific conditions. It also clarifies that the exact repair method for any particular eroded area will depend on what Reclamation and the landowner agree to following negotiations on rights-of-way/flowage easements and stabilization methods. Until these negotiations take place, site-specific descriptions are not available.	1-introduction to chapter 2-introduction to chapter 2-Alternative 2; Landowner Negotiations
	This EA contains discussion of how Reclamation will involve private and Federal landowners.	1-Rights-of-Way/Flowage Easements and Wasteway Access 2-introduction to chapter 2-Alternative 2 2-Alternative 4; Vegetation Removal 3-Geology; Environmental Consequences; Cumulative Effects 3-Vegetation; Environmental Consequences; Mitigation 4-Agency Consultation and Coordination; Bureau of Land Management Coordination 4-Adjacent Landowners 4-Other Contacts

Reclamation's Responses to the 7-19-03 comments from Ty and Lauren Hisatomi:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
		5-Vegetation
	Some landowner negotiations have already occurred.	2-Alternative 2; Access Road; Route 2-Alternative 2; Vegetation Cuttings and Removal; Along the Access Road 2-Alternative 2; Inspection and Maintenance 3-Historic Properties; Environmental Consequences; Alternative 2 4-Public Involvement 4-Adjacent Landowners
analysis is inaccurate	Without specific mention of the claimed inaccuracies, Reclamation cannot respond.	--
analysis fails to adequately address issues raised at 12-6-01 scoping meeting and in our 5-20-01 scoping letter	Many of the issues raised are unrelated to stabilizing the wasteway. Reclamation acknowledges and has documented these issues, but considers them as being beyond the scope of this EA.	1-Purposes of and Need for Action 1-Proposed Action and Scope of Work 1-Scoping Process and Issues Identified Attachment E – Public Involvement
	The Draft EA contains discussion responding to identified issues that fell within the purpose, need, proposed action, and scope of work. Likewise, public comments on the Draft EA that fell within these same parameters were considered and, in response, appropriate text changes are included in this FONSI/Programmatic Final EA.	throughout the FONSI/Programmatic Final EA
greatest analysis flaw is lack of acknowledgement of adverse cumulative effects of sustained wasteway use	Reclamation acknowledges the damage caused by sustained diversions through the wasteway and describes environmental	1-Purposes of and Need for Action 1-Proposed Action and Scope of Work

Reclamation's Responses to the 7-19-03 comments from Ty and Lauren Hisatomi:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
	consequences, or effects, likely to occur under the four alternatives. It is the acknowledgement of damage that brought about the development of the proposed wasteway stabilization program.	1-Background; Wasteway Construction and Modification 1-Rights-of-Way/Flowage Easements and Wasteway Access 3-Geology; Affected Environment; Reclamation's Geologic and Geotechnical Studies 3-Environmental Consequences section for each resource 6-Chapter 3 References
	The EA describes cumulative effects in eight of the natural resource categories that potentially could be affected by the proposed action – to upgrade access to the wasteway and stabilize localized areas of the wasteway channel.	3-Environmental Consequences; Cumulative Effects section for each resource
EA does not examine entire wasteway (Hwy 66 to Tyler Creek Road); areas downstream also run risk of massive erosion	Text is changed to clarify that the proposed work area includes the wasteway from the pipe outlet downstream to where Tyler Creek enters Emigrant Creek. It now also includes discussion on why Emigrant Creek is excluded from the stabilization efforts. The work area includes T39S, R3E, Section 32; T40S, R3E, Sections 5 and 6; and T40S, R2E, Section 1; but is limited to those areas where wasteway access is needed and where Reclamation's use of the wasteway has caused or could cause channel erosion.	Glossary and Acronyms; work area 1-Proposed Action and Scope of Work 1-Figures 1-2 and 1-4 3-Figure 3-1 1-Rights-of-Way/Flowage Easements and Wasteway Access

Reclamation's Responses to the 7-19-03 comments from Ty and Lauren Hisatomi:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
urge Reclamation to stabilize, restore, and mitigate; the draft EA missed these basic concepts; proposed actions are shortsighted, based on convenience, and focused on least expensive and greatest expediency	The entire EA is about stabilizing the wasteway so it can continue to function, as it has for the past 43 years, as a water delivery bypass when Green Springs Powerplant is out of service.	Entire EA 1-Purposes of and Need for Action 1-Proposed Action and Scope of Work 2-introduction to chapter 2-Future Diversions Through the Wasteway 2-Alternative 2; Landowner Negotiations
	Reclamation developed the alternatives based on current engineering practices and input from landowners and public scoping efforts.	1-Scoping Process and Issues Identified 2-introduction to chapter 2-Alternative 2 4-entire chapter
	The preferred alternative offers a well-rounded approach to stabilizing the wasteway. It effectively addresses existing environmental problems associated with past wasteway use and applies proactive, environmentally friendly measures to stabilize the wasteway.	2-Alternative 2 3-Environmental Consequences; Alternative 2 section for each resource
	The EA describes mitigation in nine of the natural resource categories that potentially could be affected by the proposed action – to upgrade access to the wasteway and stabilize localized areas of the wasteway channel. Reclamation's environmental commitments, some of which are also mitigation measures, are outlined in chapter 5.	3-Affected Environment and Environmental Consequences; Mitigation section of each resource 3-Environmental Justice; Environmental Consequences 5-entire chapter

<table>
<tr><th colspan="3">Reclamation's Responses to the 7-19-03 comments from Ty and Lauren Hisatomi:</th></tr>
<tr><th>The issue is:</th><th>Reclamation's response</th><th>For further information, refer to the Tyler Creek Wasteway Stabilization EA in:
(Chapter-Section; subsection)</th></tr>
<tr><td rowspan="2">EA does not address very root of the problem - too much water without scientific analysis of adverse effects; gross oversight not to mention a wasteway operating plan; A maximum flow that includes combined water deliveries and natural flow of weather events must be determined.</td><td>Stabilizing structures will be designed based on flow requirements and sized so as not to create adverse effects. This EA is about stabilizing the wasteway rather than about changing operations of individual facilities within the Rogue River Basin Project. This EA incorporates by reference the document "Rogue River Basin Project Talent Division – Oregon, Facilities and Operations."</td><td>1-Purposes of and Need for Action
2-Alternative 2; Access Road; Road Specifications
2-Alternative 4; Access Roads
3-Fish and Wildlife; Environmental Consequences; Alternative 2
2-Alternative 2; Bioengineering Techniques; Vegetation Selection
6-Chapter 1 References</td></tr>
<tr><td>Text is revised to clarify that Reclamation will continue using the wasteway.</td><td>2-introduction to chapter
2-Future Diversions Through the Wasteway
2-Alternative 2; Landowner Negotiations</td></tr>
<tr><td>Reclamation has no easement or right-of-way to operate on private property</td><td>Reclamation has acquired rights-of-way/ flowage easements for those portions of the wasteway in T39S, R3E, Section 32 and T40S, R3E, Section 5 as shown on figures 1-2 and 1-4. On the lower portions of the wasteway (T40S, R3E, Section 6 and T40S, R2E, Section 1), it is true Reclamation has not exercised rights-of-way reserved under the 1890 Canal Act. It is also true that Reclamation can run water through natural waterways without obtaining rights-of-way if the flow is within the carrying capacity of the channel. Reclamation will acquire additional rights-of-way as needed to access and stabilize the wasteway channel.</td><td>Glossary and Acronyms; 1890 Canal Act right
1-Rights-of-Way/Flowage Easements and Wasteway Access
2-Alternative 2; Acquiring Additional Rights-of-Way/Flowage Easements
2-Alternative 2; Standard Engineering Techniques
2-Alternative 2; Access Road; Route; and Use of the Road
2-Alternative 2; Proposed Work Sequence
2-Alternative 2; Inspection and Maintenance</td></tr>
</table>

Reclamation's Responses to the 7-19-03 comments from Ty and Lauren Hisatomi:

The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
	Reclamation must acquire rights-of-way/ flowage easements before stabilization work on private land can proceed.	1-Rights-of-Way/Flowage Easements and Wasteway Access 2-Alternative 2; Acquiring Additional Rights-of-Way/Flowage Easements 2-Alternative 3; Rights-of-Way/Flowage Easements, Negotiations, and Data Collection 2-Alternative 4; Rights-of-Way/Flowage Easements, Negotiations, and Data Collection
What monitoring will be done? Who will do monitoring?	The Inspection and Maintenance sections are modified to add further clarification of these programs.	2-Alternative 2; Inspection and Maintenance 2-Alternative 3; Inspection and Maintenance 2-Alternative 4; Inspection and Maintenance
The statement, "the wasteway has no effect whatsoever on Ashland Creek or on its water quality" is misleading. Water from the wasteway is diverted directly into the Ashland Lateral. Ashland relies on this water [*from Ashland Lateral*] to supplement its domestic water supply.	The entire Water Quality section is updated to reflect the latest Oregon Department of Environmental Quality 303(d) listing.	3-Water Quality
	Yes, wasteway flow is diverted into Ashland Lateral. Text is changed to explain that in most years, the city of Ashland gets its drinking water supply by exercising a water exchange with willing parties on the East Fork Ashland Creek. Ashland Creek (the city's main water source) and its water quality are unaffected by wasteway flows since Ashland Lateral water enters a siphon and is piped beneath Ashland Creek. The two water sources do not intermix.	3-Water Quality; Affected Environment; Drinking Water
	Text is changed to clarify that only infrequently, when Ashland Creek water is	3-Water Quality; Affected Environment; Drinking Water

Reclamation's Responses to the 7-19-03 comments from Ty and Lauren Hisatomi:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
	unavailable, does the city of Ashland gets its drinking water from Ashland Lateral. Wasteway diversions flow 1.4-miles down Emigrant Creek to the Ashland Lateral diversion dam. Most of the diversions enter Ashland Lateral and travel 12 miles to the city of Ashland. Any sedimentation generated by using the wasteway would likely settle out in Emigrant Creek and the lateral. Most likely, sedimentation from wasteway use would not enter the city's water supply.	
water quality issues pertaining to continued wasteway releases; FOG concluded that mass wasteway wasting contributes year-round phosphorus exceedences in Bear Creek	The preferred alternative offers a well-rounded approach to stabilizing the wasteway. It effectively addresses existing environmental problems associated with past wasteway use and applies proactive, environmentally friendly measures to stabilize the wasteway and should improve water quality.	2-Alternative 2 3-Environmental Consequences; Alternative 2 section for each resource
	Text is revised to include the following statement, "Water diverted into the wasteway flows into Schoolhouse Creek, Tyler Creek, Emigrant Creek, and then into either Ashland Lateral or Emigrant Lake. Although extended periods of wasteway use may reduce bank stability and increase sediment concentrations, other factors independent of wasteway use impact water quality in the three creeks, Ashland Lateral, and Emigrant Lake."	3-Water Quality; Affected Environment

Reclamation's Responses to the 7-19-03 comments from Ty and Lauren Hisatomi:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
	Text is changed to state that stabilization is not intended to fix all the basin's problems nor is it intended to upgrade private property beyond what previously existed or what was damaged by Reclamation's actions. Stabilization is instead intended to repair damage caused by diverting water.	2-Alternative 2; Landowner Negotiations
	The FOG report also pointed out several other watershed sources of erosion that contribute large quantities of pollutants to the watershed's river system.	3-Geology; Affected Environment; Privately Completed Studies; 1999 Tyler Creek Monitoring Project
analysis is incomplete; EA lacks analysis of substantive issues and falls short of offering broad range of alternatives; it addresses only a short-term fix to a portion of the affected area	The proposed action is to upgrade access to the wasteway and stabilize localized areas of the wasteway channel.	1-introduction to chapter 1-Purposes of and Need for Action 1-Proposed Action and Scope of Work 1-Background; Early Powerplant/Wasteway Designs 2-introduction to chapter 2-Alternative 2 2-Alternative 2; Landowner Negotiations 2-Alternative 4; Access Roads
	The title of the EA is changed to "Finding of No Significant Impact and Programmatic Final Environmental Assessment." The introduction of chapter 1 is changed to explain that this Programmatic Final Environmental Assessment (EA) provides coverage for implementing general provisions (for which site-specific layout and design	Front cover 1-introduction to chapter 2-Alternative 2; Minimizing Construction Impacts 2-Alternative 4; Minimizing Construction Impacts

Reclamation's Responses to the 7-19-03 comments from Ty and Lauren Hisatomi:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
	have not yet taken place) to upgrade access to the wasteway and stabilize localized areas of the wasteway channel. It further explains that site-specific environmental compliance will be accomplished prior to initiating stabilization or major surface disturbing activities.	
	The entire EA is about stabilizing the wasteway so it can continue to function, as it has for the past 43 years, as a water delivery bypass when Green Springs Powerplant is out of service.	Entire EA 1-Purposes of and Need for Action 1-Proposed Action and Scope of Work 2-introduction to chapter 2-Future Diversions Through the Wasteway 2-Alternative 2; Landowner Negotiations
extend the comment period so vacationing property owners can comment; Rogue Valley Technical Pool should review and comment on the proposed plan	Comment periods for Draft EAs are typically 30 days long. The comment period on this Draft EA closed on August 4, 2003, following a 30-day review period. An extensive public involvement process preceded the release of the Draft EA and encouraged and invited all interested parties and individuals to participate in Reclamation's public involvement process and to review and comment on the Draft EA. Some members of the Rogue Valley Technical Pool are on the mail list. Therefore, the comment period is not extended.	4-entire chapter Attachment D – Mail Distribution List Attachment E – Public Involvement

AUG 05 '03

6101

C. Edwards
1920 Tyler Creek Rd
Ashland, OR 97520
July 28, 2003

Bureau of Reclamation
LCA-6101, Lower Columbia Area Office
825 NE Multnomah Street, Suite 1110
Portland, OR 97232-2135

Dear Bureau of Rec.:

This letter is in response to your request for comments on the Draft EA for the Tyler Creek Wasteway Stabilization Project. I own approximately 100 acres in T40S R3E Section 6, Jackson County taxlot 40-3E-6-3100, in the state of Oregon. I have owned the property for 18 years and am now building a home on it and am living there. In the past, I have written your office and TID about the releases and erosion. About ½ mile of my property either includes the waste way or borders it. The bridge across the wasteway which I use to access my well and the bulk of my property has been washed out twice, once by your extended release in 1993 and again in 1996 due to localized flooding. From 1985 (when I bought the property) to 1993, the bridge was intact. Currently we are unable to get water from our well because there is no access. I feel I have been significantly impacted by the actions of the BOR, and I am glad they are finally going to do something about it.

