UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, WA 98115

Refer to NMFS No: 2008/05624; 2008/05627

September 26, 2008

Thomas Tidwell
Regional Forester, Northern Region
USDA Forest Service
P.O. Box 7669
Missoula, Montana 59807

Harv Forsgren
Regional Forester, Intermountain Region
USDA Forest Service
324 25th Street
Ogden, Utah 84401

Re: Endangered Species Act Section 7 Formal Consultation and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for the programmatic Modified Idaho Roadless Rule for the Salmon River Basin HUC #170602, Clearwater River Basin HUC #170603, and portions of the Lower Snake River Basin HUC #170601, Idaho (one project)

Dear Mr. Tidwell and Mr. Forsgren:

The enclosed document contains a biological opinion (Opinion) prepared by the National Marine Fisheries Service (NMFS) pursuant to section 7(a)(2) of the Endangered Species Act (ESA) on the effects of the programmatic Modified Idaho Roadless Rule (MIRR) for Regions 1 and 4 of the U.S. Forest Service (USFS). In this Opinion, NMFS concludes that the action, as proposed, is not likely to jeopardize the continued existence of Snake River spring/summer Chinook salmon, fall Chinook salmon and sockeye salmon, and Snake River Basin steelhead or result in the destruction or adverse modification of their designated critical habitat.

No incidental take is exempted with the issuance of this Opinion. As a result of the USFS authorizing the MIRR, specific projects and their actions developed in accordance with the MIRR and associated Land and Resource Management Plans (LRMPs) may cause effects that later constitute take of listed anadromous steelhead and salmon. Any potential effects identified in this Opinion would occur later in time pursuant to the programmatic direction provided by the MIRR. Subsequent consultations on site-specific proposed actions developed pursuant to the MIRR and relevant provisions of the LRMPs will serve as the basis for determining if an exemption from the ESA section 9 take prohibitions is warranted. At that time, NMFS would provide Reasonable and Prudent Measures, and Terms and Conditions, as appropriate, to

minimize the impacts of any taking(s) on the listed species in accordance with 50 CFR 402.14i. NMFS does not anticipate that adoption of the MIRR by the USFS will incidentally take any ESA-listed salmon or steelhead; therefore, no incidental take statement is provided.

This document also includes the results of NMFS' analysis of the action's likely effects on essential fish habitat (EFH) pursuant to Section 305(b) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA). NMFS concludes that the proposed action has the potential to cause adverse effects to EFH. The programmatic MIRR provides both permissions and restrictions on land management actions that can take place within Idaho Roadless Areas and is prescriptive in terms of the sideboards that would guide or limit project design. However, the USFS does not specify what management actions would be carried out, when or where such actions would occur, or what mitigation measures might be incorporated into the proposed action(s) to reduce potential adverse effects from such proposed projects. Thus, the programmatic nature of the MIRR does not support the determination of any EFH conservation recommendations by NMFS. Subsequent consultations by the USFS on specifically proposed actions developed pursuant to the MIRR and relevant provisions of the LRMPs will serve as the basis for determining what conservation recommendations would be warranted for the proposed action. At that time, NMFS would provide EFH Conservation Recommendations, as appropriate, to minimize potential impacts on EFH. Since no EFH Conservation Recommendations have been provided, no statutory response is required.

If you have questions regarding this consultation, please contact Dale Brege, Supervisory Fish Biologist at the North Idaho Branch Office in Grangeville, Idaho, (208) 983-4060, or David Mabe, State Director at the Idaho State Habitat Office in Boise, Idaho at (208) 378-5696.

Sincerely,

for D. Robert Lohn
Regional Administrator

Enclosure

cc: J. Foss – USFWS
M. Lopez – NPT
Y. Tuell – SBT
C. Groen – IDFG

Endangered Species Act – Section 7 Consultation
Biological Opinion

&

Magnuson-Stevens Fishery Conservation and Management Act
Essential Fish Habitat Consultation

For the programmatic
Modified Idaho Roadless Rule, State of Idaho

Hydrologic Units: Salmon River Basin #17060201-17060210, Clearwater River Basin #17060301-17060306, and portions of the Lower Snake River Basin #17060101 and 17060103

Adams, Blaine, Clearwater, Custer, Idaho, Latah, Lemhi,
Lewis, Nez Perce, and Valley Counties, Idaho

Lead Action Agency:	U.S. Forest Service (Regions 1 and 4)
Consultation Conducted By:	National Marine Fisheries Service Northwest Region
Date Issued:	September 26, 2008
Issued by:	for D. Robert Lohn Regional Administrator

NMFS No.: 2008/05624; 2008/05627

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Acronyms Used in this Document

2001 Roadless Rule	2001 Roadless Area Conservation Rule
ACS	Aquatic Conservation Strategy
BA	Biological Assessment
BCR	Backcountry Restoration
BLM	Bureau of Land Management
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CPZ	Community Protection Zone
DCH	Designated Critical Habitat
DPS	Distinct Population Segment
DQA	Data Quality Act
EFH	Essential Fish Habitat
ESA	Endangered Species Act
ESU	Evolutionarily Significant Unit
FCRPS	Federal Columbia River Power System
FEIS	Final Environmental Impact Statement
GFRG	General Forest, Rangeland, or Grassland
HUC	Hydrologic Unit Code
ICBEMP	Interior Columbia Basin Ecosystem Management Plan
ICBTRT	Interior Columbia Basin Technical Recovery Team
IDFG	Idaho Department of Fish and Game
IRA	Idaho Roadless Area
IRR	Idaho Roadless Rule
LRMPs	Land and Resource Management Plan
MIRR	Modified Idaho Roadless Rule
MPG	Major Population Groups
MSA	Magnuson-Stevens Fishery Conservation and Management Act
NMFS	National Marine Fisheries Service
Opinion	Biological Opinion
PCE	Primary Constituent Elements
PFC	Proper Functioning Condition
PFMC	Pacific Fishery Management Council
RACNAC	Roadless Area Conservation National Advisory Committee
RDAT	Road Density Analysis Team
RPMs	Reasonable and Prudent Measure
SAHTS	Special Areas of Historic and Tribal Significance
Services	USFWS and NMFS
SWIE	Southwest Idaho Ecogroup
Tribes	Nez Perce Tribe and the Shoshone-Bannock Tribes
USDA	U.S. Department of Agriculture

USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
VSP	Viable Salmonid Population
WLR	Wildland Recreation

1. INTRODUCTION

The biological opinion (Opinion) and incidental take statement portions of this consultation were prepared by the National Marine Fisheries Service (NMFS) in accordance with section 7(b) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531, *et seq*.), and implementing regulations at 50 CFR 402. With respect to designated critical habitat, the following analysis relied only on the statutory provisions of the ESA, and not on the regulatory definition of "destruction or adverse modification" at 50 CFR 402.02.

The essential fish habitat (EFH) consultation was prepared in accordance with section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) (16 U.S.C. 1801, *et seq*.) and implementing regulations at 50 CFR 600. The administrative record for this consultation is on file at the Idaho State Habitat Office in Boise, Idaho.

1.1. Background and Consultation History

The U.S. Forest Service (USFS) first introduced the Idaho Roadless Rule (IRR) by holding a meeting with the U.S. Fish and Wildlife Service (USFWS) and NMFS on June 21, 2007. The purpose of the meeting was to discuss consultation needs for the IRR effort, as well as to discuss those species that needed to be included in the consultation. The USFS was proposing to promulgate a State-specific rule in response to the Idaho State Petition presented by Governor Risch on November 29 and 30, 2006, to the National Roadless Area Conservation National Advisory Committee (RACNAC). The State of Idaho, through its Office of Endangered Species, has been represented throughout the consultation.

On June 4, 2008, species lists (USFS Region 1 list #4420-2008-SL-0356 and USFS Region 4 list #14420-2008-SL-0357) for the Final Environmental Impact Statement (FEIS) for the Idaho Roadless Rule were received from the USFWS Office, Boise, Idaho. On June 11, 2008, a species list (SP #1-9-08-SP-0067) for inclusion into the FEIS was received from the USFWS Office, Spokane, Washington.

After review and comment from the public at large, government to government consultations with the Nez Perce Tribe and Shoshone-Bannock Tribes (Tribes), discussions with adjacent states, meetings with other agencies, and recommendations by the RACNAC, the IRR, as presented in the draft EIS, was modified to reflect concerns about the assignment of some Idaho Roadless Areas (IRAs) to a particular management theme and some concerns about the management themes themselves. At that point, the project became known as the Modified Idaho Roadless Rule (MIRR). Numerous meetings and conference calls between the USFS, USFWS, and NMFS continued to occur during the course of this consultation, with the dates and participants documented in the USFS' biological assessment (BA). A draft BA was sent to NMFS on June 3, 2008, and after review, NMFS sent its initial comments concerning anadromous fish to the USFS (Region 1) on June 12, 2008. After receiving several additional versions of draft BAs, NMFS sent its final comments to the USFS on August 11, 2008. The USFS sent a final BA on August 27, 2008, and formal consultation was initiated at that time.

