



United States
Department of
Agriculture

Forest Service
Pacific Northwest
Region

February 2006



Final Gold Mountain Road Repair Environmental Assessment

**Mt. Baker-Snoqualmie National Forest
Darrington Ranger District
Darrington, Snohomish County, Washington**



White Chuck Bridge Destroyed by October 2003 Flood Event

Contact: Phyllis Reed, Teamleader, 1405 Emens Avenue North, Darrington, WA 98241 ~ 360-436-1155

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication f program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice or TDD).

USDA is an equal opportunity provider and employer.

Table of Contents

Introduction	1
<i>Need for Action.....</i>	<i>4</i>
<i>Proposed Action</i>	<i>5</i>
Road 22 and White Chuck Bridge	6
Road 2210 and Road 2211	8
<i>Project Scope.....</i>	<i>13</i>
Relationship to the Forest Plan and Other Documents	13
Relationship to Other Documents.....	19
Other Relevant Laws and Regulations.....	19
<i>Public Involvement.....</i>	<i>21</i>
<i>Significant Issues: Point of Discussion, Debate, or Dispute</i>	<i>23</i>
Alternatives Including the Proposed Action	25
<i>Introduction</i>	<i>25</i>
Process Used to Formulate the Alternatives	25
Alternatives Considered but Eliminated from Detailed Study.....	26
<i>Alternatives Considered in Detail</i>	<i>29</i>
Alternative A (No Action): No Bridge Repair or Replacement, No Reroutes, No Decommissioning	29
Alternatives B (Proposed Action): Build New Bridge, Remove Old Bridge, Reroute Road 22 Around Site #2, Repair Sites #3-9	29
Alternative C: Replace Bridge; Repair Site #1, #6-#9, Reroute Site #2-#5, Decommission Road 22 between Road 24 and Road 2210 Junctions.....	33
Road Segments Used Per Alternative	34
Mitigation Measures and Monitoring for All Action Alternatives.....	35
Environmental Consequences	47
<i>Access and Road Management Affected Environment.....</i>	<i>47</i>
Roads Analysis Findings, Maintenance Level	47
Past Flood Damage	49
<i>Access and Road Management Environmental Consequences.....</i>	<i>50</i>
<i>Recreation Affected Environment.....</i>	<i>56</i>
<i>Recreational Environmental Consequences</i>	<i>57</i>
<i>Geomorphology/Soils/Hydrology Affected Environment.....</i>	<i>58</i>
Geology	59
Soils	59
Hydrology	61
<i>Geomorphology/Soils/Hydrology Environmental Consequences</i>	<i>64</i>
<i>Riparian Reserves Affected Environment</i>	<i>73</i>
<i>Riparian Reserves Environmental Consequences</i>	<i>73</i>
Riparian Reserves	74
<i>Fisheries Affected Environment.....</i>	<i>76</i>
Fish Species of Interest	76
Watershed-Scale Flood Effects.....	79
Sauk River Watershed-Scale Conditions	80
White Chuck River Watershed-Scale Conditions	81

Project-Level Conditions	81
Special Habitat Designations—Critical Habitat.....	82
Special Habitat Designations—Essential Fish Habitat	82
Watershed and Fish Habitat Restoration.....	82
<i>Fisheries Environmental Consequences</i>	84
<i>Skagit Wild and Scenic River Affected Environment</i>	93
<i>Skagit Wild and Scenic River Environmental Consequences</i>	94
<i>White Chuck River Recommended WSR Environmental Consequences</i>	96
<i>Scenic Viewshed Middleground Affected Environment</i>	97
<i>Scenic Viewshed Environmental Consequences</i>	97
<i>Wildlife Affected Environment</i>	98
<i>Wildlife Environmental Consequences</i>	101
<i>Botany Affected Environment</i>	112
<i>Botany Environmental Consequences</i>	113
<i>Heritage Resources Affected Environment</i>	114
<i>Heritage Resources Environmental Consequences</i>	115
<i>Treaty Resources/Reserved Indian Rights Affected Environment</i>	116
<i>Treaty Resources Environmental Consequences</i>	116
<i>Local Economy/Tourism Affected Environment</i>	116
<i>Local Economy/Tourism Environmental Consequences</i>	117
<i>Wilderness, Inventoried Roadless Areas, Unroaded Lands</i>	119
<i>Environmental Justice</i>	119
<i>Other Resources</i>	120
<i>Agencies and Persons Consulted</i>	123
Appendix A – Comments and Issues Identified throughout the Analysis Process	125
Appendix B 1949 Aerial Photo.....	139
Appendix C Cumulative Effects Review Process.....	140
Appendix D - Glossary of Commonly Used Terms.....	147
References.....	152
Commonly Used Acronyms.....	iv