I do not feel that using the wasteway for a 20-60 cfs release was ever an environmentally acceptable option. On page 4 under "Early Powerplant/ Wasteway Designs" the EA states that BOR found the existing Tyler Creek wasteway to be the most technically economically and environmentally acceptable option' among several others considered. For whom? This statement does not surprise me considering that BOR did not bother to obtain right-of-way down-

C. Edwards
p. 2.

stream from Section 5 (Garfas). Probably, since the area in Section 6 was formerly used as open range, there was no one to witness past degradations to the streambed. But people live here now and do not want to see their land ruined any more. On page 6 of the EA, BOR itself admits that during 1993 the channel wasn't capable of handling the flow.

As a result, while I am encouraged by your "preferred alternative", I do not feel that the standard engineering techniques proposed (i.e. backfill and riprap) for the culverts downstream from the Garfas property (pp18+19), which I own, are adequate. Should another large (20-60 cfs) release be required, due to unforeseen problems at the powerplant, how would BOR (or would BOR) attempt to monitor further damage in this area? The "middle culvert" indicated in Fig 1-4 in Section 6 (photo Fig. 2-11), downstream from the Garfas property, has already been fixed a couple of times with backfill and riprap. As I mentioned in past letters to you (May 14 and Nov 17, 2001 - attached) these culverts absolutely need to hold up in order for me to access my well and the rest of my property. If BOR releases flow above 20 cfs in the future, I can guarantee you that merely shoring up the existing culverts with backfill and riprap will not suffice. A larger, more permanent structure needs to be installed to handle larger flows and I think that since BOR was responsible for destroying the original bridge, BOR should be responsible for installing a better one.

Also, a permanent easement for BOR from Tyler Creek Rd to the "culverts" (future bridge) is necessary to enable them to monitor in the culvert area and upstream to Garfas' property for channel erosion and necessary repair to the ½ mile of stream channel that crosses my land, as well as BLM.

C. Edwards
p. 3.

From 1985 to 1993 there existed a road, similar to the one on Garfas' in Fig. 2-14, that bordered my property and gave me access (as well as others, including PPL) to the culverts and the other side (~95 acres of my land). The map attached to my letter of May 14, 2001 shows this old road. Your surveyors used it last October. This road down was also damaged by slumps from creek erosion caused by releases. I would like it fixed also, similar to the access road through Garfas', perhaps as part of the creation of a new easement. I have taken photos of the areas in question. The easement would necessarily have to pass through properties owned by my two neighbors (Hisotomi TL 3101 and Woods / Stewart TL 3102), as my driveway does. But I think it essential that BOR be able to monitor this area, since there is a slump almost as bad as the "area of considerable erosion" halfway up my property (actually on BLM), which is causing a slump or landslide in the area north of the creek (my property). This is labelled "B" in the map attached to my letter to you of May 14, 2001.

In sum:

1. I support expansion of the project to include areas affected in T40S R3E Sec 6.

2. I would like to see stabilization and monitoring done for future releases in Sec 6, as well as Sec 5.

3. I would like to see future releases limited to 20 cfs when wasteway is in use (nowhere in document is flow restriction proposed).

4. UNLESS SIGNIFICANT STANDARD ENGINEERING is done to the channel, both in the proposed

C. Edwards
p. 4.

work area, and in areas west of Garfas' down to Tyler Creek (to include identified culverts and bridges damaged in 1993 release), flows in excess of 20 cfs will continue to degrade the channel and damage property.

5. Just because BOR had an easement to release water over private lands in Sec 5 and didn't have one over my land and others in Sec 6, doesn't mean the majority of the rehabilitation work should be done in Sec 5 (Fig 1-4). Necessary easements should be obtained and the entire channel from the pipe outlet to Tyler Creek should be rehabilitated and monitored for future damage, since there has been damage all the way down in the past.

Thanks for your considaration.

Sincerely,

Catherine Edwards

cc: Jon Lindell, BLM

660 Kelly Blvd.
Springfield, OR 97477
May 14, 2001

Bureau of Reclamation
Pacific Northwest Region
Lower Columbia Area Office
825 N.E. Multnomah St., Suite 1110
Portland, OR 97232-2135

Dear Bureau of Reclamation:

This letter is in response to your environmental scoping letter dated April 6, 2001, which I did not receive until May 4, 2001. I have since attended a meeting with John Ward of Friends of the Greensprings where I found out that as a property owner along the Tyler Creek Wasteway Drainage I need to get my concerns about your Road and Restoration project to you by May 20th.

I have enclosed a map showing the geographic relationship of my property to the drainage, as well as correspondence I had with the Talent Irrigation District during 1993 regarding the increased flow of water. On the map, the small "x" labelled "A" refers to a bridge I had across Schoolhouse Creek that was wiped out during the release of 1993. The other small "x" labelled "B" refers to a large slump on Tunnel Creek that took out several large trees subsequent to the release of 1993. There is also considerable slumping in the hill directly north of the creek. The small dot labelled "C" refers to the Center Quarter Corner of Section 6. The small dot labelled "D" refers to the Southeast corner of the South half of the Northeast Quarter of Section 6. I included the "C" and "D" references because there are USGS section markers in these two locations which may help you in locating the two damage sites.

It is my opinion that most of the erosion in the creek that I have seen is due to the unnatural flows caused by the "wasteway". If you compare other creeks in the area, you will see that "Tunnel" Creek far exceeds them in damage to the bank, sedimentation and damage to surrounding vegetation (mostly trees). This does not even begin to address changes which have occurred over the past 10 years in instream aquatic life. For example I used to see what I think are Giant Pacific salamanders near my now-nonexistent bridge. These are no longer there.

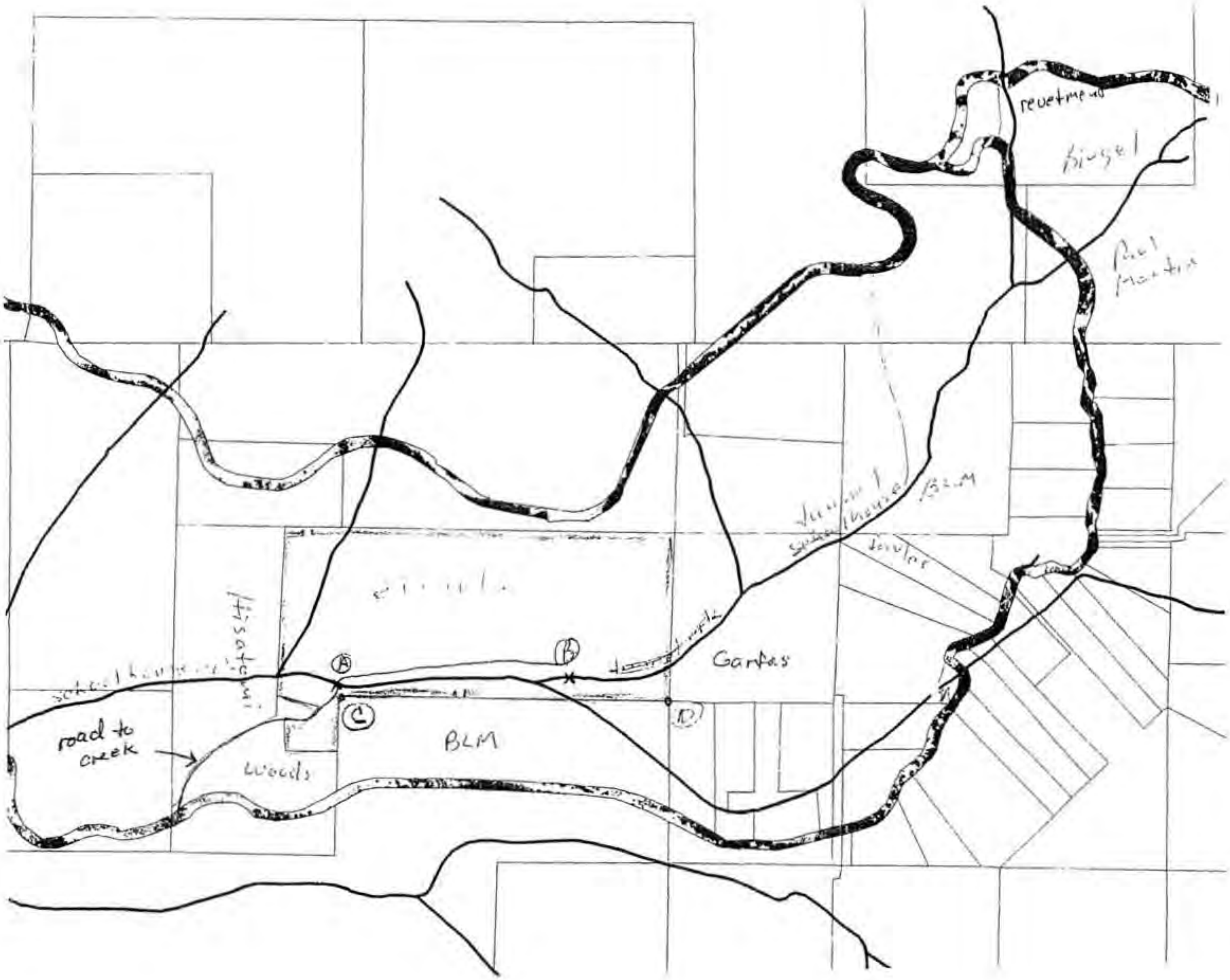
John Ward informed me that you will be down visiting some of the damaged areas in the neighborhood on May 21st and I would like to be down there to show you the two areas referenced about which have suffered considerable erosion as a result of the wasteway. I do not live there currently, but will make it a point to be there to do this. Please let me know when and where you would like to meet. The address of my property is 1920 Tyler Creek Road.

Thank you for considering my comments.

Sincerely yours,

Catherine Edwards

Catherine Edwards


BLM
A
B
C
D
road to creek
woods
BLM

November 17, 2001
660 Kelly Blvd.
Springfield, OR 97477

Mr. Wes Green
Bureau of Reclamation
1150 North Curtis Road, Suite 100
Boise, Idaho 83706-1234

Dear Mr. Green:

I just wanted to contact you regarding the Tyler Creek (a.k.a. Tunnel Creek, Schoolhouse Creek) bypass near Ashland, Oregon. In rummaging through my old files, I happened to find more documentation relating to damages to my property caused by releases from the Tyler Creek bypass. I have attached copies of this correspondence. It consists of a letter sent to the Talent Irrigation District in March of 1988 by a former co-owner of my property, as well as TID's response and that of their insurer. Finding this caused me to start ruminating about what might happen in the future.

My partner and I were just down in Ashland last week and are making progress on our building permit there. We installed the foundation for a new house. We have the house here in Springfield up for sale and plan on putting the money into building a house in Ashland. One of my concerns is that the well, that was dug and tested before my buying the land, is on the other side of the creek from the building site. The bridge over the creek provided access to the well. Once we move down there, we will need this access to further develop the well. Water is scarce is our area and, based on the experiences of our neighbors, more drilling on the homesite side of the creek is too costly an option. We need to get to the well across the creek.

Back in 1988, when we first noticed damages caused by the release, TID (and their insurer) basically told us that they were not responsible for damages. What they did not tell us at that time was that your agency was responsible for the bypass. In addition, in talking with John Ward and other neighbors, and after speaking with you and others at the BOR, I have learned that BOR, while managing the release of water through my property for TID, does not have an easement to do so. I have looked at the recorded deed and related land sales contract, which I have paid off, and there is no mention of an easement. You apparently DO have an easement over Garfas', the neighbors who have held you accountable for damages to their property.

You will recall I was there when John Ward and others participated in a hike and observation along the bypass, all the way from the release tank down to Sunny Kieley's property. At that time, I pointed out my areas of concern (points A and B on the map attached to my letter of May 14, 2001). Point A is the area where my (former) bridge was located.

On May 22, 2001, your office officially informed me of a release to occur over the Memorial Day weekend, which was also the topic of our conversation on the hike. I have heard from neighbors that there were additional releases, which I was not informed of. I have checked the creek, and, while there has been some change in the stream course (under the power lines), it does not appear that these new releases caused damage comparable to the release in 1993.

I really enjoyed hiking with you and the information I received from you and your staff back in May. However, I am planning on moving down to the Ashland property, hopefully within the next year, and, when I do so, I will need water. This means I will have to use some of the money

I get from the sale of my home to rebuild the bridge. This bridge will need to continue to stand in order to allow access to the well. When I bought the place, the bridge, which was more or less intact from 1985 to 1993, consisted of two concrete culverts spanning the creek. This held up until the 60 cfs was released.