NMFS sent an electronic draft copy of this Opinion to the Nez Perce Tribe (D. Johnson and M. Lopez) and to the Shoshone-Bannock Tribes (Y. Tuell) on August 22, 2008. The Tribes, as of September 24, 2008, did not respond with comments.

The existing Forest Plans and the 2001 Roadless Area Conservation Rule (2001 Roadless Rule) underwent ESA consultation through either informal or formal consultation process with the USFWS and NMFS (Services). Under the 2001 Roadless Rule, the Services agreed with the USFS that the action may affect but was not likely to adversely affect Federally listed species, with the anticipated impacts considered beneficial to listed species due to the additional restrictions imposed on activities in inventoried roadless areas in comparison to existing Forest Plans (66 FR 3244; January 12, 2001). On August 13, 2008, however, the U.S. District Court in Wyoming issued an injunction against the 2001 Roadless Rule, so its present status is uncertain. Forest Plans for the area of the MIRR were originally consulted upon individually, and subsequently, all of them were modified to include PACFISH and INFISH; a biological opinion was issued on June 19, 1998, by NMFS for the USFS and Bureau of Land Management (BLM) Land and Resource Management Plans (LRMPs) as amended by PACFISH (USDA and USDI 1995). In 2003, the Southwest Idaho Ecogroup (SWIE), which includes the Boise, Payette, and Sawtooth National Forests, consulted on Forest Plans with a new Aquatic Conservation Strategy (ACS) that replaced PACFISH, and on June 9, 2003, NMFS issued a biological opinion for their revised LRMPs. Consultation on the Forest Plans anticipated that some adverse impacts to listed species would occur. Years in which the consultations took place for the various national forests are: Boise – 2003; Caribou – 2003; Payette – 2003; Sawtooth - 2003; Targhee – 1997; Wallowa-Whitman – 1990; Clearwater – 1987; Idaho Panhandle – 1987; Nez Perce – 1987; and Salmon-Challis – 1987.

1.2. Proposed Action

U.S. Forest Service Purpose and Need

The USFS-stated purpose of the MIRR is to provide State-specific direction for the conservation and management of inventoried roadless areas within the State of Idaho. The MIRR integrates local management concerns with the national objectives for protecting roadless area values and characteristics. Roadless area characteristics include: High quality or undisturbed soil, water and air; sources of public drinking water; diversity of plant and animal communities; habitat for threatened, endangered, proposed, candidate, and sensitive species and for those species dependent on large, undisturbed areas of land; primitive, semi-primitive non-motorized, and motorized classes of dispersed recreation; reference landscapes; natural appearing landscapes with high scenic quality; traditional cultural properties and sacred sites; and other locally identified unique characteristics.

The U.S. Department of Agriculture (USDA) and the USFS state that they are committed to conserving and managing inventoried roadless areas and consider these areas an important component of the National Forest System. The USDA believes that the most viable path for lasting conservation of these areas must properly integrate local, state, and national perspectives

on roadless area management. Their proposed action attempts to achieve this integration by taking into account state and local resource management challenges along with the national interest in maintaining roadless characteristics.

The management direction is based on individual roadless characteristics for lands: (1) containing outstanding or unique features, where there is minimal or no evidence of human use; (2) containing culturally significant areas; (3) containing general roadless characteristics, where human uses may or may not be more apparent; and (4) displaying high levels of human use, while: (a) protecting communities, homes, and property from the risk of severe wildfire or other risks existing on adjacent Federal lands; (b) protecting forests from the negative effects of severe wildfire and insect and disease outbreaks; or (c) protecting access to property, by ensuring that states, Tribes, and citizens owning property within roadless areas have access to that property as required by existing laws.

Proposed Action

For purposes of this consultation, the proposed action is the MIRR that provides direction for management of a system of lands called IRAs and establishes five management area themes that span a continuum that includes prohibitive to permissive allocations related to road construction and reconstruction, timber cutting, and discretionary mining (Figure 1) on 9,304,300 acres of IRAs. This continuum accounts for stewardship of the uniqueness of each individual roadless area's landscape and the quality of roadless characteristics in that area. Allocations to a specific theme are not intended to mandate or direct the USFS to propose or implement any particular action. The MIRR also provides for management flexibility to accommodate necessary corrections and modifications in the future. If the MIRR is adopted, the 2001 Roadless Rule would no longer be in effect within the State of Idaho.

The management themes are broken down as follows:

- Wild Land Recreation (WLR) – 1,479,700 acres
- Primitive – 1,722,700 acres and Special Areas of Historic and Tribal Significance (SAHTS) – 48,600 acres, for a total of 1,771,300 acres
- Backcountry Restoration (BCR) – 5,312,900 acres - includes 442,000 acres within Community Protection Zones (CPZ)
- General Forest, Rangeland, or Grassland (GFRG) – 405,900 acres
- Other Forest Plan Special Areas – 334,500 acres

Wild Land Recreation – This is a classification of an IRA assigned to lands that were generally identified during the forest planning process and recommended for wilderness designation.

Road construction and reconstruction. Under the WLR theme, road construction and reconstruction is prohibited unless provided for by statute or treaty, or pursuant to reserved or outstanding rights, or other legal duty of the United States.

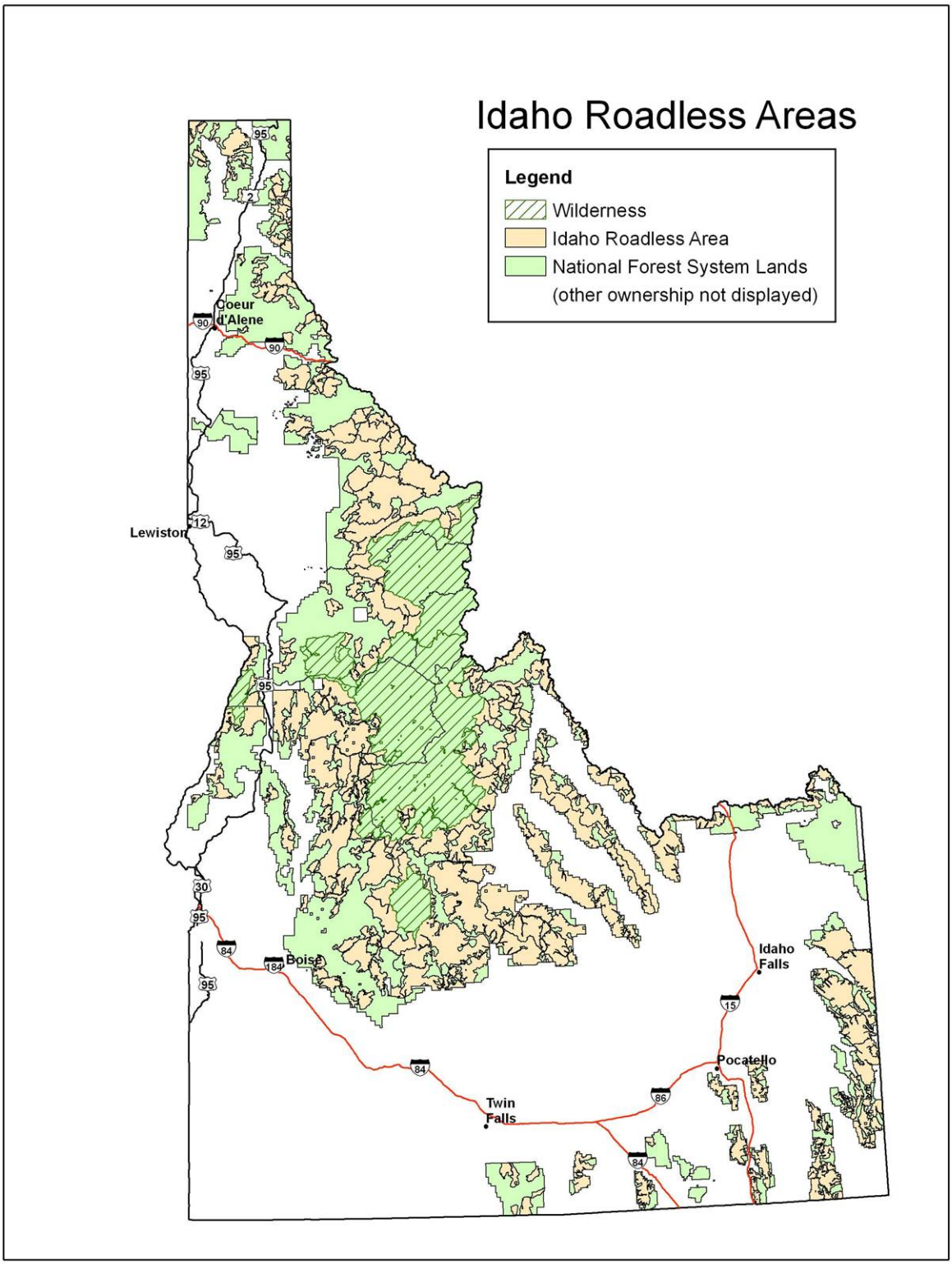


Figure 1. Map of Idaho showing the Idaho Roadless Areas

Timber cutting, sale, or removal. Under the WLR theme, timber cutting, sale, or removal is prohibited except for personal or administrative use (36 CFR §223), or when incidental to the implementation of a management activity not otherwise prohibited (e.g., trail clearing).