Figure 1: Forest-wide Flood Damage Locator Map	3
Figure 2: Photo of Site #1 (Road 22 MP 10.1).....	6
Figure 3: Photo of Site #2 on Road 22 (MP 9.4)	8
Figure 4: Flood Damage Map	10
Figure 5: Enlargement of Boat Launch and Trailhead	11
Figure 6: Bridge Replacement Drawing.....	12
Figure 7: Merged Land Allocations Map	17
Figure 8: Example of White Chuck River's Natural Meander Following the 2003 Flooding.....	27
Figure 9: Site #4 Broken Culvert.....	32
Figure 10: Repair Site #7 Culvert Damage	33
Figure 11: Alternative B Route	40
Figure 12: Alternative C Route	41
Figure 13: Site #6 Junction of Road 22 and 2210 (Four-Mile)	50
Figure 14: Site #9 on Road 2211	54
Figure 15: Dispersed Campsite Destroyed by the Floodwaters.....	56
Figure 16: Example of River Meander.....	63
Figure 17 1949 Photo of Old Road System Accessing South End of Gold Mountain.	139
Figure 18: Potential Cumulative Activities Map	146
 Table 1: Scoping Period Commenters.....	22
Table 2: Roads and Mileage for Site #2 Reroute.....	32
Table 3: Alternative B Re-route Compared to Pre-flood Mileage to Same Location.....	34
Table 4: Alternative C Reroute Compared to Pre-flood Mileage to Same Location	34
Table 5: Alternative B Net Road Mileage Changes	34
Table 6: Alternative C Net Road Mileage Changes	34
Table 7: Comparison of Alternatives	42
Table 8: Road Segments Maintenance Level and Roads Analysis Results	48
Table 9: Past Flood Damages	49
Table 10: Comparison of Travel Time and Mileage	51
Table 11: Haul Cost Analysis Summary	53
Table 12: Cumulative Effects Determination for Projects in the Sauk and White Chuck Rivers.....	71
Table 13: Riparian reserves Acres Affected – Alternative B	73
Table 14: Fish Species of Interest for the Gold Mountain Road Repair Project	77
Table 15: Watershed Restoration History in the Sauk River System	83
Table 16: Projects and Activities Being Considered for Aquatics Cumulative Effects.....	90
Table 17: Maximum Use Limits.....	94
Table 18: Changes within BMU #11 Core Habitat/Season Foraging Habitat	101
Table 19: Suitable Habitat Within 75 Yards of Project Sites with Potential for Noise Disturbance	103
Table 20: Other Projects Assessed as Part of Wildlife Cumulative Effects.	111
Table 21: Visitors* to Darrington Ranger District Office	118
Table 22: Race and Ethnicity Profile.....	120
Table 23: Public Comments Received During the Scoping Period	125
Table 24 - Substantive Comments from the 30-Day Comment Period	129
Table 25: Past, Present, or Reasonably Foreseeable Actions	142
Table 26: Projects Reviewed and Found Not Contributing to Cumulative Effects	144

Commonly Used Acronyms

WDG	Washington Department of Game	NFS	National Forest System
ACS	Aquatic Conservation Strategy	NHPA	National Historic Preservation Act
ATM	Access and travel management	NMFS	National Marine Fisheries Service
BA	Biological Assessment	NOAA	National Oceanic and Atmospheric Administration
BE	Biological Evaluation	NWFP	Northwest Forest Plan
BO	Biological Opinion	NWIFC	Northwest Indian Fisheries Commission
BMP	Best Management Practice	OG	Old growth
CCF	One Hundred Cubic Feet	ORV	Off Road Vehicle
CEQ	Council on Environmental Quality	PAG	Plant association group
CFR	Code of Federal Regulations	RM	River Mile
Cfs	cubic feet per second	RNV	Range of natural variability
CHU	Critical Habitat Unit	ROD	Record of Decision
CWA	Clean Water Act	ROS	Recreation Opportunity Spectrum
Dbh	Diameter at breast height	RV	Recreational Vehicle
DNR	Department of Natural Resources	RVD	Recreational Vehicle Day
DSR	Damage Survey Report	RVDS	Recreation visitor days
DPS	Distinct Population Segment	S and M	Survey and Manage
EA	Environmental Assessment	SHPO	State Historic Preservation Office
EIS	Environmental Impact Statement	TES	Threatened, endangered and sensitive species
ERFO Roads	Emergency Relief for Federally Owned Roads	TMDL	Total Maximum Daily Load
ESA	Endangered Species Act	U.S.C.	United States Code
ESU	Evolutionarily Significant Unit	US	United States
FEMA Agency	Federal Emergency Management Agency	USACE	United States Army Corp of Engineers
FEIS	Final Environmental Impact Statement	USDA FS	U.S. Forest Service
FHA	Federal Highways Administration	USDI	U.S. Department of the Interior
FONSI	Finding of No Significant Impact	USFWS	U.S. Fish and Wildlife Service
FS	Forest Service	USGS	U.S. Geological Survey
GIS	Geographical Information System	WAC	Washington Administrative Code
GSI	Genetic Stock Information	WaRIS	Washington Rivers Information System
HPA	Hydraulic Project Approval	WDF (now WDFW)	Washington Department of Fisheries
HUC	USGS Hydrologic Unit Code	WDFW Wildlife	Washington State Dept. of Fish and Wildlife
IDT	Interdisciplinary Team	WDOE	Washington Department of Ecology
LSR	Late Successional Reserve	WDOT	Washington State Department of Transportation
LWD	Large woody debris	WDW	Washington Department of Wildlife
MA	Management Area	WRIA	Water Resource Inventory Area
MBF	Thousand Board Feet	WSA	Watershed Analysis
MBS Forest	Mount Baker-Snoqualmie National Forest	WSCC Commission	Washington State Conservation Commission
Mgpd	Million gallons per day	WSR	Wild and Scenic River
MIS	Management Indicator Species	WWTIT Tribes	Western Washington Treaty Indian Tribes
ML	Maintenance Level		
MP	Milepost		
NEPA	National Environmental Policy Act		
NFMA	National Forest Management Act		

USDA Non-Discrimination Statement Revised 6/8/2005

"The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202)720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, DC 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer."