So I would like answers to the following:

1) If TID/BOR needed an easement for release of water over Garfas' property, since there was potential for damages, why was an easement never obtained for release of water over my property? I believe you told me that, at the time the deal with TID was set up, your department did not think (because of soil conditions, elevation, etc.) that damages would occur further downstream, but, obviously, they have.

2) How can I be assured that any bridge that I put up to access my well will not be damaged by future releases?

I appreciate your monitoring the release over Memorial Day and the fact that you came down to explain matters to us. It always makes me feel better to talk to a real person. But I just wanted to make it clear to your agency that if I do put up a bridge and it is destroyed by releases, I would have to take legal action. To prevent this, please send me answers to the two questions above and keep me informed of all future releases due to power plant repairs, etc.

Thanks for your help.

Sincerely yours,

Cathy Edwards

Catherine Edwards

cc: John Ward, FOG
Ty & Lauren Hisatomi

Reclamation's Responses to the 7-28-03 comments from Catherine Edwards:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
my bridge (figure 2-11) [*the middle culvert*] washed out twice, once by Reclamation's extended release in 1993 and again in 1996 by localized flooding; currently unable to get water from my well; people don't want their land ruined any more; Reclamation damaged my bridge so Reclamation should install a better bridge	Reclamation must acquire rights-of-way/ flowage easements before stabilization work on private land can proceed and will negotiate with individual landowners of those wasteway areas where flow has exceeded or could exceed the natural channel.	1-Rights-of-Way/Flowage Easements and Wasteway Access 2-Alternative 2; Acquiring Additional Rights-of-Way/Flowage Easements 2-Alternative 3; Rights-of-Way/Flowage Easements, Negotiations, and Data Collection 2-Alternative 4; Rights-of-Way/Flowage Easements, Negotiations, and Data Collection
	Text is changed to clarify that Reclamation will continue consulting and negotiating with adjacent landowners to acquire rights-of-way/flowage easements and to accomplish wasteway stabilization.	2-introduction to chapter 2-Alternative 2; Landowner Negotiations 2-Alternative 2; Data Collection; Collecting Further Data 2-Alternative 2; Bioengineering Techniques 2-Alternative 2; Standard Engineering Techniques 2-Alternative 2; Vegetation Cuttings and Removal 2-Alternative 2; Proposed Work Sequence 2-Alternative 3; Rights-of-Way/Flowage Easements, Negotiations, and Data Collection 2-Alternative 4; Rights-of-Way/Flowage Easements, Negotiations, and Data Collection 2-Alternative 4; Vegetation Removal 3-Cascade Siskiyou National Monument; Environmental Consequences

Reclamation's Responses to the 7-28-03 comments from Catherine Edwards:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
		4-Agency Consultation and Coordination; Bureau of Land Management Coordination 4-Adjacent Landowners 4-Other Contacts 5-Vegetation
	This EA contains discussion of how Reclamation will involve private and Federal landowners.	1-Rights-of-Way/Flowage Easements and Wasteway Access 2-introduction to chapter 2-Alternative 2 2-Alternative 4; Vegetation Removal 3-Geology; Environmental Consequences; Cumulative Effects 3-Vegetation; Environmental Consequences; Mitigation 4-Agency Consultation and Coordination; Bureau of Land Management Coordination 4-Adjacent Landowners 4-Other Contacts 5-Vegetation
	The goal of the stabilization efforts is to upgrade access (with the new access road) and stabilize the wasteway channel banks. Following successful acquisition of rights-of-way/flowage easements and stabilization negotiations, Reclamation will stabilize the middle culvert accordingly. However,	1-introduction to chapter 1-Purposes of and Need for Action 1-Proposed Action and Scope of Work 1-Background; Early Powerplant/Wasteway Designs 2-introduction to chapter

Reclamation's Responses to the 7-28-03 comments from Catherine Edwards:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
	stabilization is not intended to fix all the basin's problems nor is it intended to upgrade private property beyond what previously existed or what was damaged by Reclamation's actions. Stabilization is instead intended to repair damage caused by diverting water through the wasteway.	2-Alternative 2 2-Alternative 2; Landowner Negotiations 2-Alternative 4; Access Roads
using the wasteway for 20-60 cfs was never an environmentally acceptable option	Text is changed to remove "environmentally" acceptable from early powerplant/wasteway designs.	1-Background; Early Powerplant/Wasteway Designs 2-Alternatives Considered But Eliminated From Further Consideration
Reclamation did not bother to obtain rights-of-way downstream from Section 5	Reclamation has acquired rights-of-way/flowage easements for those portions of the wasteway in T39S, R3E, Section 32 and T40S, R3E, Section 5 as shown on figures 1-2 and 1-4. On the lower portions of the wasteway (T40S, R3E, Section 6 and T40S, R2E, Section 1), it is true Reclamation has not exercised rights-of-way reserved under the 1890 Canal Act. It is also true that Reclamation can run water through natural waterways without obtaining rights-of-way if the flow is within the carrying capacity of the channel. Reclamation will acquire additional rights-of-way as needed to access and stabilize the wasteway channel.	Glossary and Acronyms; 1890 Canal Act right 1-Rights-of-Way/Flowage Easements and Wasteway Access 2-Alternative 2; Acquiring Additional Rights-of-Way/Flowage Easements 2-Alternative 2; Standard Engineering Techniques 2-Alternative 2; Access Road; Route; and Use of the Road 2-Alternative 2; Proposed Work Sequence 2-Alternative 2; Inspection and Maintenance
Reclamation admits that during 1993, the channel wasn't capable of handling the flow	Reclamation acknowledges the damage caused by sustained diversions through the wasteway. This EA describes environmental consequences likely to occur under the four alternatives. It is the acknowledgement of	1-Purposes of and Need for Action 1-Proposed Action and Scope of Work 1-Background; Wasteway Construction and Modification

Reclamation's Responses to the 7-28-03 comments from Catherine Edwards:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
	damage that brought about the development of the proposed wasteway stabilization program.	1-Rights-of-Way/Flowage Easements and Wasteway Access 3-Geology; Affected Environment; Reclamation's Geologic and Geotechnical Studies 3-Environmental Consequences section for each resource 6-Chapter 3 References
a permanent easement from Tyler Creek Road to the middle culverts (future bridge) is necessary for monitoring; obtain necessary easements, rehabilitate, and monitor the entire channel from pipe outlet to Tyler Creek	Text is changed to clarify that landowner negotiations will determine whether access to the wasteway will be temporary or permanent.	2-Alternative 2; Landowner Negotiations 2-Alternative 2; Standard Engineering Techniques 5-Soil
	Text is changed to clarify that Reclamation will continue consulting and negotiating with adjacent landowners to acquire rights-of-way/flowage easements and to accomplish wasteway stabilization.	2-introduction to chapter 2-Alternative 2; Landowner Negotiations 2-Alternative 2; Data Collection; Collecting Further Data 2-Alternative 2; Bioengineering Techniques 2-Alternative 2; Standard Engineering Techniques 2-Alternative 2; Vegetation Cuttings and Removal 2-Alternative 2; Proposed Work Sequence 2-Alternative 3; Rights-of-Way/Flowage Easements, Negotiations, and Data Collection 2-Alternative 4; Rights-of-Way/Flowage Easements, Negotiations, and Data Collection 2-Alternative 4; Vegetation Removal

Reclamation's Responses to the 7-28-03 comments from Catherine Edwards:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
		3-Cascade Siskiyou National Monument; Environmental Consequences 4-Agency Consultation and Coordination; Bureau of Land Management Coordination 4-Adjacent Landowners 4-Other Contacts 5-Vegetation
	This EA contains discussion of how Reclamation will involve private and Federal landowners.	1-Rights-of-Way/Flowage Easements and Wasteway Access 2-introduction to chapter 2-Alternative 2 2-Alternative 4; Vegetation Removal 3-Geology; Environmental Consequences; Cumulative Effects 3-Vegetation; Environmental Consequences; Mitigation 4-Agency Consultation and Coordination; Bureau of Land Management Coordination 4-Adjacent Landowners 4-Other Contacts 5-Vegetation
	The work area extends from the pipe outlet downstream to where Tyler Creek enters Emigrant Creek	Glossary and Acronyms; work area 1-Proposed Action and Scope of Work 1-Figures 1-2 and 1-4

Reclamation's Responses to the 7-28-03 comments from Catherine Edwards:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
		3-Figure 3-1
	Reclamation must acquire rights-of-way/ flowage easements before stabilization work on private land can proceed and will negotiate with individual landowners of those wasteway areas where flow has exceeded or could exceed the natural channel.	1-Rights-of-Way/Flowage Easements and Wasteway Access 2-Alternative 2; Acquiring Additional Rights-of-Way/Flowage Easements 2-Alternative 3; Rights-of-Way/Flowage Easements, Negotiations, and Data Collection 2-Alternative 4; Rights-of-Way/Flowage Easements, Negotiations, and Data Collection
	The Inspection and Maintenance sections are modified to add further clarification of these programs.	2-Alternative 2; Inspection and Maintenance 2-Alternative 3; Inspection and Maintenance 2-Alternative 4; Inspection and Maintenance
I am encouraged by the preferred alternative; but the proposed standard engineering techniques (backfill and riprap) for the middle culverts, which I own, are inadequate; needs a larger more permanent structure to handle larger flows; use more significant standard engineering techniques than just backfill and riprap	Text is changed to clarify that the exact repair method for any particular eroded area will depend on what Reclamation and the landowner agree to following negotiations on rights-of-way/flowage easements and stabilization methods. Until these negotiations take place, site-specific descriptions are not available.	1-introduction to chapter 2-introduction to chapter 2-Alternative 2; Landowner Negotiations
	Text is changed to state that stabilization is not intended to fix all the basin's problems nor is it intended to upgrade private property beyond what previously existed or what was damaged by Reclamation's actions. Stabilization is instead intended to repair damage caused by diverting water.	2-Alternative 2; Landowner Negotiations

Reclamation's Responses to the 7-28-03 comments from Catherine Edwards:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
how, and would, Reclamation monitor further damage on my land which has a slump almost as bad as the area of considerable erosion; essential to monitor this area	The Inspection and Maintenance sections are modified to add further clarification of these programs.	2-Alternative 2; Inspection and Maintenance 2-Alternative 3; Inspection and Maintenance 2-Alternative 4; Inspection and Maintenance
	The geologic features of the Western Cascades are such that the Tyler Creek watershed lies in an area of weak, fragmented, and landslide-prone ashflow and decomposed volcanic ash beds. Some of the soils are highly susceptible to landslide. Landslides are likely to occur on this type of geologic features, even if Reclamation does not use the wasteway.	3-Geology
	Stabilization is not intended to fix all the basin's problems nor is it intended to upgrade private property beyond what previously existed or what was damaged by Reclamation's actions. Stabilization is instead intended to repair damage caused by diverting water through the wasteway so the wasteway can continue to function as a water delivery bypass when the powerplant is out of service.	1-Purposes of and Need for Action 1-Proposed Action and Scope of Work 2-introduction to chapter 2-Future Diversions Through the Wasteway 2-Alternative 2; Landowner Negotiations
	Based on landowner negotiations and professional judgment, Reclamation will make the decision on which areas to stabilize and how. Reclamation will acquire all the necessary permits prior to beginning construction.	2-Alternative 2; Landowner Negotiations 1-introduction to chapter 1-Construction Permits 2-Alternative 2; Access Road; Road Specifications 2-Alternative 2; Proposed Work Sequence

Reclamation's Responses to the 7-28-03 comments from Catherine Edwards:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
		3-Water Quality; Environmental Consequences; Alternative 2 3-Water Quality; Environmental Consequences; Alternative 4 3-Wetlands; Environmental Consequences; Alternative 2 3-Wetlands; Environmental Consequences; Cumulative Effects 3-Wetlands; Environmental Consequences; Mitigation 3-Threatened and Endangered Species; Northern Spotted Owl; Environmental Consequences; Alternative 2 4-Agency Consultation and Coordination; National Historic Preservation Act of 1966, as Amended 5-Water
an existing access road (similar to figure 2-14) to my property and well was also damaged by using the wasteway; I want it fixed similar to the proposed access road through the Garfas' property as part of a new easement that would have to pass through properties owned by Hisatomi and Woods/Stewart	Based on landowner negotiations and professional judgment, Reclamation will make the decision on which areas to stabilize and how. Reclamation will acquire all the necessary rights-of-way/easements and permits prior to beginning construction.	2-Alternative 2; Landowner Negotiations 1-introduction to chapter 1-Construction Permits 2-Alternative 2; Access Road; Road Specifications 2-Alternative 2; Proposed Work Sequence 3-Water Quality; Environmental Consequences; Alternative 2 3-Water Quality; Environmental Consequences; Alternative 4

Reclamation's Responses to the 7-28-03 comments from Catherine Edwards:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
		3-Wetlands; Environmental Consequences; Alternative 2 3-Wetlands; Environmental Consequences; Cumulative Effects 3-Wetlands; Environmental Consequences; Mitigation 3-Threatened and Endangered Species; Northern Spotted Owl; Environmental Consequences; Alternative 2 4-Agency Consultation and Coordination; National Historic Preservation Act of 1966, as Amended 5-Water
	Text is changed to clarify that the exact repair method for any particular eroded area will depend on what Reclamation and the landowner agree to following negotiations on rights-of-way/flowage easements and stabilization methods. Until these negotiations take place, site-specific descriptions are not available.	1-introduction to chapter 2-introduction to chapter 2-Alternative 2; Landowner Negotiations
	Text is changed to clarify that Reclamation will continue consulting and negotiating with adjacent landowners to acquire rights-of-way/flowage easements and to accomplish wasteway stabilization.	2-introduction to chapter 2-Alternative 2; Landowner Negotiations 2-Alternative 2; Data Collection; Collecting Further Data 2-Alternative 2; Bioengineering Techniques 2-Alternative 2; Standard Engineering Techniques