Mineral activities. Under the WLR theme, there is no recommendation, authorization, or consent to surface occupancy, or road construction or reconstruction associated with new mineral leases. The sale of common variety minerals would be prohibited. Locatable mineral activities pursuant to the General Mining Law of 1872, including road construction and reconstruction, would not be affected.

Primitive and Special Areas of Historic and Tribal Significance (SAHTS) - This is a classification of an IRA assigned to lands that were primitive in nature or were special areas with historic and/or tribal significance. Approximately 1,722,700 acres are classified as Primitive, and 48,600 acres are classified as SAHTS.

Road construction and reconstruction. Under the Primitive and SAHTS themes, road construction and reconstruction activities are prohibited, unless provided for by statute or treaty, or pursuant to reserved or outstanding rights, or other legal duty of the United States.

Timber cutting, sale, or removal. Under the Primitive and SAHTS themes, timber cutting, sale, or removal is prohibited except:

1. To improve threatened, endangered, proposed, or sensitive species habitat;

2. To maintain or restore the characteristics of ecosystem composition and structure;

3. To reduce the risk of uncharacteristic wildland fire effects to an at-risk community or municipal water supply system;

4. For personal or administrative use, as provided for in 36 CFR 223; or

5. Where such cutting, sale or removal is incidental to the implementation of a management activity not otherwise prohibited by this subpart.

Timber cutting, sale, or removal shall be limited to situations that: will maintain or improve one or more roadless characteristics over the long term; use existing roads or aerial harvest systems; maximize retention of large trees as appropriate for the forest type, to the extent the trees promote fire-resilient stands; be consistent with applicable land management plan direction; and be approved by the USFS Regional Forester.

Mineral activities. There is no recommendation, authorization, or consent to surface occupancy or road construction or reconstruction associated with new mineral or energy leases. The sale of common variety minerals would be prohibited. Locatable mineral activities pursuant to the General Mining Law of 1872 including road construction and reconstruction would not be affected.

Backcountry Restoration (Backcountry or BCR) - About 5,312,900 acres are classified as BCR, of which about 442,000 acres are within the CPZ.

Road construction/reconstruction. Under the BCR theme, road construction or reconstruction is permissible when/where:

1. The Regional Forester determines:

    a. A road is needed to protect public health and safety or imminent threat of flood, wildland fire, or other catastrophic event that, without intervention, would cause the loss of life or property;

    b. A road is needed to conduct a response action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to conduct a natural resource restoration action under CERCLA, section 311 of the Clean Water Act, or the Oil Pollution Act;

    c. A road is needed pursuant to statute, treaty, reserved or outstanding rights, or other legal duty of the United States;

    d. Road realignment is needed to prevent irreparable resource damage that arises from the design, location, use, or deterioration of a road and cannot be mitigated by road maintenance. Road realignment may occur under this paragraph only if the road is deemed essential for public or private access, natural resource management, or public health and safety;

    e. A road (re)construction is needed to implement a road safety improvement project on a road determined to be hazardous based on accident experience or accident potential on that road; or

2. The USDA Secretary determines that a Federal aid highway project, authorized pursuant to Title 23 of the United States Code, is in the public interest or is consistent with the purpose for which the land was reserved or acquired and no other reasonable and prudent alternative exists.

3. A responsible official may authorize temporary road construction or road reconstruction for timber cutting, sale, or removal for CPZ activities if the activity cannot be reasonably accomplished without a temporary road.

4. The Regional Forester may approve temporary road construction or road reconstruction on an infrequent basis for the forest type to reduce hazardous fuel conditions outside the community protection zone where:

    a. There is a significant risk that a wildland fire disturbance event could adversely affect an at-risk community or municipal water supply system. A significant risk

b. The activity cannot be reasonably accomplished without a temporary road; and

c. The activity maintains or improves one or more roadless characteristics over the long-term,

Timber cutting, sale, or removal. Under the BCR theme, timber cutting, sale, or removal activities are permitted if one of the following circumstances (conditions) exists:

1. To reduce hazardous fuel conditions within the CPZ.

2. To reduce the hazardous fuel conditions outside the CPZ where there is a significant risk of wildland fire disturbance event that could adversely affect an at-risk community or municipal water supply system. A significant risk exists where the history of fire occurrence and fire hazard and risk indicate a serious threat to an at-risk community or municipal water supply system.

3. To improve threatened, endangered, proposed, or sensitive species habitat.

4. To maintain or restore the characteristics of ecosystem composition and structure.

5. To reduce uncharacteristic wildland fire effects.

6. For personal or administrative use, as provided for in 36 CFR 223.

7. Where incidental to the implementation of a management activity not otherwise prohibited by this subpart.

8. In a substantially altered portion of an IRA designated as BCR, which has been altered due to the construction of a forest road and subsequent timber cutting. Both the road construction and subsequent timber cutting must have occurred prior to the effective date of this rule.

9. Any action authorized pursuant to conditions 2 through 5 shall be limited to situations that:

   a. Will maintain or improve one or more of the roadless characteristics over the long term;

   b. Maximize the retention of large trees as appropriate for the forest type, to the extent they promote fire-resilient stands;

   c. Be consistent with applicable land management components; and

d. Must be approved by the Regional Forester.

The activities above may use any forest roads or temporary roads including those authorized for hazardous fuel reduction projects within the CPZ and outside the CPZ (road construction conditions 2 and 3 until decommissioned).

Mineral activities. There is no recommendation, authorization, or consent to surface occupancy or road construction or reconstruction associated with new mineral or energy leases. Locatable mineral activities pursuant to the General Mining Law of 1872, including road construction and reconstruction, would not be affected.

The USFS would not authorize sale of common variety mineral materials, but may authorize the use or sale of common variety minerals, and associated road construction or reconstruction to access these minerals if the use of these minerals is incidental to activity allowed under this rule.

General Forest, Rangeland, or Grassland (GFRG) - About 405,900 acres are classified as GFRG.

Road construction/reconstruction. Under the GFRG theme, road construction and reconstruction are permitted for a forest permanent or temporary road, but must be consistent with applicable land management plan components. Forest roads constructed or reconstructed must be conducted in a manner that minimizes effects on surface resources and must be consistent with applicable land management plan components.

Timber cutting, sale, or removal. Under the GFRG theme, timber cutting, sale, or removal is permitted, at the discretion of the responsible official, when consistent with the applicable land management plan components.

Mineral activities: Under the GFRG theme, there is no recommendation, authorization, or consent to road construction or reconstruction associated with new mineral leases, except such road construction or reconstruction may be authorized in association with specific phosphate deposits. Leasing instruments that allow surface use or occupancy are permissible if they do not require road construction or reconstruction and surface use and occupancy is allowed in the Forest Plan. Locatable mineral activities pursuant to the General Mining Law of 1872 would not be affected, including road construction and reconstruction. The USFS may authorize the use or sale of common variety mineral materials and associated road construction or reconstruction to access these minerals only if the use of these minerals is incidental to an activity allowed under this rule.

Road construction or reconstruction associated with mining activities permissible under this subsection must be conducted in a manner that minimizes effects on surface resources, prevents unnecessary or unreasonable surface disturbances, and may only be used for the specific intended purpose. Roads constructed or reconstructed must be decommissioned when no longer needed or upon expiration of the lease, or permit, or other authorization whichever is sooner. Decommissioning shall consider public safety, costs, and potential impacts to land and resources.

Guidance that applies to all activities:

1. Permanent roads - Where permanent roads are allowed road construction and road reconstruction must be consistent with applicable land management plan components.

2. Temporary roads - Temporary road construction must be conducted in a manner that minimizes effects on surface resources, is consistent with applicable land management plan components, and may only be used for the specified purpose. Temporary roads must be decommissioned when no longer needed or upon expiration of the contract, or permit, whichever is sooner. Road decommissioning will be required in all such contracts or permits and this provision may not be waived.

3. Road maintenance - Road maintenance on authorized roads is permissible in IRAs.

Other Forest Plan Special Areas

The IRR identified approximately 334,400 acres of roadless areas that are already part of other land classification systems, such as research natural areas, wild and scenic rivers, special interest areas, and the like. These areas are governed by specific USFS directives and Forest Plan direction. These Forest Plan special areas are included for the sake of completeness; however, the MIRR does not recommend management direction for these lands, since they would continue to be governed by Forest Plans.

Other Activities in Idaho Roadless Areas.

Motorized Travel. The MIRR does not affect the current or future management status of existing roads or trails in IRAs. Decisions concerning the future management and/or status of existing roads or trails in IRAs shall be made during the applicable travel management processes.

Grazing. The MIRR does not affect the current management status of existing grazing allotments in IRAs. Future road construction or reconstruction associated with grazing operations shall conform to this rule.

Motorized Equipment and Mechanical Transport. The MIRR does not affect the current or future management status of the existing use of motorized equipment and mechanical transport in IRAs. Decisions concerning the future management and/or use of motorized equipment and mechanical transport in IRAs under this rule shall be made during the applicable forest planning processes.

Summary

In general, the MIRR proposes direction for the conservation and management of roadless areas in Idaho. This direction establishes prohibitions and permissions related to road construction/reconstruction, timber cutting, and discretionary mining across IRAs, based on the

management area themes. Although the MIRR does not authorize any on-the-ground projects, it does designate management area themes to IRAs, and thus dictates the nature of activities that could take place within the IRAs.

The USFS states that land management plan components that are consistent with the MIRR will continue to provide guidance for projects and activities within IRAs. The MIRR does not compel the amendment or revision of any land management plan, nor does it supersede specific USFS directives and Forest Plan direction for Forest Plan Special Areas imbedded in whole or in part within IRAs.

The USFS has determined that PACFISH and the SWIE ACS are not inconsistent with the Idaho Roadless Rule; therefore, the use of PACFISH, the SWIE ACS, other protective Forest Plan land management components, and their respective biological opinions is still required. The conservation measures and the provisions of those opinions were intended to reduce or avoid adverse effects on listed species and their habitats. NMFS regards these measures as integral components of the proposed action and expects that all proposed project activities that are later brought forward under the MIRR will be completed consistent with those measures. NMFS has completed its effects analysis accordingly. Any deviation from these measures will be beyond the scope of this consultation. Further consultation will also be required to determine what effects any future modifications of the proposed action including PACFISH, the SWIE ACS, and other Forest Plans, may have on listed salmon or steelhead or their designated critical habitats.

1.3. Action Area

'Action area' means all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR 402.02). The MIRR project area includes the 9,304,300 acres of 250 individual IRAs located within the State of Idaho on 11 national forests. Acreages of IRAs by forest are listed in Table 1. These Idaho public lands are managed by the USFS and stretch from the Selkirk Mountains in north Idaho along the Canadian border south to the Wasatch Mountain Range along the Utah border and encompass a wide variety of terrestrial and aquatic habitats. However, for purposes of NMFS' consultation, the action area for anadromous fish includes the entire range of ESA-listed salmon and steelhead (Figure 2) in the State of Idaho, including all streams designated as critical habitat, plus all areas downstream that may be affected by future activities occurring within the roadless areas. The major drainages within the action area include the Salmon River and its tributaries, and the Clearwater River and its tributaries. Excluded are the North Fork Clearwater River upstream from Dworshak Dam; and the Snake River below Hell's Canyon dam and its Idaho tributaries. The Wallowa-Whitman National Forest does not actually contain land within the State of Idaho, but it does manage the Hells Canyon National Recreation Area, a portion of which is within Idaho and is part of the Nez Perce National Forest.

Table 1. Acres of Idaho Roadless Area by National Forest

National Forest	Acres of Roadless Area	Contains Anadromous Waters	National Forest	Acres of Roadless Area	Contains Anadromous Waters
Boise	1,108,900	X	Payette	908,200	X
Caribou	741,700		Salmon-Challis	2,265,300	X
Clearwater	984,400	X	Sawtooth	1,194,900	X
Idaho Panhandle	797,100		Targhee	736,300	
Kootenai	35,100		Wallowa-Whitman	35,400	X
Nez Perce	497,000	X	-	-	-

Snake River Basin steelhead, Snake River spring/summer Chinook salmon, Snake River fall-run Chinook salmon, and Snake River sockeye salmon occur within the action area. The actions are also within designated critical habitat for all four of these ESA-listed salmonid species (Table 2). Pursuant to NMFS ESA responsibilities and authorities, NMFS evaluated the effects of the project on Snake River salmon and steelhead and their designated critical habitat.

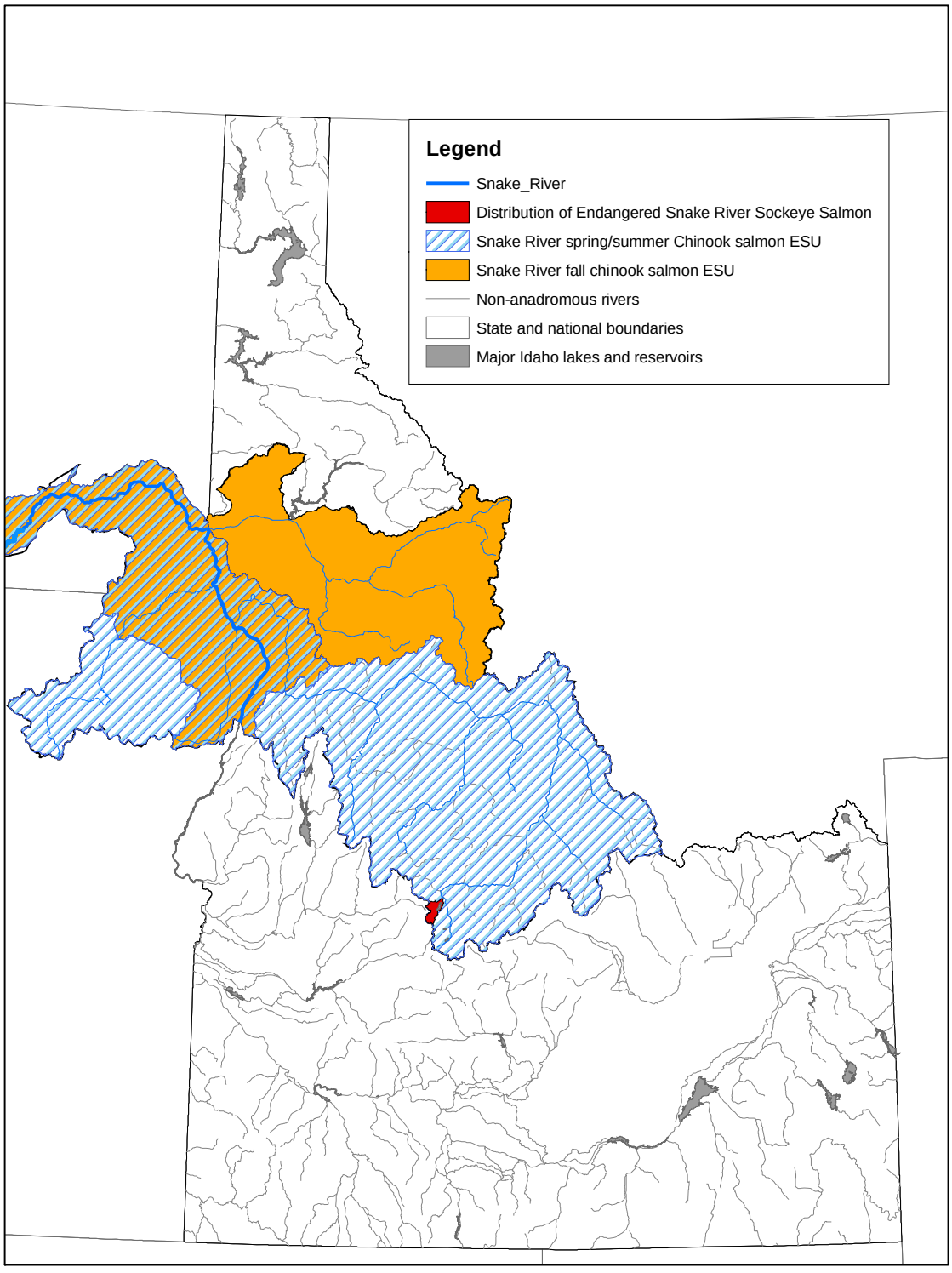


Figure 2. Map of the Snake River salmon and steelhead evolutionarily significant unit (ESU) boundaries drawn at the river basin scale for simplification. The Snake River Basin steelhead distinct population segment (DPS) boundary overlaps exactly with the extent of both Chinook ESUs.