Reclamation's Responses to the 7-28-03 comments from Catherine Edwards:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
		2-Alternative 2; Vegetation Cuttings and Removal 2-Alternative 2; Proposed Work Sequence 2-Alternative 3; Rights-of-Way/Flowage Easements, Negotiations, and Data Collection 2-Alternative 4; Rights-of-Way/Flowage Easements, Negotiations, and Data Collection 2-Alternative 4; Vegetation Removal 3-Cascade Siskiyou National Monument; Environmental Consequences 4-Agency Consultation and Coordination; Bureau of Land Management Coordination 4-Adjacent Landowners 4-Other Contacts 5-Vegetation
	This EA contains discussion of how Reclamation will involve private and Federal landowners.	1-Rights-of-Way/Flowage Easements and Wasteway Access 2-introduction to chapter 2-Alternative 2 2-Alternative 4; Vegetation Removal 3-Geology; Environmental Consequences; Cumulative Effects 3-Vegetation; Environmental Consequences; Mitigation

Reclamation's Responses to the 7-28-03 comments from Catherine Edwards:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
		4-Agency Consultation and Coordination; Bureau of Land Management Coordination 4-Adjacent Landowners 4-Other Contacts 5-Vegetation
	Stabilization is not intended to fix all the basin's problems nor is it intended to upgrade private property beyond what previously existed or what was damaged by Reclamation's actions. Stabilization is instead intended to repair damage caused by diverting water through the wasteway so the wasteway can continue to function as a water delivery bypass when the powerplant is out of service.	1-Purposes of and Need for Action 1-Proposed Action and Scope of Work 2-introduction to chapter 2-Future Diversions Through the Wasteway 2-Alternative 2; Landowner Negotiations
expand project to include stabilization and monitoring of areas affected in Section 6; the majority of the rehabilitation work should not be done in Section 5	Text is changed to clarify that the proposed work area includes the wasteway from the pipe outlet downstream to where Tyler Creek enters Emigrant Creek. It now also includes discussion on why Emigrant Creek is excluded from the stabilization efforts. The work area includes T39S, R3E, Section 32; T40S, R3E, Sections 5 and 6; and T40S, R2E, Section 1; but is limited to those areas where wasteway access is needed and where Reclamation's use of the wasteway has caused or could cause channel erosion.	Glossary and Acronyms; work area 1-Proposed Action and Scope of Work 1-Figures 1-2 and 1-4 3-Figure 3-1 1-Rights-of-Way/Flowage Easements and Wasteway Access
impose a flow restriction that limits future releases to 20 cfs	This is an operations matter. This EA is about stabilizing the wasteway rather than	1-Purposes of and Need for Action

Reclamation's Responses to the 7-28-03 comments from Catherine Edwards:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
	about changing operations of individual facilities within the Rogue River Basin Project. This EA incorporates by reference the document "Rogue River Basin Project Talent Division – Oregon, Facilities and Operations."	2-Alternative 2; Bioengineering Techniques; Vegetation Selection 6-Chapter 1 References
	Text is revised to clarify that Reclamation will continue using the wasteway.	2-introduction to chapter 2-Future Diversions Through the Wasteway 2-Alternative 2; Landowner Negotiations
	The Inspection and Maintenance sections are modified to add further clarification of these programs.	2-Alternative 2; Inspection and Maintenance 2-Alternative 3; Inspection and Maintenance 2-Alternative 4; Inspection and Maintenance

Daphne Stewart and Bob Woods
1770 Tyler Creek Road
Ashland, OR 97520

August 1, 2003

Bureau of Reclamation
LCA-6101
Lower Columbia Area Office
825 N.E. Multnomah Street, Suite 1100
Portland, OR 97232-2135

Ladies and Gentlemen:

As the owners of 1770 Tyler Creek Road, and having read the Bureau's Tyler Creek Wasteway Stabilization Draft Environment Assessment, we appreciate the excellent work and thoughtful approach taken by the Bureau in developing this report. However, we do have a few reservations about your report, as it does not address material issues about sections of the wasteway. Our land is impacted by the use of the wasteway: it runs along Schoolhouse Creek from the middle culvert almost to the bridge. Use of the wasteway causes harm to our property and we seek adequate redress.

We offer the following comments:

1) The assessment is incomplete and needs to be revised to determine the scope of work and the impact of that work on all property downstream of the Garfas property before any action should be taken. As effected landowners, we have no idea what the Bureau's specific plans are for our section of our property in any of the four alternatives. The Bureau has yet to assess our portion of Schoolhouse Creek and therefore no action is warranted until that section is studied.

2) The suggestion that "standard engineering" practices be used in our section is vague and therefore fails to adequately disclose your proposed actions. We note the specific details that are made available for cures upstream of our property. Landowners above us have a clear indication of how the Bureau's actions will affect their land. We have no such indication. Such arbitrary implementation of the laws requiring adequate study and notification of environmental and historical impact is highly capricious as applied to our land.

Bureau of Reclamation
Tyler Creek Wasteway Comments
Page Two

3) The Bureau has never requested an easement from us to study our section of the land. Yet, the Bureau claims that it will seek such rights of way and repair our culvert site (pg. 13). Should not the Bureau work with us to design a solution rather than being capricious about our land in its report? Please be advised that access to the destroyed middle culvert and the weakened bridge is most likely over our property.

4) If the Bureau has not studied our section of the wasteway, how can it know the project's total impact on our land and the environment downstream? We can not tell from this report how the proposed repair of all land affected by the use of the wasteway will impact those using the water downstream if we do not know the benefits or harm involved with the work under the rubric, "standard engineering."

5) We are unsure about the environmental impact of the wasteway project. It is not clear that the Bureau has taken into consideration all of the environmental studies conducted by the Friends of the Greensprings, as these are not fully referenced in the report.

6) Finally, we are not clear about the intended future use of the wasteway and its continuing impact on our land. Is it being engineered to handle increased flow capacity or is it to be repaired -- only to be destroyed at a later date when another flow emergency emerges? What are the plans of the Bureau for the future use of the wasteway?

Our goals are to understand the impact of the project, thoroughly, and cooperate with our neighbors and the Bureau on creating the best possible solution for the wasteway. However, in order to do so, we require a more accurate and detailed explanation of your plans for the wasteway.

Thank you for your consideration.

Sincerely,

D. Stewart and [signature]

Daphne Stewart and Bob Woods

Reclamation's Responses to the 8-1-03 comments from Daphne Stewart and Bob Woods:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
use of wasteway causes harm to our property and we seek adequate redress	Reclamation must acquire rights-of-way/ flowage easements before stabilization work on private land can proceed, and will negotiate with individual landowners of those wasteway areas where flow has exceeded or could exceed the natural channel.	1-Rights-of-Way/Flowage Easements and Wasteway Access 2-Alternative 2; Acquiring Additional Rights-of-Way/Flowage Easements 2-Alternative 3; Rights-of-Way/Flowage Easements, Negotiations, and Data Collection 2-Alternative 4; Rights-of-Way/Flowage Easements, Negotiations, and Data Collection
	This EA contains discussion of how Reclamation will involve private and Federal landowners.	1-Rights-of-Way/Flowage Easements and Wasteway Access 2-introduction to chapter 2-Alternative 2 2-Alternative 4; Vegetation Removal 3-Geology; Environmental Consequences; Cumulative Effects 3-Vegetation; Environmental Consequences; Mitigation 4-Agency Consultation and Coordination; Bureau of Land Management Coordination 4-Adjacent Landowners 4-Other Contacts 5-Vegetation
	Following successful acquisition of rights-of-way/flowage easements and stabilization negotiations, Reclamation will stabilize the	2-Alternative 2; Proposed Work Sequence 2-Alternative 2; Landowner Negotiations

Reclamation's Responses to the 8-1-03 comments from Daphne Stewart and Bob Woods:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
	channel accordingly. However, the stabilization plan excludes upgrading private property beyond what existed prior to the 1993 damage caused by Reclamation's water diversions.	1-Purposes of and Need for Action 1-Proposed Action and Scope of Work 2-introduction to chapter 2-Alternative 2; Data Collection; Collecting Further Data 2-Alternative 2; Standard Engineering Techniques
draft EA does not address material issues about sections of the wasteway; incomplete assessment; determine scope of work and impact of that work on all property downstream from Garfas property before any action is taken; no idea what Reclamation's specific plans are for our property in any of the four alternatives; Reclamation has yet to assess our property; no action is warranted until studied; we require a more accurate and detailed explanation of Reclamation's plans for the wasteway so we can thoroughly understand the impact of the project and cooperate with neighbors and Reclamation to create the best possible solution for the wasteway; how can Reclamation know the total impact on our land and the downstream environment; standard engineering practices is vague and fails to adequately disclose your proposed actions on our property; such arbitrary implementation of laws is highly capricious as applied to our land; cannot tell	The title of the EA is changed to "Finding of No Significant Impact and Programmatic Final Environmental Assessment." The introduction of chapter 1 is changed to explain that this Programmatic Final Environmental Assessment provides coverage for implementing general provisions (for which site-specific layout and design have not yet taken place) to upgrade access to the wasteway and stabilize localized areas of the wasteway channel. It further explains that site-specific environmental compliance will be accomplished prior to initiating stabilization or major surface disturbing activities.	Front cover 1-introduction to chapter 2-Alternative 2; Minimizing Construction Impacts 2-Alternative 4; Minimizing Construction Impacts
	Text is changed to clarify why the alternatives are described in general terms rather than in terms of site-specific conditions. Text is changed to clarify that the exact repair method for any particular eroded area will depend on what Reclamation and the landowner agree to following negotiations	1-introduction to chapter 2-introduction to chapter 2-Alternative 2; Landowner Negotiations

Reclamation's Responses to the 8-1-03 comments from Daphne Stewart and Bob Woods:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
from draft EA how the proposed repair will impact those using water downstream if we don't know the benefits or harms of standard engineering techniques	on rights-of-way/flowage easements and stabilization methods. Until these negotiations take place, site-specific descriptions are not available.	
	Text is changed to clarify that Reclamation will continue consulting and negotiating with adjacent landowners to acquire rights-of-way/ flowage easements and to accomplish wasteway stabilization.	2-introduction to chapter 2-Alternative 2; Landowner Negotiations 2-Alternative 2; Data Collection; Collecting Further Data 2-Alternative 2; Bioengineering Techniques 2-Alternative 2; Standard Engineering Techniques 2-Alternative 2; Vegetation Cuttings and Removal 2-Alternative 2; Proposed Work Sequence 2-Alternative 3; Rights-of-Way/Flowage Easements, Negotiations, and Data Collection 2-Alternative 4; Rights-of-Way/Flowage Easements, Negotiations, and Data Collection 2-Alternative 4; Vegetation Removal 3-Cascade Siskiyou National Monument; Environmental Consequences 4-Agency Consultation and Coordination; Bureau of Land Management Coordination 4-Adjacent Landowners 4-Other Contacts 5-Vegetation

Reclamation's Responses to the 8-1-03 comments from Daphne Stewart and Bob Woods:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
	This EA contains discussion of how Reclamation will involve private and Federal landowners.	1-Rights-of-Way/Flowage Easements and Wasteway Access 2-introduction to chapter 2-Alternative 2 2-Alternative 4; Vegetation Removal 3-Geology; Environmental Consequences; Cumulative Effects 3-Vegetation; Environmental Consequences; Mitigation 4-Agency Consultation and Coordination; Bureau of Land Management Coordination 4-Adjacent Landowners 4-Other Contacts 5-Vegetation
	The EA describes the alternatives, including a comparison table of bioengineering techniques versus standard engineering techniques. It further describes the benefits and harms (the potential impacts of the four alternatives for each resource potentially affected by the proposed action) of both techniques.	2-entire chapter 3-Environmental Consequences section for each resource
landowners upstream from us have specific details and a clear indication of how Reclamation's actions will affect their land; Reclamation never requested an easement	Reclamation has acquired rights-of-way/ flowage easements for those portions of the wasteway in T39S, R3E, Section 32 and T40S, R3E, Section 5 as shown on figures 1-2	Glossary and Acronyms; 1890 Canal Act right 1-Rights-of-Way/Flowage Easements and Wasteway Access

Reclamation's Responses to the 8-1-03 comments from Daphne Stewart and Bob Woods:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
from us to study our land; access to destroyed middle culvert and weakened bridge is most likely over our property; Reclamation should work with us to design a solution rather than being capricious about our land	and 1-4; therefore, landowner negotiations for those areas are further advanced. On the lower portions of the wasteway (T40S, R3E, Section 6 and T40S, R2E, Section 1), it is true Reclamation has not exercised rights-of-way reserved under the 1890 Canal Act. It is also true that Reclamation can run water through natural waterways without obtaining rights-of-way if the flow is within the carrying capacity of the channel. Reclamation will acquire additional rights-of-way as needed to access and stabilize the wasteway channel, the middle culvert, and the bridge.	2-Alternative 2; Acquiring Additional Rights-of-Way/Flowage Easements 2-Alternative 2; Standard Engineering Techniques 2-Alternative 2; Access Road; Route and Use of the Road 2-Alternative 2; Proposed Work Sequence 2-Alternative 2; Inspection and Maintenance
	Reclamation must acquire rights-of-way/ flowage easements before stabilization work on private land can proceed and will negotiate with individual landowners of those wasteway areas where flow has exceeded or could exceed the natural channel.	1-Rights-of-Way/Flowage Easements and Wasteway Access 2-Alternative 2; Acquiring Additional Rights-of-Way/Flowage Easements 2-Alternative 3; Rights-of-Way/Flowage Easements, Negotiations, and Data Collection 2-Alternative 4; Rights-of-Way/Flowage Easements, Negotiations, and Data Collection
	Text is changed to clarify that the exact repair method for any particular eroded area will depend on what Reclamation and the landowner agree to following negotiations on rights-of-way/flowage easements and stabilization methods. Until these negotiations take place, site-specific descriptions are not available.	1-introduction to chapter 2-introduction to chapter 2-Alternative 2; Landowner Negotiations