Table 2. Federal Register notices for final rules that list threatened and endangered species, designate critical habitats, or apply protective regulations to listed species considered in this consultation.

Species	Listing Status	Critical Habitat	Protective Regulations
Chinook salmon (*Oncorhynchus tshawytscha*)			
Snake River spring/summer run	T 6/28/05; 70 FR 37160	10/25/99; 64 FR 57399	6/28/05; 70 FR 37160
Snake River fall-run	T 6/28/05; 70 FR 37160	12/28/93; 58 FR 68543	6/28/05; 70 FR 37160
Sockeye salmon (*Oncorhynchus nerka*)			
Snake River	E 6/28/05; 70 FR 37160	12/28/93; 58 FR 68543	ESA Section 9 applies
Steelhead (*Oncorhynchus mykiss*)			
Snake River Basin	T 1/05/06; 71 FR 834	9/02/05; 70 FR 52630	6/28/05; 70 FR 37160

Note: Listing status: 'T' means listed as threatened under the ESA; 'E' means listed as endangered.

2. ENDANGERED SPECIES ACT

The ESA establishes a national program to conserve threatened and endangered species of fish, wildlife, plants, and the habitat on which they depend. Section 7(a) (2) of the ESA requires Federal agencies to consult with USFWS, NMFS, or both, to ensure that their actions are not likely to jeopardize the continued existence of endangered or threatened species or adversely modify or destroy their designated critical habitats. Section 7(b) (4) requires the provision of an incidental take statement that specifies the impact of any incidental taking and includes reasonable and prudent measures (RPMs) to minimize such impacts.

2.1. Biological Opinion

This Opinion presents NMFS' review of the status of each listed species of Pacific salmon and steelhead[1] considered in this consultation, the condition of designated critical habitat, the environmental baseline for the action area, all the effects of the action as proposed, and cumulative effects (50 CFR 402.14(g)). For the jeopardy analysis, NMFS analyzes those combined factors to conclude whether the proposed action is likely to appreciably reduce the likelihood of the survival and recovery of the affected listed species.

The critical habitat analysis determines whether the proposed action will destroy or adversely modify designated critical habitat for listed species by examining any change in the conservation value of the essential features of that critical habitat. This analysis relies on statutory provisions of the ESA, including those in section 3 that define "critical habitat" and "conservation," in

[1] "An 'evolutionarily significant unit' (ESU) of Pacific salmon (Waples 1991) and a 'distinct population segment' (DPS) of steelhead (final steelhead FR notice) are considered to be 'species,' as defined in Section 3 of the ESA."

section 4 that describe the designation process, and in section 7 that sets forth the substantive protections and procedural aspects of consultation. The regulatory definition of "destruction or adverse modification" at 50 CFR 402.02 is not used in this Opinion.

2.1.1. Status of the Species and Critical Habitat

This section defines the biological requirements of each listed species affected by the proposed action, and the status of each designated critical habitat relative to those requirements. Listed species facing a high risk of extinction and critical habitats with degraded conservation value are more vulnerable to the aggregation of effects considered under the environmental baseline, the effects of the proposed action, and cumulative effects.

2.1.1.1. Status of the Species.

NMFS reviews the condition of the listed species affected by the proposed action using criteria that describe a 'viable salmonid population' (VSP) (McElhany *et al*. 2000). Attributes associated with a VSP include abundance, productivity, spatial structure, and genetic diversity that maintain its capacity to adapt to various environmental conditions and allow it sustain itself in the natural environment. These attributes are influenced by survival, behavior, and experiences throughout the entire life cycle, characteristics that are influenced, in turn, by habitat and other environmental conditions.

To be considered viable, with a negligible risk of extinction due to threats from demographic variation, local environmental variation, and genetic diversity changes over the long-term, an ESA-listed species should have the following characteristics. It should contain multiple populations so that a single catastrophic event is less likely to cause the ESA-listed species to become extinct, and so that the ESA-listed species may function as "metapopulation" as necessary to sustain population-level extinction/recolonization processes. Multiple populations within an ESA-listed species also increase the likelihood that a diversity of phenotypic and genotypic characteristics will be maintained, thus allowing natural evolutionary processes to operate and increase the ESA-listed species' long-term viability. Some of the ESA-listed species' populations should be relatively large and productive to further reduce the risk of extinction in response to a single catastrophic event that affects all populations. If an ESA-listed species consists of only one population, that population must be as large and productive ("resilient") as possible. Some populations in each ESA-listed species should be geographically widespread to reduce the risk that spatially-correlated environmental catastrophes will drive the species to extinction. Other populations in the same ESA-listed species should be geographically close to each other to increase connectivity between existing populations and encourage metapopulation function. Populations with diverse life-histories and phenotypes should be maintained in each ESA-listed species to further reduce the risk of correlated environmental catastrophes or changes in environmental conditions that occur too rapidly for an evolutionary response, and to maintain genetic diversity that allows natural evolutionary processes to operate within an ESU/DPS. Finally, evaluations of species status should take into account uncertainty about ESA-listed species-level processes. NMFS' understanding of species-level spatial and

temporal processes is limited such that the historical number and distribution of populations serve as a useful goal in maintaining viability of ESA-listed species that likely were historically self-sustaining.

2.1.1.1.1. Snake River Spring/Summer Chinook Salmon. The estimated historic annual production of Snake River spring and summer Chinook may have been in excess of 1.5 million adult returns per year (Matthews and Waples 1991). Returns to Snake River tributaries had dropped to less than 100,000 adults per year by the late 1960s, and numbers continued to generally decline until the late 1990s (Figure 2). These declines occurred in spite of steadily increasing hatchery production since the late 1970s. Over a 10-year period from 1992 to 2001, natural-origin fish returning to Lower Granite Dam were roughly 42% of the total returns. Peak numbers of adult returns at Lower Granite occurred in 2001 to 2004 (average of 124,344); however, aggregated counts of hatchery and natural-origin fish have averaged 40,660 from 2005 to 2007. There should be approximately 73,000 for 2008, with another 16,000 Chinook jacks (WPC 2008). The trend in natural-origin returns is nearly static since 1962, but year-to-year variation has become uncharacteristically large, in comparison to the previous 30 years. The fluctuations in population size and increased hatchery production mask production trends for natural-origin Chinook, and makes future population size difficult to accurately predict beyond a few years.

ESU Distribution

Spring and summer Chinook salmon runs returning to the major tributaries of the Snake River were classified as an ESU by NMFS (Matthews and Waples 1991). This ESU includes production areas that are characterized by spring-timed returns, summer-timed returns, and combinations from the two adult timing patterns. Historically, the Salmon River system may have supported more than 40% of the total return of spring and summer Chinook to the Columbia system (e.g., Fulton 1968).

The Snake River spring/summer Chinook ESU includes current runs to the Tucannon River, the Grande Ronde River system, the Imnaha River and the Salmon River (Matthews and Waples 1991). Some or all of the fish returning to several of the hatchery programs are also listed, including those returning to the Tucannon River, Imnaha River, and Grande Ronde River hatcheries, and to the Sawtooth, Pahsimeroi, and McCall hatcheries on the Salmon River. The Salmon River system contains a range of habitats used by spring/summer Chinook. The South Fork and Middle Fork Salmon Rivers currently support the bulk of natural production in the drainage. Two large tributaries entering above the confluence of the Middle Fork, the Lemhi and Pahsimeroi Rivers, both drain broad alluvial valleys and are believed to have supported substantial, relatively productive anadromous fish runs. Returns into the upper Salmon River tributaries have reestablished following the opening of passage around Sunbeam Dam on the mainstem Salmon River downstream of Stanley, Idaho. The dam was impassable to anadromous fish from 1910 until the 1930s.

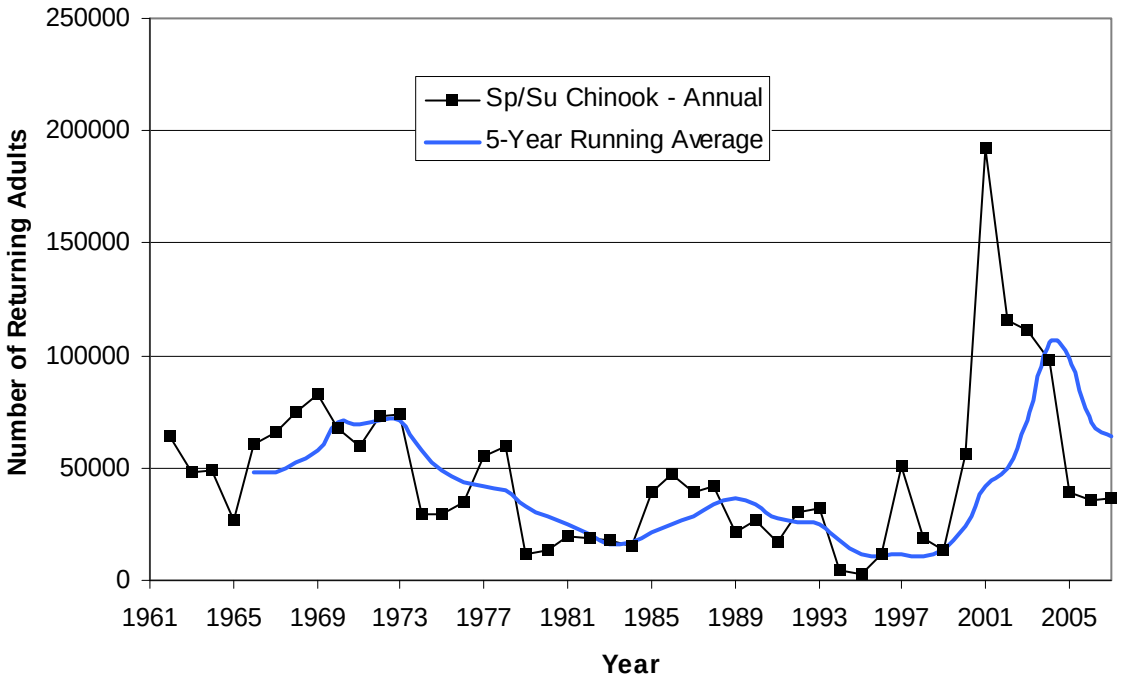
Current runs returning to the Clearwater River drainages were excluded from the Snake River spring/summer Chinook ESU. Lewiston Dam, located in the lower mainstem of the Clearwater

River, completely blocked passage of Chinook salmon in most years during 1927 through the early 1940s (Matthews and Waples 1991). Spring and summer Chinook runs into the Clearwater system were reintroduced via hatchery outplants beginning in the late 1940s. As a result, Matthews and Waples (1991) concluded that "...the massive outplantings of non-indigenous stocks presumably substantially altered, if not eliminated, the original gene pool."

ESU Viability Indicators

In the 2005 status review update, NMFS modified previous approaches to ESU risk assessment to incorporate VSP criteria (McElhany *et al*. 2000): abundance, growth rate/productivity, spatial structure, and genetic diversity. The Snake River spring/summer Chinook salmon ESU does not meet the ESU-level viability criteria (non-negligible risk of extinction over 100-year time period) based on current abundance and productivity information. The current condition of Snake River spring/summer Chinook (described in Good *et al*. 2005; and TRT 2003) is summarized below:

Figure 3. Number of adult spring/summer Chinook salmon returning to Ice Harbor Dam 1960 to 2007 (FPC 2008). Data include both wild and hatchery fish.



Abundance:

- Year-to-year abundance has high variability, which is most pronounced in natural-origin fish.

- Average abundance in the most recent decade is more abundant than previous decade, but there is no obvious long-term trend (Figure 2).

- Hatchery fish are faring better than wild fish, which comprise roughly 40% of the total returns in the past decade.

- Most populations are far below their respective interim recovery targets.

Productivity (population growth rate):

- Long term trends < 1; indicating the population size is shrinking (values greater than one indicate a growing population).

- Recent trends, buoyed by last 5 years, are approaching 1.

Spatial Structure:

- Many spawning aggregates have been extirpated, which has increased the spatial separation of some populations.

- Populations are widely distributed in a diversity of habitats, although roughly one-half of the historic habitat is inaccessible.

Genetic Diversity:

- No evidence of wide-scale genetic introgression by hatchery populations.

- High variability in life history traits indicates sufficient genetic variability within the DPS to maintain distinct subpopulations adapted to local environments.

2.1.1.1.2. Snake River Fall Chinook Salmon.

ESU Distribution

Snake River fall Chinook salmon spawning and rearing occurs only in larger, mainstem rivers, such as the Salmon, Snake, and Clearwater Rivers. Historically, the primary fall-run Chinook salmon spawning areas were located on the upper mainstem Snake River (Connor *et al*. 2005). A series of Snake River mainstem dams blocks access to the upper Snake River, which has significantly reduced spawning and rearing habitat for Snake River fall-run Chinook salmon. Currently, natural spawning is limited to Snake River from the upper end of Lower Granite Reservoir to Hells Canyon Dam; the lower reaches of the Imnaha, Grande Ronde, Clearwater, Salmon, and Tucannon Rivers; and small areas in the tailraces of the lower Snake River hydroelectric dams (Good *et al*. 2005). The vast majority of spawning today occurs upstream of Lower Granite Dam, with the largest concentration of spawning sites in the Clearwater River, downstream from Lolo Creek, and in the Salmon River upstream to the confluence with the Little Salmon River.

As a consequence of losing access to historic spawning and rearing sites in the Upper Snake River, fall Chinook salmon now reside in waters that are generally cooler than the majority of historic spawning areas. In addition, alteration of the Lower Snake River by hydroelectric dams has created a series of low-velocity pools in the Snake River that did not exist historically. Both of these habitat alterations have created obstacles to fall Chinook survival. Prior to alteration of the Snake River basin by dams, fall Chinook salmon exhibited a largely ocean-type life history, where they migrated downstream and reared in the mainstem Snake River during their first year. Today, fall Chinook salmon in the Snake River Basin exhibit one of two life histories that Connor *et al*. (2005) have called ocean-type and reservoir-type. The reservoir-type life history is one where juveniles overwinter in the pools created by the dams, prior to migrating out of the Snake River. The reservoir-type life history is likely a response to early development in cooler temperatures, which prevents juveniles from reaching a suitable size to migrate out of the Snake River.

ESU Viability Indicators

The Snake River fall Chinook salmon ESU does not meet the ESU-level viability criteria (the non-negligible risk of extinction over 100-year time period), based on current abundance and productivity information. This ESU has been reduced to a single remnant population with a narrow range of available habitat. The current condition of Snake River fall Chinook is described in Good *et al.* (2005) and TRT (2003) as summarized below:

Abundance:

- Overall adult abundance is relatively low, but has been increasing. The 10-year average (1998 to 2007) over Lower Granite Dam is 8,636, but the latest 5-year average (2003 to 2007) is 11,220.

- The 1997 to 2001 geometric mean natural-origin count over Lower Granite Dam is approximately 35% of the proposed delisting abundance criteria of 2,500 natural spawners averaged over 8 years.

- Recent abundance is approaching the delisting criteria.

- Hatchery fish are faring better than wild fish.

Productivity (population growth rate):

- Long-term trend in total returns is > 1, indicating the population size is growing (values greater than one indicate a growing population).

- In the past 2 years, total abundance has dropped, but still remains at levels higher than previous decades.

- Productivity is likely sustained largely by a system of small artificial rearing facilities in the Lower Snake River Basin.

- The growth trend for natural-origin fish is close to one, and could either be higher or lower, depending on the number of hatchery fish that spawn naturally.

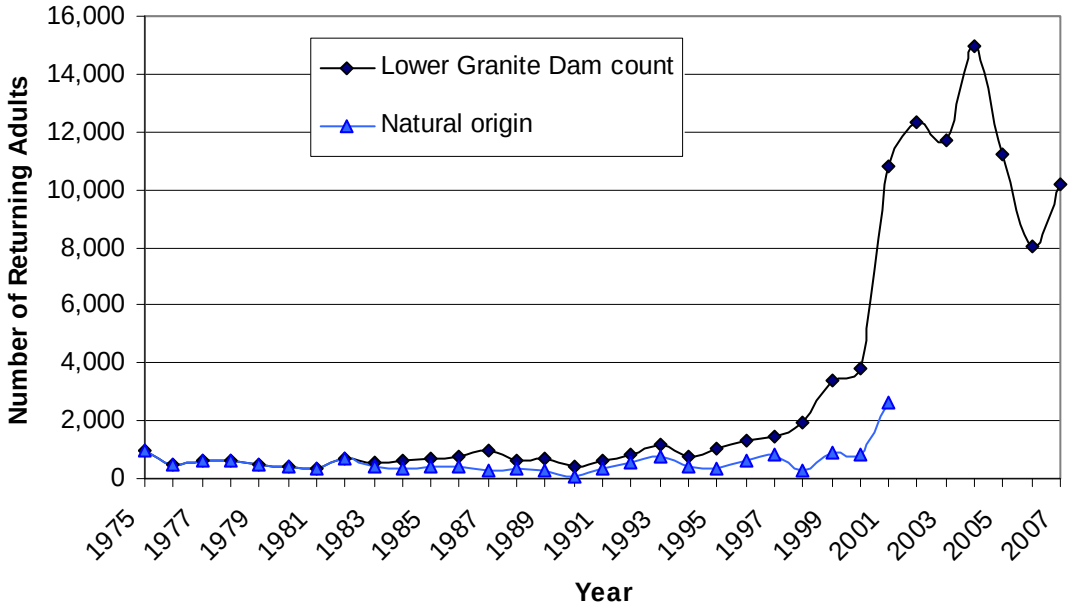
Spatial Structure:

- The historic spatial structure has been reduced to one single remnant population.
- The ESU occupies a relatively small amount of marginal habitat, with the vast majority of historic habit inaccessible.