Reclamation's Responses to the 8-1-03 comments from Daphne Stewart and Bob Woods:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
	Text is changed to clarify that Reclamation will continue consulting and negotiating with adjacent landowners to acquire rights-of-way/ flowage easements and to accomplish wasteway stabilization.	2-introduction to chapter 2-Alternative 2; Landowner Negotiations 2-Alternative 2; Data Collection; Collecting Further Data 2-Alternative 2; Bioengineering Techniques 2-Alternative 2; Standard Engineering Techniques 2-Alternative 2; Vegetation Cuttings and Removal 2-Alternative 2; Proposed Work Sequence 2-Alternative 3; Rights-of-Way/Flowage Easements, Negotiations, and Data Collection 2-Alternative 4; Rights-of-Way/Flowage Easements, Negotiations, and Data Collection 2-Alternative 4; Vegetation Removal 3-Cascade Siskiyou National Monument; Environmental Consequences 4-Agency Consultation and Coordination; Bureau of Land Management Coordination 4-Adjacent Landowners 4-Other Contacts 5-Vegetation
	This EA contains discussion of how Reclamation will involve private and Federal landowners.	1-Rights-of-Way/Flowage Easements and Wasteway Access 2-introduction to chapter

Reclamation's Responses to the 8-1-03 comments from Daphne Stewart and Bob Woods:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
		2-Alternative 2 2-Alternative 4; Vegetation Removal 3-Geology; Environmental Consequences; Cumulative Effects 3-Vegetation; Environmental Consequences; Mitigation 4-Agency Consultation and Coordination; Bureau of Land Management Coordination 4-Adjacent Landowners 4-Other Contacts 5-Vegetation
	Stabilization will occur as needed within acquired rights-of-way/flowage easements where Reclamation's water diversions have caused or could cause channel erosion	Glossary and Acronyms; work area 1-Proposed Action and Scope of Work 1-Rights-of-Way/Flowage Easements and Wasteway Access
not clear that Reclamation considered all of the FOG environmental studies	Reclamation's impact analysis and documentation in the EA includes available, pertinent, and completed studies; including FOG's 2000 Tyler Creek Monitoring Project report which provided the basis for the 303(d) listing.	3-Environmental Consequences section for each resource 3-Geology; Affected Environment; Privately Completed Studies 3-Water Quality; Affected Environment 6-Chapter 3 References
unsure about environmental impact; not clear of Reclamation's intended future use of the	Text is revised to clarify that Reclamation will continue using the wasteway as a water	2-introduction to chapter 2-Future Diversions Through the Wasteway

Reclamation's Responses to the 8-1-03 comments from Daphne Stewart and Bob Woods:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
wasteway and its continuing impact on our land	delivery bypass when the powerplant is out of service.	2-Alternative 2; Landowner Negotiations
	Chapter 3 describes potential impacts the four alternatives could have on each natural resource potentially affected by the proposed action.	3-entire chapter
is wasteway being engineered to handle increased flow or just repaired to be destroyed again	The entire EA is about stabilizing the wasteway so it can continue to function, as it has for the past 43 years, as a water delivery bypass when Green Springs Powerplant is out of service. A goal of the preferred alternative is to attain minimal erosion.	Entire EA 1-Purposes of and Need for Action 1-Proposed Action and Scope of Work 1-Scoping Process and Issues Identified 2-introduction to chapter 2-Future Diversions Through the Wasteway 2-Alternative 2; Landowner Negotiations 2-Alternative 2; Proposed Work Sequence
	Reclamation developed the alternatives based on current engineering practices and input from landowners and public scoping efforts.	1-Scoping Process and Issues Identified 2-introduction to chapter 2-Alternative 2 4-entire chapter
	The preferred alternative offers an environmentally sound solution to the existing erosion problem.	2-Alternative 2 3-Environmental Consequences; Alternative 2 section for each resource
	Stabilization will be an ongoing effort for several years as the root systems develop.	2-introduction to chapter 2-Alternative 2 2-Alternative 2; Inspection and Maintenance

Reclamation's Responses to the 8-1-03 comments from Daphne Stewart and Bob Woods:		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
		2-Alternative 2; Bioengineering Techniques; Stabilizing Infrastructures 3-Geology; Environmental Consequences; Alternative 2 3-Geology; Environmental Consequences; Alternative 3 3-Water Quality; Environmental Consequences; Alternative 3
	The Inspection and Maintenance sections are modified to add further clarification of these programs and to identify how these programs should help reduce future erosion.	2-Alternative 2; Inspection and Maintenance 2-Alternative 3; Inspection and Maintenance 2-Alternative 4; Inspection and Maintenance

From: Tanya Sommer
To: Blakney, Karen; Kent, Terrald; Snyder, Jo
Date: 8/4/03 6:02:41 PM
Subject: Fwd: Comments on Draft EA for the Tyler Creek Wasteway Stabilization

>>> <Kathy_Minor@or.blm.gov> 08/04/03 04:17PM >>>

Dear Ms. Sommer

In order to meet your timeframe for comments, I am e-mailing you a draft copy of comments from the Ashland Resource Area, Medford District BLM. The Resource Area Manager will review these comment and may make some changes prior to mailing you a signed hardcopy of our comments.

(See attached file: Comments on Draft EA for Tyler Creek Wasteway Stabilization.doc)

Kathy Minor
Planning and Environmental Coordinator
Cascade-Siskiyou National Monument
Ashland Resource Area
(541) 618-2245
Kathy_Minor@blm.gov

USDI Bureau of Land Management
Medford District
3040 Biddle Road
Medford, OR 97504
August 4, 2003

Bureau of Reclamation
LCA-6101
Lower Columbia Area Office
825 N.E. Multnomah Street, Suite 1110
Portland, OR 97232-2135
Attention: Tanya Sommer

Dear Ms. Sommer:

Thank you for the opportunity to comment on the Draft Environmental Assessment (EA) for the Tyler Creek Wasteway Stabilization. Since the wasteway passes through Bureau of Land Management (BLM) lands, I requested my staff to review the Draft EA and provide comments. Attached you will find a summary of their comments.

If you have questions about their comments or need additional information, please contact Kathy Minor (541) 618-2245.

Sincerely,

Richard J. Drehobl

Chapter 1

***Background* – Early Powerplant/Wasteway Designs (EA, p.4)**

- "Sampson Creek" is correct spelling rather than "Samson Creek"
- Although you stated that use of Sampson Creek was an "eliminated design", you failed to identify that Sampson Creek and an unnamed tributary to Sampson Creek were historically used to transfer this water from Little Hyatt Reservoir to Emigrant Reservoir prior to construction of Keene Creek Reservoir and the Tyler Creek Wasteway.

"Reclamation has examined various powerplant and wasteway design options prior to the 1959-1960 construction and in more recent years. All options, except those for the existing powerplant and wasteway, were eliminated from further consideration because they were either technically, economically, or environmentally unacceptable. The eliminated designs include:

- A power conduit layout…such as Sampson Creek
- A two unit powerhouse…into Emigrant Creek
- A bypass valve and pipe…discharge into Emigrant Creek
- A buried pipeline…wasteway alignment

After much analysis on design options, Reclamation found the existing Tyler Creek wasteway to be the most technically, economically, and environmentally acceptable option."

Comment: A current review of the above options should take place to confirm that new information or a change in conditions (e.g., economics) has not transpired. This review should be documented or cited in the EA.

Figure 1-2. Proposed work area (EA, p. 3)

This map identifies the location of the proposed road

Proposed Action and Scope of Work (EA, p. 2)

"Increased population and development in the Tyler Creek drainage have somewhat increased wasteway flow."

Comment: This statement needs to be explained. How does increased population increase the wasteway flow?

Figure 1-4. Approximate 2002 land ownership and Reclamation rights-of-way

The only access road identified on the map is the one through the Garfas property. Other "already existing" access roads are not identified. Are any of them on BLM?

Flowage Easements, Rights-of-Way, and Wasteway Access (EA, pp.6-7)

"…Reclamation, therefore, acquired a 60-foot-wide access easement and right-of-way across approximately a 1,700-foot length of private property for easier wasteway access (figure 1-4). Reclamation may need to acquire additional flowage easements and rights-of-way in areas needing stabilization. In the absence of agreements between Rreclamation and landowners. Reclamation has the option of invoking the Canal Act, if applicable. The Canal Act of August 30, 1890, (26 Stat. 391) authorizes Reclamation to acquire lands with compensation, take possession, and exercise certain rights-of-way …"

Comment: Looking at the map, it appears there could be alternative access that could have less environmental and social impacts (e.g., taking off of Tyler Creek Road where the Schoolhouse Ck. crossing and the wetlands are not an issue). You might have the best location but this cannot be confirmed by reading the EA. The EA would be stronger if you cited some sort of route analysis. If you do invoke the Canal Act for condemnation of access, you will probably need some sort of route analysis.

Chapter 2

Alternative 2 - Proposed Work Sequence (EA, p. 13)

"The priorities in the first year would be to: construct nonexistent sections of the access road."

Comment: It is not clear where the existent sections of the access road are located.

Alternative 2 - Proposed Work Sequence (EA, p. 13)

"The priorities in the first year would be to: begin stabilizing banks damaged by previous wasteway use and still actively eroding."

Comment: Does this proposed work only apply to areas within the existing rights-of-way? There is no mention of acquiring additional flowage easements and rights-of-way under the Proposed Work Sequence section. It would be good to include project priorities for future years.

Alternative 2 - Proposed Work Sequence (EA, p. 13)

"The priorities in the first year would be to: repair the private culvert site."

Comment: Figure 1-4 identifies three culverts on private land. Which one would be repaired during the first year? Would the repair include replacing the existing culvert with one that is sized for a 100-year flow event?

Alternative 2 – Bioengineering Techniques (EA, p. 13)

"Sites needing stabilization would be evaluated in consultation with landowners and managing agencies…"

Comment: Who decides that a site needs stabilization? There needs to be more information provided as to how Reclamation will work with the landowners/management agencies to determine where stabilization work would occur and how the work would be done.

Alternative 2 – Bioengineering Techniques (EA, p. 14)

"Structures would be constructed from trees within the adjacent mixed conifer stand."
"Efforts would be made to prevent cutting live trees along the wasteway. Live brush would be cut within existing rights-of-way or with the landowner's permission…"

Comment: How would Reclamation acquire the authorization to cut trees that are not within the Reclamation's right-of-way? Given the small size of the wasteway channel, the brush within the right-of-way may be providing shade. How will the existing vegetation be analyzed to determine if it can be removed without affecting stream shade or wildlife benefits? Any tree/brush removal within Riparian Reserves on BLM-administered lands would need a site specific environmental analysis.

Alternative 2 – Bioengineering Techniques (EA, p. 14)

Comment: By maintaining the wasteway in a location that was once a natural stream channel, and due to the size of flows when the wasteway is in operation, the channel has adjusted to a size that would maintain perennial characteristics, including associated riparian vegetation. The success of planting riparian species such as alder and willow from cuttings in the wasteway would be improved with year-around moisture availability.

Reclamation should consider providing a small maintenance flow down this channel throughout the summer to stabilize and maintain this channel. Reclamation does have the ability to accomplish this and still fulfill their stated responsibilities. This would help maintain Reclamation's facilities (long-term stability of the wasteway), meet water delivery obligations (flow would still be delivered down the same channel that Reclamation already has flowage easements for), and is a viable alternative to be considered in evaluating environmental effects. The environmental benefits of a truly stabilized wasteway using bioengineering techniques would include improved riparian vegetation, a stream channel that is Functioning-at-risk with an upward trend, and decreased sediment delivery to the downstream aquatic system.

Alternative 2 – Bioengineering Techniques (EA, p. 15-17)

Although examples of potential types of biological and standard engineering techniques are provided on pages 15-17, exactly where these types of structures/techniques will be used is not described. On page 12, BOR says it will need to do further studies to determine exactly where these projects will be placed on the landscape, and "how much standard engineering" will be needed. Specifically, the following questions should be answered to help clarify the proposed action.

(1) Exactly where will you potentially be removing trees from the riparian area (how close to the channel)? Of what diameter? Live or dead? Selected "here and there" or an entire clump removed?

(2) What will you do with trees removed from the channel?

(3) How will you move excavators and other equipment around in the work area? With those steep banks, you will need to access the channel where banks are shallow and then walk the machine down the actual channel?

(4) What will you do with the water when working in the stream? There are cutthroat and other native fish downstream and you will be creating a plume of sediment during construction activities. How will you ensure that you will be minimizing impacts to these fish?

Alternative 2 – Standard Engineering Techniques (EA, p. 19)

"Two possible locations (figures 2-11 and 2-12) for standard engineering techniques …"

Comment: Are these the *only* locations being considered for standard engineering techniques under alternative 2? The Geology alternative 2 section (EA, p. 28) mentions the use of standard engineering techniques in high velocity areas. Where are these areas located?

Alternative 2 - Access Road (EA, p. 21)

"The proposed route would include the following crossing structures: a 48- to 60-inch – diameter culvert crossing Schoolhouse Creek."

Comment: Which size culvert will be used for the crossing? What size structure is required to pass a 100-year flow event?