Genetic Diversity:

- Diversity is likely reduced from historic levels.
- Hatcheries affect ESU genetics due to three major components: (1) Natural origin fish (which may be progeny of hatchery fish), (2) returns of Snake River fish from the Lyons Ferry Hatchery program, and (3) strays from hatchery programs outside the Snake River.
- The Snake River fall Chinook salmon remains genetically distinct from similar fish in other basins.
- Phenotypic characteristics have shifted in apparent response to environmental changes from hydroelectric dams (Connor *et al.* 2005).

Figure 4. Number of adult fall Chinook salmon returning to Lower Granite Dam 1975 to 2007 (FPC 2008 and Good *et al*. 2005). The dam counts include both wild and hatchery fish.



2.1.1.1.3. Snake River Steelhead Distinct Population Segment (DPS). Steelhead are anadromous fish which spawn in freshwater streams and mature in the ocean. Starting from the adult life stage, Snake River Basin steelhead migrate from the Pacific Ocean into the Columbia River and reach the Snake River and major tributaries from late summer through fall. During spawning migration, adult salmon and steelhead require clean water, cool temperatures, access to thermal refugia, dissolved oxygen levels near 100% saturation, low turbidity, adequate flows and depths to allow passage over barriers to reach spawning sites, and sufficient holding and resting sites.

Snake River Basin steelhead hold their positions in larger rivers for several months, but in late winter or early spring, adult steelhead begin to disperse from holding areas and move upstream. In the Snake River, the majority of adults disperse into tributary spawning areas from March through May, with earlier dispersal among steelhead that spawn at lower elevations, and later dispersal at higher elevations. The timing of spawning and migration in Pacific salmon and steelhead is highly variable and appears to be influenced more by genetic factors shaped by average long-term conditions faced by individual stocks, rather than proximal environmental conditions such as temperature and stream flow (Quinn 2005). The degree of dispersal within a given watershed appears to be influenced by the amount of stream flow, with low rates of dispersal among headwater streams at low flows and greater dispersal at higher flows. Spawning begins shortly after fish reach spawning areas.

After reaching spawning grounds, steelhead typically select spawning gravels at the downstream end of pools, in gravels ranging in size from 0.5 to 4.5 inches in diameter (Pauley *et al*. 1986). These spawning areas must meet species-specific requirements of flow, water quality, substrate size, and groundwater upwelling. Embryo survival and fry emergence depend on substrate conditions (e.g. gravel size, porosity, permeability, and oxygen concentrations), substrate stability during high flows, and water temperatures of 55.4 ˚F or less. Juveniles emerge from redds in 4 to 8 weeks, depending on temperature. After emergence, fry have poor swimming ability and they are subject to high rates of mortality at this stage. Steelhead fry initially drift from the redds into shallow, low velocity areas in side channels and along channel margins to escape high velocities and predators (Everest and Chapman 1972). They progressively move toward deeper water as they grow in size and swimming abilities improve (Bjornn and Rieser 1991). Migration of juvenile to rearing areas requires that access to these habitats is not impeded by physical, chemical, and thermal conditions. As juveniles develop in fresh water, they require environments with cold water, abundance of pools and cover, adequate stream flows, and a source of invertebrate prey. Highest rates of mortality typically occur during the fry stage and during the first winter.

Juveniles typically reside in fresh water for 2 to 3 years, or longer, depending on temperature and growth rate (Mullan *et al*. 1992). There appears to be a size threshold that determines the age at which steelhead smolt, with faster-growing fish smolting at an earlier age. Smolts migrate downstream during spring runoff, which occurs from March to mid-June in the Snake River Basin, depending on elevation. Additional details considered in this consultation on steelhead life history and habitat requirements are found in Busby *et al*. (1996), Swift (1976), and Pauley *et al.* (1986).

The Interior Columbia Basin Technical Recovery Team (ICBTRT 2003) identified six major population groups (MPGs) in the Snake River Basin steelhead DPS: (1) the Grande Ronde River system; (2) the Imnaha River drainage; (3) the Clearwater River drainage; (4) the Salmon River; (5) Hells Canyon; and (6) the Lower Snake. The Snake River historically supported more than 55% of total natural-origin production of steelhead in the Columbia River Basin. It now has approximately 63% of the basin's natural production potential. The Snake River steelhead DPS is distributed throughout the Snake River drainage system, including tributaries in southwest Washington, eastern Oregon and north/central Idaho (Good *et al*. 2005). Snake River Basin steelhead migrate a substantial distance from the ocean (over 900 miles) and use high elevation tributaries (up to 6,562 feet above sea level) for spawning and juvenile rearing. Snake River steelhead occupy habitat that is considerably warmer and drier (on an annual basis) than other steelhead DPSs. Snake River Basin steelhead are generally classified as summer run, based on their adult run timing pattern. Summer steelhead enter the Columbia River from late June to October. After holding over the winter, summer steelhead spawn during the following spring (March to May). Managers classify up-river summer steelhead runs into two groups based primarily on ocean age and adult size upon return to the Columbia River. A-run steelhead are predominately age-1-ocean fish while B-run steelhead are larger, predominated by age-2-ocean fish.

A-run populations are found in the tributaries to the lower Clearwater River, the upper Salmon River and its tributaries, the lower Salmon River and its tributaries, the Grande Ronde River, Imnaha River, and possibly the Snake River's mainstem tributaries below Hells Canyon Dam. B-run steelhead occupy four major subbasins, including two on the Clearwater River (Lochsa and Selway) and two on the Salmon River (Middle Fork and South Fork Salmon), which are areas that are for the most part not occupied by A-run steelhead. Some natural B-run steelhead are also produced in parts of the mainstem Clearwater and its major tributaries.

The draft status update report (BRT 2003), population assessment (McClure *et al.* 2003), updated status review (Good *et al.* 2005), and listing notice in the January 5, 2006, Federal Register (71 FR 873) provide a variety of assessments on the biological status of Snake River Basin steelhead (up through the spring of 2005). These documents show a general range-wide decline in wild steelhead abundance over the past century, with present abundance greatly depressed compared to estimates of historic numbers. Trends in hatchery-origin fish are generally increasing in abundance, but combined numbers of hatchery and wild fish still remain far below historic numbers. Accurate counts and stock-specific information on abundance and distribution of wild steelhead are unavailable for most of the Snake River Basin steelhead, and available data are limited to aggregate counts of wild and hatchery fish counted at different hydropower dams since the 1970s, with hatchery fish counted separately since 1995. In addition to declines in abundance, the natural range of Snake River Basin steelhead has been reduced by nearly one-half due to impassable dams and other passage barriers of the past century. None of the independent populations in the Salmon and Clearwater MPGs currently meet population viability criteria according to the draft recovery plan.

Snake River Basin steelhead have experienced a dramatic and long-term decline in population size since the 1870s. By 1962, Snake River Basin steelhead had already declined considerably from estimates of population size prior to European influence. Direct estimates of steelhead are

not available prior to construction of the Ice Harbor Dam in 1962. Since the construction of dams in the Snake River, counts of natural- and hatchery-origin steelhead returning to the Snake River Basin declined sharply in the early 1970s, increased modestly from the mid-1970s through the 1980s, declined again during much of the 1990s, and increased sharply in 2001 (NPCC 2003). Since 2001, counts of natural-origin steelhead have exhibited mixed trends, with present numbers generally averaging 25% of the fish counted in 1962, while aggregate counts of all steelhead are slightly higher than the numbers counted in 1962.