Alternative 2 - Access Road (EA, p. 21)

"The proposed route would include the following crossing structures: possibly four 12- to 18-inch-diameter culverts crossing small intermittent tributaries to existing wetlands."

Comment: What is meant by "possibly" four culverts would be installed? Is it possible that no culverts would be installed at the wetland crossing?

Alternative 2 (Preferred Alternative (EA, p. 12)

"…The preferred alternative is to:…

- Stabilize localized areas…
- Construct an access road to the wasteway with existing Reclamation right-of-way, and…"

Access Road (EA, pp. 19-21)

An access road would be built during dry weather…The road would dodge other trees as much as possible…Neither the existing portion nor the new portions of the access road would be paved or graveled…The proposed route would include the following crossing structures:

- A 48- to 60-inch-diamerter culver crossing Schoolhouse Creek…

A locked gate would block the entrance…Reclamation…would use the road only during dry conditions to monitor and repair the access road and the wasteway channel…"

Monitoring and Maintenance (EA, p. 21)

"Reclamation and TID would perform annual monitoring of the wasteway each spring, during and after wasteway use, and after high precipitation events."

Comment: Reclamation states that the access road would not be paved or graveled. A natural surface or dirt road is proposed. To strengthen the EA, it would be good to disclose the proposed grade of the road and give some rational on why you are proposing a natural surface road and not a rocked or paved running surface.

Monitoring the wastway implies that you would be using the access road. Monitoring takes place "each spring, during and after wasteway use, and after high precipitation events." This could be in conflict with using the natural surface road during the dry weather. Rocking the road would mitigate any direct or indirect impacts from using the road during other than dry periods.

Chapter 3

Geology – Environmental Consequences – Alternative 2 (EA, p. 28)

"The access road would have no effect on the local geology since the road surface would not be graded and the road would only be used during dry weather.

Comment: What about the impact of sediment moving off the unsurfaced road access road during storm events? There is no discussion of the soil/geology impacts from accessing the sites where the standard engineering techniques would be used.

Geology – Environmental Consequences – Alternative 4 (EA, p. 29)

"Standard engineering approaches would require heavy equipment to haul and install large boulders, prefabricated structures, and other construction materials; therefore, more access to the wasteway would be needed."

Comment: What impacts would result from more access to the wasteway?

Geology – Environmental Consequences – Cumulative Effects (EA, p. 29-30)

"Increasing development around the wasteway impacts geological resources as more people move in, build homes and roads, install wells and septic systems, and graze more cattle."

Comment: This statement needs to be explained. How does the increasing development impact the geological resources?

Water Quality – Affected Environment (EA, p. 30)

"Several water bodies within the Rogue River basin are included on the 303(d)list; only three are near the wasteway."

Comment: "Several" is an understatement. There are **hundreds** of listed water bodies within the Rogue River basin.

Water Quality – Environmental Consequences – Alternative 2 (EA, p. 36)

"Slightly lower water temperatures could occur with increased vegetation and riparian shade along the wasteway."

Comment: The Environmental Consequences for Vegetation – Alternative 2 (p. 42) states that "the preferred alternative would result in some loss of riparian vegetation, particularly in those areas where standard engineering techniques were used." The impact of riparian vegetation removal needs to be addressed in the Water Quality section especially as it relates to water temperatures.

Water Quality – Environmental Consequences – Alternative 2 (EA, p. 36)

Comment: There is no discussion in this section regarding the impact to water quality (sedimentation in particular) that would result from the proposed culvert installations, stabilization work, and access road construction.

Water Quality – Environmental Consequences – Alternative 2 (EA, p. 36)

Comment: At the end of the second paragraph on the page, the statement "Likewise, Emigrant Creek water temperatures should decrease when released water flows through the wasteway" is an incorrect statement, as under "normal" operations, flow is piped through Greensprings Powerplant and released to Emigrant Creek without any solar exposure to heat the water. Use of Tyler Creek and the wasteway to convey the water, with broad expanses of bedrock and areas of poor riparian vegetation, has much greater potential to allow water temperatures to rise than does the pipeline conveyance.

Water Quality – Environmental Consequences – Alternative 4 (EA, p. 36)
"Water temperature would likely increase with removal of local vegetation."

Comment: The description of alternative 4 (pp. 23-24) does not mention the removal of local vegetation.

Water Quality – Environmental Consequences – Alternative 4 (EA, p. 36)

Comment: There is no discussion of the water quality impacts that would result from the access road being "extended paralleling the wasteway short distances both upstream and downstream" (p. 24) or from the "many other access roads off Tyler Creek Road" that would be needed (p. 24).

Water Quality – Environmental Consequences – Mitigation (EA, p. 36)
"Reclamation would use best management practices to minimize environmental consequences caused by stabilizing activities or constructing the access road"

Comment: What BMPs would be used?

Water Quality – Environmental Consequences – Mitigation (EA, p. 36)

Comment: Consider adding a mitigation measure that would require surfacing the entire access road or at a minimum, surface the stream crossings and the approaches to the stream crossings. Add a mitigation measure to restrict the channel stabilization work to the dry season. All instream work should be completed during the ODFW's instream work period.

Fish and Wildlife – Environmental Consequences - Alternative 2 (EA, p. 46)

Comment: The EA needs to address the impact of the proposed culverts on Schoolhouse Creek and above the wetland area on the passage of all species and lifestages of native fishes as well as other aquatic species.

Correction (EA, p. 52):
Although SONCC critical habitat does not extend above Emigrant Dam, as you noted, the rule for Essential Fish Habitat did not exclude lands above Emigrant Dam. It is very unlikely that the Tyler "Wasteway" stabilization project will have an effect on EFH for coho salmon (because of the temperature stabilizing and sediment storage capabilities of Emigrant Lake); however, you may want to mention EFH in your environmental consequences section. See: http://www.nwr.noaa.gov/1habcon/habweb/msa.htm for more information.

Correction (EA, p. 44):
In 1999, a BLM crew electroshocked Tyler Creek and found cutthroat trout (*Oncorhynchus clarkii*) and reticulate sculpin (*Cottus perplexus*) in sections 1 and 6.

Chapter 6

References (EA, p. 74):
Comment: Reference for Montfort 2002 – Tim Montfort is a hydrologist, not a biologist.

Reclamation's Responses to the 8-4-03 comments from Richard Drehobl, Bureau of Land Management		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
explain how - "Increased population and development in the Tyler Creek drainage have somewhat increased wasteway flow."	The EA no longer contains this statement.	1-Proposed Action and Scope of Work
explain how - "Increasing development around the wasteway impacts geological resources as more people move in, build homes and roads, install wells and septic systems, and graze more cattle." impacts geological resources	The EA no longer contains this statement.	3-Geology; Environmental Consequences; Cumulative Effects
pg 3: figure 1-2 identifies the location of the proposed road	Reclamation acknowledges this comment and is including it in the EA.	--
"Sampson Creek" is the correct spelling rather than "Samson Creek"	Text is changed to correct the spelling to "Sampson Creek"	1-Background; Early Powerplant/Wasteway Designs
draft EA states use of Sampson Creek was an "eliminated design;" failed to state that Sampson Creek and an unnamed tributary were historically used to transfer water from Hyatt Reservoir to Emigrant Reservoir prior to constructing Keene Creek Reservoir and Tyler Creek wasteway	This is true, but also insignificant. Between 1923 and about 1960, private facilities carried water from Hyatt Reservoir into Keene Creek. About a mile down Keene Creek, the water was diverted into the Keene Creek Canal and across the Cascade Divide into Sampson Creek. The Keene Creek Diversion Dam and Canal were abandoned for good reason: The water supply for the Talent Division of the Rogue River Basin Project is entirely independent of water supplies for other divisions of the Project. All of Talent's supply came from Bear and Emigrant Creeks, McDonald Creek in the Applegate River	1-Background; Early Powerplant/Wasteway Designs

Reclamation's Responses to the 8-4-03 comments from Richard Drehobl, Bureau of Land Management		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
	watershed, and from Keene Creek in the Jenny Creek subbasin. This water supply was insufficient to fully develop lands in the Talent Division. Therefore, Reclamation built Howard Prairie Dam on Beaver Creek in Klamath River Basin, a collection system in the Rogue River Basin to transport water for storage in Howard Prairie Lake, transbasin facilities to move water from Howard Prairie Lake and Hyatt Reservoir to the Rogue River Basin, and Green Springs Powerplant. Reclamation also enlarged Emigrant Dam and Lake, thereby inundating the mouth of Sampson Creek. The current configuration of Project facilities is such that all the Talent Division water, except for possibly Hyatt Reservoir storage and runoff in the upper reaches of Keene Creek, is inaccessible to Sampson Creek. The existing hierarchy of water delivery priorities dictates where Ashland Lateral water comes from. Both Hyatt Reservoir storage and Keene Creek runoff are lower in priority. In the unlikely event that Sampson Creek were brought back onto the Project system, Talent Division's water supply when the	

Reclamation's Responses to the 8-4-03 comments from Richard Drehobl, Bureau of Land Management		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
	powerplant was out of service would likely revert back to the insufficient supply that was available prior to enlarging the Project's water supply. Lands that were brought into production as a result of the enlargement would likely be without water when the powerplant was down for repairs or maintenance.	
current review of various powerplant and wasteway designs previously examined should take place to confirm that new information or a change in conditions (e.g., economics) has not transpired; document or cite this review in the EA	Text is changed to state that regardless of whether or not a bypass valve at Green Springs Powerplant may prove to be technically, economically, and environmentally viable, Reclamation will still upgrade access to the wasteway and stabilize localized areas of the wasteway channel.	1-Background; Early Powerplant/Wasteway Designs 2-Alternatives Considered But Eliminated From Further Consideration
The only access road identified on figure 1-4 is through the Garfas property. Other "already existing" access roads are not identified. Are any on BLM lands?	The approximate locations of existing roads accessing the wasteway channel and that are shown on the most current US Geological Survey topographic maps, a BLM map, GIS data, or aerial photographs are added to the EA. The powerline road appears to run through BLM lands.	1-Figures 1-2 and 1-4 2-Alternative 2; Access Road
cite some sort of route analysis; could be alternative access with less environmental and social impacts where creek crossing and wetlands are not an issue; cannot confirm the best location by reading the draft EA	Text is changed to clarify why the access road right-of-way was located as shown on figures 1-2, 1-4, and 2-13. Reclamation negotiated with the private landowner and arrived at an acceptable location for a 60-foot-wide access easement approximately 1,700-feet long.	1-Rights-of-Way/Flowage Easements and Wasteway Access 2-Alternative 2; Access Road; Route
clarify proposed action - exactly where will trees potentially be removed from the riparian	Text is revised to clarify proposed vegetation cuttings and removal	2-Alternative 2; Vegetation Cuttings and Removal

Reclamation's Responses to the 8-4-03 comments from Richard Drehobl, Bureau of Land Management		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
area (how close to the channel); describe tree diameters, live or dead trees, whether tree selection will be "here and there" or an entire clump removed; what will Reclamation do with trees removed from the channel		2-Alternative 3; Vegetation Cuttings and Removal 2-Alternative 4; Vegetation Removal
clarify proposed action - how will excavators and other equipment move around in the work area	The construction specifications will identify equipment types and access during road construction. Most likely, equipment will travel off road within the acquired right-of-way and road alignment until portions of the road are completed. Then, equipment will use the access road. Stabilization equipment needs will depend upon the site-specific repair methods identified following landowner negotiations. Construction specifications will identify equipment types and access routes. Minimal equipment and as much manual labor as possible will be used.	2-Alternative 2; Landowner Negotiations 2-Alternative 2; Standard Engineering Techniques 2-Alternative 2; Access Road; Construction 3-Geology; Environmental Consequences; Mitigation 3-Water Quality; Environmental Consequences; Mitigation 3-Fish and Wildlife; Environmental Consequences; Mitigation 5-Soil 5-Water 2-Alternative 2; Bioengineering Techniques; Bioengineering Advantages
clarify proposed action - what will Reclamation do with the water when working in the stream; clarify proposed action - how will Reclamation ensure minimized construction impacts to downstream fishery	Instream work will take place as much as possible when flow is absent from the channel. Since no anadromous fish species inhabit the proposed work area, this should coincide with ODFW's instream work period. Permits will further dictate instream working conditions. Text is changed to clarify that as much as possible, Reclamation will perform stabilization efforts, road construction,	2-Alternative 2; Access Road 2-Alternative 2; Proposed Work Sequence 2-Alternative 2; Minimizing Construction Impacts 2-Alternative 2; Inspection and Maintenance 2-Alternative 4; Access Roads 2-Alternative 4; Minimizing Construction Impacts 2-Alternative 4; Inspection and Maintenance

Reclamation's Responses to the 8-4-03 comments from Richard Drehobl, Bureau of Land Management		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
	inspection, and maintenance during dry periods.	3-Geology; Environmental Consequences; Alternative 2 3-Geology; Environmental Consequences; Alternative 4 3-Geology; Environmental Consequences; Cumulative Effects 3-Geology; Environmental Consequences; Mitigation 3-Water Quality; Environmental Consequences; Alternative 2 3-Water Quality; Environmental Consequences; Mitigation 3-Fish and Wildlife; Environmental Consequences; Mitigation 3-Threatened and Endangered Species; Bald Eagle; Environmental Consequences; Alternative 2 3-Threatened and Endangered Species; Northern Spotted Owl; Environmental Consequences; Alternative 2 3-Historic Properties; Environmental Consequences; Alternative 2 3-Fish and Wildlife; Environmental Consequences; Mitigation 5-Soil 5-Fish and Wildlife

Reclamation's Responses to the 8-4-03 comments from Richard Drehobl, Bureau of Land Management		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
	Reclamation's contractor will keep construction debris and rubble out of the stream channel to minimized construction impacts to the downstream fishery.	2-Alternative 2; Minimizing Construction Impacts 2-Alternative 4; Minimizing Construction Impacts 5-Fish and Wildlife
	The access road culverts should not affect aquatic species since these structures will be sized appropriately for expected runoff, to not impede flow, and to have the least impact on drainage characteristics. They will be placed to allow for passage of aquatic species.	2-Alternative 2; Access Road; Road Specifications 3-Fish and Wildlife; Environmental Consequences; Alternative 2
	Stabilizing the wasteway will be done in concert with other efforts to preserve and protect local fish and wildlife species.	3-Fish and Wildlife; Environmental Consequences; Cumulative Effects 5-Fish and Wildlife
	Reclamation will use best management practices (as outlined in the construction contract specifications) to minimize environmental consequences caused by stabilizing activities or constructing the access road. All standard and reasonable precautions will be taken to reduce erosion and limit sedimentation during and after construction. Proper planning will produce efficiency and timely completion of construction activities with the least amount of people and heavy equipment working at any given time.	2-Alternative 2; Bioengineering Techniques; Vegetation Selection 2-Alternative 2; Vegetation Cuttings and Removal; Along the Wasteway 3-Geology; Environmental Consequences; Mitigation 3-Water Quality; Environmental Consequences; Mitigation 3-Wetlands; Environmental Consequences; Alternative 4 3-Fish and Wildlife; Environmental Consequences; Mitigation 5-Soil

Reclamation's Responses to the 8-4-03 comments from Richard Drehobl, Bureau of Land Management		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
		5-Water 5-Fish and Wildlife
disclose proposed grade of access road and give rational on why proposing a natural surface road rather than a rocked or paved running surface	Text is changed to clarify construction of the proposed access road. Neither the existing portion nor new portions of the access road will be paved or graveled (with the exception of some gravel near the culverts). Vehicles could travel over the natural road surface during dry conditions without rutting the surface. The Schoolhouse Creek culvert area will be the only graded portion of the access road and will be ramped to allow vehicles to cross over the culvert.	2-Alternative 2; Access Road; Road Specifications 2-Alternative 2; Minimizing Construction Impacts 2-Alternative 4; Minimizing Construction Impacts 3-Water Quality; Environmental Consequences; Mitigation
monitoring implies using the access road "each spring, during and after wasteway use, and after high precipitation events;" could conflict with statement that natural surface road would only be used during dry weather; rocking the road would mitigate any direct or indirect impacts from using the road during other than dry periods	Text is changed to clarify that as much as possible, Reclamation will perform stabilization efforts, road construction, inspection, and maintenance during dry periods. Should a need arise to access the wasteway during non-dry periods, Reclamation and TID will use foot traffic within the acquired right-of-way. Should a rare instance require immediate vehicular access for emergency stabilization repairs during a wet period, Reclamation will also repair the access road as necessary.	2-Alternative 2; Access Road 2-Alternative 2; Proposed Work Sequence 2-Alternative 2; Minimizing Construction Impacts 2-Alternative 2; Inspection and Maintenance 2-Alternative 4; Access Roads 2-Alternative 4; Minimizing Construction Impacts 2-Alternative 4; Inspection and Maintenance 3-Geology; Environmental Consequences; Alternative 2 3-Geology; Environmental Consequences; Alternative 4

Reclamation's Responses to the 8-4-03 comments from Richard Drehobl, Bureau of Land Management		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
		3-Geology; Environmental Consequences; Cumulative Effects 3-Geology; Environmental Consequences; Mitigation 3-Water Quality; Environmental Consequences; Alternative 2 3-Water Quality; Environmental Consequences; Mitigation 3-Threatened and Endangered Species; Bald Eagle; Environmental Consequences; Alternative 2 3-Threatened and Endangered Species; Northern Spotted Owl; Environmental Consequences; Alternative 2 3-Historic Properties; Environmental Consequences; Alternative 2 3-Fish and Wildlife; Environmental Consequences; Mitigation 5-Soil 5-Fish and Wildlife
it is not clear where existent and non-existent sections of access road are located	Figure 2-13 is changed to indicate the approximate location of the old abandoned logging road.	2-Alternative 2; Access Road 2-Figure 2-13
Does the statement, "The priorities in the first year would be to: begin stabilizing banks damaged by previous wasteway use and still actively eroding." only apply to areas within the existing rights-of-way?	Yes. Text is changed to clarify that Reclamation has no authority to stabilize areas outside its rights-of-way, and therefore, must acquire rights-of-way/flowage easements before stabilization work on	1-Rights-of-Way/Flowage Easements and Wasteway Access 2-Alternative 2; Acquiring Additional Rights-of-Way/Flowage Easements

Reclamation's Responses to the 8-4-03 comments from Richard Drehobl, Bureau of Land Management		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
	private land can proceed. Reclamation will negotiate with individual landowners of those wasteway areas where flow has exceeded or could exceed the natural channel.	2-Alternative 3; Rights-of-Way/Flowage Easements, Negotiations, and Data Collection 2-Alternative 4; Rights-of-Way/Flowage Easements, Negotiations, and Data Collection
no mention of acquiring additional flowage easements and rights-of-way under the Proposed Work Sequence section	Text is changed to clarify acquisition of additional rights-of-way/flowage easements	2-Alternative 2; Proposed Work Sequence 1-Rights-of-Way/Flowage Easements and Wasteway Access 2-Alternative 2 2-Alternative 2; Acquiring Additional Rights-of-Way/Flowage Easements 2-Alternative 2; Landowner Negotiations 2-Alternative 2; Data Collection; Using Data 2-Alternative 2; Standard Engineering Techniques 2-Alternative 3; Rights-of-Way/Flowage Easements, Negotiations, and Data Collection 2-Alternative 4; Rights-of-Way/Flowage Easements, Negotiations, and Data Collection 4-Adjacent Landowners
Proposed Work Sequence section - include project priorities for future years	Text is changed to clarify project priorities.	2-Alternative 2; Proposed Work Sequence 2-Alternative 4; Proposed Work Sequence 2-Alternative 2; Landowner Negotiations
under the Proposed Work Sequence section, which of the three culverts (figure 1-4) on	Text is changed to clarify that the middle culvert is a first priority.	2-Alternative 2; Proposed Work Sequence

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The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
private land would be repaired during the first year; would the repair include a culvert sized for 100-year flow event; which size culvert will be used for the Schoolhouse Creek crossing; what size structure is required to pass 100-year flow event?	Text is changed to clarify that culverts will be sized appropriately for expected runoff, to not impede flow, and to have the least impact on drainage characteristics. They will be placed to allow for passage of aquatic species. A flow measurement weir installed near the wasteway's pipe outlet measures the volume of flow. Flow records, along with documentation of conditions before and after wasteway use, should improve efforts to reduce erosion and stabilize the wasteway channel.	2-Alternative 2; Access Road; Road Specifications 2-Alternative 2; Inspection and Maintenance 2-Alternative 4; Access Roads 2-Alternative 4; Inspection and Maintenance 3-Fish and Wildlife; Environmental Consequences; Alternative 2
need more information on how Reclamation will work with landowners/management agencies to decide which sites need stabilized, where stabilization would occur, and how the work would be done	Text is changed to clarify that the exact repair method for any particular eroded area will depend on what Reclamation and the landowner agree to following negotiations on rights-of-way/flowage easements and stabilization methods. Until these negotiations take place, site-specific descriptions are not available.	1-introduction to chapter 2-introduction to chapter 2-Alternative 2; Landowner Negotiations
	Text is changed to clarify landowner negotiations.	2-Alternative 2; Landowner Negotiations 1-introduction to chapter 1-Construction Permits 2-Alternative 2; Access Road; Road Specifications 2-Alternative 2; Proposed Work Sequence 3-Water Quality; Environmental Consequences; Alternative 2

Reclamation's Responses to the 8-4-03 comments from Richard Drehobl, Bureau of Land Management		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
		3-Water Quality; Environmental Consequences; Alternative 4 3-Wetlands; Environmental Quality; Alternative 2 3-Wetlands; Environmental Consequences; Cumulative Effects 3-Wetlands; Environmental Consequences; Mitigation 3-Threatened and Endangered Species; Northern Spotted Owl; Environmental Consequences; Alternative 2 4-Agency Consultation and Coordination; National Historic Preservation Act of 1966, as Amended 5-Water
	Text is changed to clarify that Reclamation will continue consulting and negotiating with adjacent landowners to acquire rights-of-way/flowage easements and to accomplish wasteway stabilization.	2-introduction to chapter 2-Alternative 2; Landowner Negotiations 2-Alternative 2; Data Collection; Collecting Further Data 2-Alternative 2; Bioengineering Techniques 2-Alternative 2; Standard Engineering Techniques 2-Alternative 2; Vegetation Cuttings and Removal 2-Alternative 2; Proposed Work Sequence 2-Alternative 3; Rights-of-Way/Flowage Easements, Negotiations, and Data Collection 2-Alternative 4; Rights-of-Way/Flowage Easements,

Reclamation's Responses to the 8-4-03 comments from Richard Drehobl, Bureau of Land Management		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
		Negotiations, and Data Collection 2-Alternative 4; Vegetation Removal 3-Cascade Siskiyou National Monument; Environmental Consequences 4-Agency Consultation and Coordination; Bureau of Land Management Coordination 4-Adjacent Landowners 4-Other Contacts 5-Vegetation
	This EA contains discussion of how Reclamation will involve private and Federal landowners.	1-Rights-of-Way/Flowage Easements and Wasteway Access 2-introduction to chapter 2-Alternative 2 2-Alternative 4; Vegetation Removal 3-Geology; Environmental Consequences; Cumulative Effects 3-Vegetation; Environmental Consequences; Mitigation 4-Agency Consultation and Coordination; Bureau of Land Management Coordination 4-Adjacent Landowners 4-Other Contacts 5-Vegetation

Reclamation's Responses to the 8-4-03 comments from Richard Drehobl, Bureau of Land Management		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
how would Reclamation acquire authorization to cut trees outside of rights-of-way	Text is changed to clarify Reclamation's existing authority through the 1890 Canal Act and how Reclamation will negotiate with landowners. Landowner approval will be obtained before cutting trees outside existing acquired rights-of-way.	Glossary and Acronyms; 1890 Canal Act right 1-Rights-of-Way/Flowage Easements and Wasteway Access 2-Alternative 2; Acquiring Additional Rights-of-Way/Flowage Easements 2-Alternative 2; Landowner Negotiations 2-Alternative 2; Vegetation Cuttings and Removal 2-Alternative 3; Vegetation Cuttings and Removal 2-Alternative 4; Vegetation Removal 5-Vegetation
how will existing vegetation be analyzed to determine if it can be removed without affecting stream shade or wildlife benefits	Reclamation will analyze site-specific conditions and involve the landowner in which plants to remove. The removal of vegetation should be assumed to have short-term negative impacts; however, the positive long-term impacts of revegetation should outweigh these negative impacts. The removal of vegetation not providing channel shade will not affect the amount of channel shade.	2-Alternative 2; Landowner Negotiations 2-Alternative 2; Vegetation Cuttings and Removal; Along the Wasteway 2-Alternative 4; Vegetation Removal; Along the Wasteway 2-Alternative 2; Minimizing Construction Impacts 3-Vegetation; Environmental Consequences
any tree/brush removal within Riparian Reserves on BLM-administered lands would need site specific environmental analysis	Site-specific environmental compliance will be accomplished prior to stabilization or major surface disturbing activities. Reclamation will continue cooperating with BLM.	1-introduction to chapter 2-Alternative 2; Minimizing Construction Impacts 2-Alternative 4; Minimizing Construction Impacts 3-Geology; Environmental Consequences; Cumulative Effects

Reclamation's Responses to the 8-4-03 comments from Richard Drehobl, Bureau of Land Management		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
		3-Vegetation; Environmental Consequences; Cumulative Effects 4-Agency Consultation and Coordination; Bureau of Land Management Coordination 3-Cascade Siskiyou National Monument; Environmental Consequences 5-Cascade Siskiyou National Monument 2-Alternative 2; Landowner Negotiations 2-Alternative 2; Vegetation Cuttings and Removal 2-Alternative 3; Vegetation Cuttings and Removal 2-Alternative 4; Vegetation Removal 5-Vegetation
success of planting riparian species (alder and willow from cuttings in wasteway) would improve with year-around moisture; consider small wasteway maintenance flow throughout summer to stabilize and maintain channel	Text is changed to clarify that vegetation native to the area will be used and that plants will rely on natural weather patterns and ground moisture for survival.	Glossary and Acronyms; revegetation 2-Alternative 2; Bioengineering Techniques; Vegetation Selection 2-Alternative 2; Bioengineering Techniques; Stabilizing Infrastructures 2-Alternative 2; Vegetation Cuttings and Removal 3-Geology; Environmental Consequences; Alternative 2 3-Vegetation; Environmental Consequences; Alternative 2 3-Vegetation; Environmental Consequences; Alternative 3

Reclamation's Responses to the 8-4-03 comments from Richard Drehobl, Bureau of Land Management		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
		3-Vegetation; Environmental Consequences; Mitigation 5-Vegetation
	This EA is about stabilizing the wasteway rather than about changing operations of individual facilities within the Rogue River Basin Project. This EA incorporates by reference the document "Rogue River Basin Project Talent Division – Oregon, Facilities and Operations."	1-Purposes of and Need for Action 2-Alternative 2; Bioengineering Techniques; Vegetation Selection 6-Chapter 1 References
clarify proposed action - exactly where will bioengineering structures be used; discuss where the high velocity areas mentioned for use of standard engineering techniques in the Geology, alternative 2 effects section are located	The title of the EA is changed to "Finding of No Significant Impact and Programmatic Final Environmental Assessment." The introduction of chapter 1 is changed to explain that this Programmatic Final Environmental Assessment provides coverage for implementing general provisions (for which site-specific layout and design have not yet taken place) to upgrade access to the wasteway and stabilize localized areas of the wasteway channel. It further explains that site-specific environmental compliance will be accomplished prior to initiating stabilization or major surface disturbing activities.	Front cover 1-introduction to chapter 2-Alternative 2; Minimizing Construction Impacts 2-Alternative 4; Minimizing Construction Impacts
	Text is changed to clarify why the alternatives are described in general terms rather than in terms of site-specific conditions.	1-introduction to chapter 2-introduction to chapter 2-Alternative 2; Landowner Negotiations

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The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
	This is a "Programmatic EA" with general descriptions of the alternatives. Negotiations with individual landowners and additional NEPA compliance will further address these issues.	Front cover 1-introduction to chapter 2-introduction to chapter 2-Alternative 2; Landowner Negotiations 2-Alternative 2; Minimizing Construction Impacts 2-Alternative 4; Minimizing Construction Impacts
are the two possible locations (figures 2-11 and 2-12) for standard engineering techniques the *only* locations being considered for standard engineering techniques under alternative 2	Text is changed to clarify that these are examples of two sites already identified and that other wasteway sites may also be suitable and considered for standard engineering structures	2-Alternative 2; Standard Engineering Techniques
	Text is changed to clarify that the exact repair method for any particular eroded area will depend on what Reclamation and the landowner agree to following negotiations on rights-of-way/flowage easements and stabilization methods. Until these negotiations take place, site-specific descriptions are not available.	1-introduction to chapter 2-introduction to chapter 2-Alternative 2; Landowner Negotiations
	Text is changed to clarify that Reclamation will continue consulting and negotiating with adjacent landowners to acquire rights-of-way/ flowage easements and to accomplish wasteway stabilization.	2-introduction to chapter 2-Alternative 2; Landowner Negotiations 2-Alternative 2; Data Collection; Collecting Further Data 2-Alternative 2; Bioengineering Techniques 2-Alternative 2; Standard Engineering Techniques 2-Alternative 2; Vegetation Cuttings and Removal

Reclamation's Responses to the 8-4-03 comments from Richard Drehobl, Bureau of Land Management		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
		2-Alternative 2; Proposed Work Sequence 2-Alternative 3; Rights-of-Way/Flowage Easements, Negotiations, and Data Collection 2-Alternative 4; Rights-of-Way/Flowage Easements, Negotiations, and Data Collection 2-Alternative 4; Vegetation Removal 3-Cascade Siskiyou National Monument; Environmental Consequences 4-Agency Consultation and Coordination; Bureau of Land Management Coordination 4-Adjacent Landowners 4-Other Contacts 5-Vegetation
	This EA contains discussion of how Reclamation will involve private and Federal landowners.	1-Rights-of-Way/Flowage Easements and Wasteway Access 2-introduction to chapter 2-Alternative 2 2-Alternative 4; Vegetation Removal 3-Geology; Environmental Consequences; Cumulative Effects 3-Vegetation; Environmental Consequences; Mitigation 4-Agency Consultation and Coordination; Bureau of Land Management Coordination

Reclamation's Responses to the 8-4-03 comments from Richard Drehobl, Bureau of Land Management		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
		4-Adjacent Landowners 4-Other Contacts 5-Vegetation
explain what is meant by "possibly" four culverts would be installed; is it possible no culverts would be installed at the wetland crossing	Culverts will be installed along the perimeter of the wetland so the access road would have the least impact on drainage characteristics surrounding the wetlands. The exact number of wetland culverts remains to be determined. It is unlikely no culverts will be installed.	2-Alternative 2; Access Road; Road Specifications 3-Fish and Wildlife; Environmental Consequences; Alternative 2
Alternative 4: discuss removal of local vegetation as stated on page 36 "Water temperature would likely increase with removal of local vegetation."	Text is changed to clarify that local vegetation would be removed under alternative 4.	2-Alternative 4; Vegetation Removal 3-Vegetation; Environmental Consequences; Alternative 4
Geology section, add discussion of impact of sediment moving off the unsurfaced access road during storm events	Text includes discussion of sediment movement during storm events.	3-Geology; Environmental Consequences; Alternative 2 3-Geology; Environmental Consequences; Alternative 4 2-Alternative 2; Access Road; Road Specifications 3-Water Quality; Environmental Consequences; Alternative 2 3-Water Quality; Environmental Consequences; Alternative 4 3-Water Quality; Environmental Consequences; Mitigation 5-Soil

Reclamation's Responses to the 8-4-03 comments from Richard Drehobl, Bureau of Land Management		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
Geology section, add discussion of soil/geology impacts from accessing sites where standard engineering techniques would be used	Since stabilization and construction of standard engineering structures will take place as much as possible during dry periods, impacts to soils and sediment runoff from vehicles accessing these sites should be minimal.	3-Geology; Environmental Consequences; Alternative 2 3-Geology; Environmental Consequences; Alternative 4
Geology impacts under Alternative 4 - describe impacts that would result from more access to the wasteway	Storm runoff could potentially carry some sediment into Schoolhouse Creek and the wetlands; however the relatively flat grade of the road near Schoolhouse Creek and the wetlands would likely keep sediment movement to a minimum. Other access roads with steep grades could experience sediment movement during storm runoff.	3-Geology; Environmental Consequences; Alternative 4
the statement "Several water bodies within the Rogue River basin are included on the 303(d)list; only three are near the wasteway." is an under statement; **hundreds** of listed water bodies are within Rogue River basin	The entire Water Quality section is updated to reflect the latest Oregon Department of Environmental Quality 303(d) listing.	3-Water Quality
	Regardless of how many listed water bodies are within the Rogue River basin, only two are near the wasteway and potentially affected by the proposed action.	3-Water Quality; Affected Environment
address in the Water Quality Environmental Consequences section, Alternative 2, the removal of riparian vegetation as it relates to water quality and temperature	The entire Water Quality section is updated to reflect the latest Oregon Department of Environmental Quality 303(d) listing.	3-Water Quality
	Text is changed to include discussion on the removal of vegetation and that it should be assumed to have short-term negative impacts; however, the positive long-term impacts of revegetation would outweigh these negative impacts.	3-Water Quality; Environmental Consequences; Alternative 2 3-Vegetation; Environmental Consequences; Alternative 2

Reclamation's Responses to the 8-4-03 comments from Richard Drehobl, Bureau of Land Management		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
		2-Alternative 2; Vegetation Cuttings and Removal; Along the Wasteway 2-Alternative 2; Minimizing Construction Impacts 2-Alternative 3; Vegetation Cuttings and Removal 2-Alternative 3; Minimizing Construction Impacts 2-Alternative 4; Vegetation Removal; Along the Wasteway
address in the Water Quality Environmental Consequences section, Alternative 2, the impact to water quality (sedimentation in particular) that would result from the proposed culvert installations, stabilization work, and access road construction	The entire Water Quality section is updated to reflect the latest Oregon Department of Environmental Quality 303(d) listing.	3-Water Quality
	Text is changed to include discussion on construction impacts.	3-Water Quality; Environmental Consequences; Alternative 2
address in the Water Quality Environmental Consequences section, Alternative 2, the incorrect statement "Likewise, Emigrant Creek water temperatures should decrease when released water flows through the wasteway." Under "normal" operations, flow is piped through Greensprings Powerplant and released to Emigrant Creek without any solar exposure to heat the water. Use of the wasteway to convey water, with broad expanses of bedrock and areas of poor riparian vegetation, has much greater potential to allow water temperatures to rise than does the pipeline conveyance	The entire Water Quality section is updated to reflect the latest Oregon Department of Environmental Quality 303(d) listing.	3-Water Quality
	Text is corrected to state that after stabilization, water released through the wasteway would somewhat decrease Emigrant Creek water temperature in the 1.2-mile reach between the mouth of Tyler Creek and the Green Springs Powerplant discharge.	3-Water Quality; Environmental Consequences; Alternative 2

Reclamation's Responses to the 8-4-03 comments from Richard Drehobl, Bureau of Land Management		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
address in the Water Quality Environmental Consequences section, Alternative 4, water quality impacts from the access road being "extended paralleling the wasteway short distances both upstream and downstream" or from the "many other access roads off Tyler Creek Road"	The entire Water Quality section is updated to reflect the latest Oregon Department of Environmental Quality 303(d) listing.	3-Water Quality
	Text is changed to include discussion on the effects storm events could have on the access roads.	3-Water Quality; Environmental Consequences; Alternative 4
address in the Water Quality Environmental Consequences section, Mitigation, what best management practices would be used	The entire Water Quality section is updated to reflect the latest Oregon Department of Environmental Quality 303(d) listing.	3-Water Quality
	Text is expanded to include discussion on best management practices and standard and reasonable precautions.	2-Alternative 2; Bioengineering Techniques; Vegetation Selection 2-Alternative 2; Vegetation Cuttings and Removal; Along the Wasteway 3-Geology; Environmental Consequences; Mitigation 3-Water Quality; Environmental Consequences; Mitigation 3-Wetlands; Environmental Consequences; Alternative 4 3-Fish and Wildlife; Environmental Consequences; Mitigation 5-Soil 5-Water 5-Fish and Wildlife
in the Water Quality Environmental Consequences section, Mitigation, consider	The entire Water Quality section is updated to reflect the latest Oregon Department of	3-Water Quality

Reclamation's Responses to the 8-4-03 comments from Richard Drehobl, Bureau of Land Management		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
adding a mitigation measure requiring surfacing entire access road or, at a minimum, surfacing stream approaches and crossings	Environmental Quality 303(d) listing.	
	Text clarifies that the road surface near the culverts will be graveled.	3-Water Quality; Environmental Consequences; Mitigation
in the Water Quality Environmental Consequences section, Mitigation, add a mitigation measure to restrict channel stabilization to dry season; all instream work should be completed during ODFW's instream work period	Text is changed to clarify that, as much as possible, Reclamation will perform stabilization efforts, road construction, inspection, and maintenance during dry periods. Should a need arise to access the wasteway during non-dry periods, foot traffic within the acquired right-of-way will be used. Should a rare instance require immediate vehicular access for emergency stabilization repairs during a wet period, Reclamation will also repair the access road as necessary.	2-Alternative 2; Access Road 2-Alternative 2; Proposed Work Sequence 2-Alternative 2; Minimizing Construction Impacts 2-Alternative 2; Inspection and Maintenance 2-Alternative 4; Access Roads 2-Alternative 4; Minimizing Construction Impacts 2-Alternative 4; Inspection and Maintenance 3-Geology; Environmental Consequences; Alternative 2 3-Geology; Environmental Consequences; Alternative 4 3-Geology; Environmental Consequences; Cumulative Effects 3-Geology; Environmental Consequences; Mitigation 3-Water Quality; Environmental Consequences; Alternative 2 3-Water Quality; Environmental Consequences; Mitigation 3-Threatened and Endangered Species; Bald Eagle; Environmental Consequences; Alternative 2

Reclamation's Responses to the 8-4-03 comments from Richard Drehobl, Bureau of Land Management		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
		3-Threatened and Endangered Species; Northern Spotted Owl; Environmental Consequences; Alternative 2 3-Historic Properties; Environmental Consequences; Alternative 2 3-Fish and Wildlife; Environmental Consequences; Mitigation 5-Soil 5-Fish and Wildlife
	Since no anadromous fish species inhabit the proposed work area, working in dry periods should coincide with ODFW's instream work period.	3-Water Quality; Environmental Consequences; Mitigation 3-Fish and Wildlife; Environmental Consequences; Mitigation 5-Water 5-Fish and Wildlife
	Text is changed to clarify that Reclamation will continue cooperating with agencies as stabilization efforts progress.	4-Other Contacts
in 1999, a BLM crew found cutthroat trout (*Oncorhynchus clarkii*) and reticulate sculpin (*Cottus perplexus*) in Sections 1 and 6 of Tyler Creek	Text is changed to add cutthroat trout to the list of fish species that could be present in the lower reach of the wasteway.	3-Fish and Wildlife; Affected Environment Fish
in the Fish and Wildlife Environmental Consequences section, Alternative 2, address impact of proposed Schoolhouse Creek and wetland area culverts on the passage of all	Text is changed to state that the access road culverts should not affect aquatic species since these structures will be sized appropriately for expected runoff, to not impede flow, and to have the least impact on	2-Alternative 2; Access Road; Road Specifications 3-Fish and Wildlife; Environmental Consequences; Alternative 2

Reclamation's Responses to the 8-4-03 comments from Richard Drehobl, Bureau of Land Management		
The issue is:	Reclamation's response	For further information, refer to the Tyler Creek Wasteway Stabilization EA in: (Chapter-Section; subsection)
species and lifestages of native fishes and other aquatic species	drainage characteristics surrounding the wetlands. They will be placed to allow for passage of aquatic species.	
in the Coho Salmon Environmental Consequences section, address Essential Fish Habitat	Essential fish habitat discussion is now included.	3-Threatened and Endangered Species; Southern Oregon/Northern California Coasts ESU Coho Salmon; Affected Environment; Essential Fish Habitat 3-Threatened and Endangered Species; Southern Oregon/Northern California Coasts ESU Coho Salmon; Environmental Consequences; Essential Fish Habitat 6-Chapter 3 References
Tim Montfort is a hydrologist, not a biologist.	Text is corrected.	6-References; Chapter 3 References