With one exception (the Tucannon River production area), the tributary habitat used by the Snake River steelhead DPS is above Lower Granite Dam. Annual return estimates for Snake River steelhead are limited to counts of the aggregate return over Lower Granite Dam. The 10-year average (1998-2007) of all adult steelhead passing Lower Granite Dam is 153,481 adults, with a range from 72,017 (1998) to 262,568 (2001). The 10-year average for natural-origin steelhead for the same period is 32,730 adults, with a range from 9,559 (1998) to 57,291 (2002). Parr densities in natural production areas, which are another indicator of population status, have been substantially below estimated capacity for several decades (Hall-Griswold and Petrosky 1996).

Dominant factors associated with trends in wild steelhead abundance include negative effects of hydroelectric dams, fishing, competition with hatchery fish, and conversion of watersheds from natural ecosystems to urban, agricultural, or industrial landscapes. Additional factors with sometimes negative or positive effects on steelhead abundance include variation in ocean circulation and North Pacific weather patterns.

DPS Viability Indicators

In the 2005 status review update, NMFS modified previous approaches to DPS risk assessment to incorporate VSP criteria (McElhany *et al*. 2000): abundance, growth rate/productivity, spatial structure, and genetic diversity. The Snake River Basin steelhead DPS does not meet the DPS-level viability criteria (non-negligible risk of extinction over 100-year time period) based on current abundance and productivity information. The current condition (Good *et al*. 2005) of Snake River Basin steelhead is summarized below:

Abundance:

- Uncertainty for wild populations given paucity of data for adult spawners in individual populations.

- Dam counts are currently 28% of interim recovery target for the Snake River Basin (52,000 natural spawners) (Figure 5).

- Joseph Creek (outside analysis area) exceeds interim recovery target.

Productivity:

- Mixed long- and short-term trends in abundance and productivity.

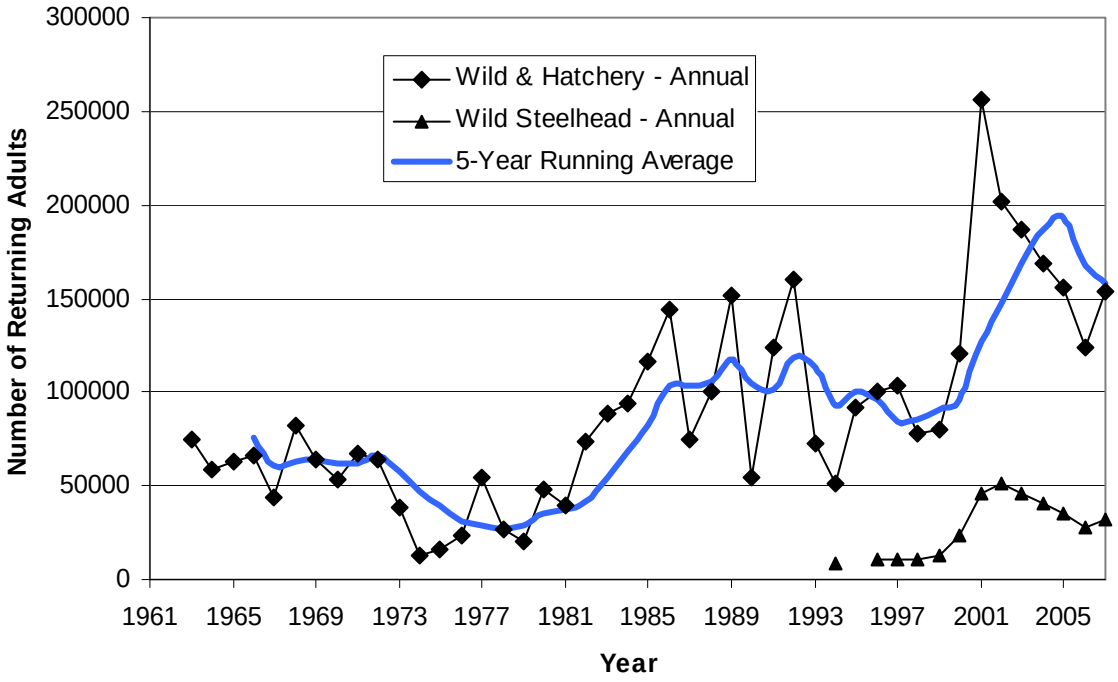
Spatial Structure:

- Well distributed with populations remaining in six major geographic areas.
- The core area for B-run steelhead, once located in the North Fork of the Clearwater River, is now inaccessible to steelhead due to the presence of Dworshak Dam.

Genetic Diversity:

- Displacement of natural fish by hatchery fish (declining proportion of natural-origin spawners).
- Homogenization of hatchery stocks within basins, and some stocks exhibiting high stray rates.

Figure 5. Number of adult steelhead returning to Ice Harbor Dam (FPC 2008).



2.1.1.1.4. Snake River Sockeye Salmon The Snake River sockeye salmon (*O. nerka*) is listed as endangered under the ESA, and is the most imperiled species in the northwest region and the Columbia River Basin. Sockeye salmon normally pass Bonneville Dam from June 1 to July 31, and Lower Granite Dam from June 25 to August 30, on their 900 mile migration to their spawning grounds of the upper Salmon River near Stanley, Idaho.

Snake River sockeye salmon have declined dramatically as a result of fishery management policy, overharvest, hydropower-caused mortality, and irrigation water withdrawals. The ESU is functionally extinct, but a remnant population is maintained through a captive breeding program. Historically, Snake River sockeye salmon spawned in five lakes (Alturas, Stanley, Redfish, Yellow Belly, and Pettit Lakes) near the headwaters of the Salmon River, Big Payette Lake in Idaho, and Wallowa Lake in Oregon (Waples *et al.* 1991; Good *et al.* 2005). Payette Lakes and Wallowa Lake are blocked to sockeye by hydropower or irrigation dams (Chapman *et al*. 1990). Sockeye access to the Payette basin was eliminated in 1923 with the construction of Black Canyon Dam. The Sunbeam Dam on the Salmon River blocked sockeye from Redfish Lake and all other Lakes in the upper Salmon River from 1910 to 1934. After the dam was breached, the run was reestablished by anadromous kokanee by the late 1940s. Irrigation diversions in Alturas Lake Creek eliminated return of sockeye to Alturas Lake. In 1997, the Idaho Department of Fish and Game (IDFG) removed the irrigation diversion to help with reintroduction efforts to Alturas Lake.

Adult sockeye salmon counts at Redfish Lake over a 10-year period (1955 to 1965) ranged from 4,361 in 1955 to 11 in 1961, with an average return of 749 (Bjornn *et al.* 1968; Good *et al.* 2005). Wild spawning Snake River sockeye salmon in Idaho ranged from zero to eight returns from 1990 through 1996, with less than two returns in four of these years. However, Snake River sockeye salmon redds were observed in Redfish Lake in 1988 and 1989 (Hall-Griswold 1990). In 2000, 257 adults returned. In 2001, 55 adult sockeye were counted at Lower Granite Dam (Fish Passage Center 2008), with 26 fish returning to trapping sites in the Stanley Basin at Redfish Lake and the Sawtooth Hatchery. In 2002, 52 adult sockeye were counted at Lower Granite Dam (Fish Passage Center 2008), with 23 fish returning to trapping sites in the Upper Stanley Basin. Two adults returned to Redfish Lake to spawn in 2003, 22 returned in 2004, six returned in 2005, three in 2006, and four in 2007 (IDFG 2008).

Recent annual numbers of sockeye salmon crossing Lower Granite Dam are 17 in 2006, 53 in 2007, and a dramatic increase to 890 in 2008 (FPC 2008). It is yet unknown how many of the 2008 run will actually return to the Stanley Basin, but as of September 5, a total of 555 sockeye have returned to the Sawtooth Fish Hatchery and the Redfish Lake Creek trap. The surprising number of returning sockeye is likely due to good smolt production 4 years ago, good out-migration conditions, and good ocean conditions. The 2008 adult returns resulted primarily from smolts that migrated to the Pacific Ocean in 2006, with about 180,765 natural origin and hatchery-produced smolts leaving the Sawtooth Valley in route to the ocean (IDFG 2008), and there was a court-ordered spill in the Federal Columbia River Power System (FCRPS).

No natural origin anadromous adults have returned since 1998 and the abundance of residual sockeye salmon in Redfish Lake is unknown. The ESU is entirely supported by adults produced through the captive propagation program. Current smolt-to-adult survival of sockeye originating from the Stanley Basin lakes is rarely greater than 0.3% (Hebdon *et al.* 2004). The current average productivity likely is substantially less than the productivity required for the population to be at low (1% to 5%) extinction risk at the minimum abundance threshold. The Snake River sockeye salmon ESU does not meet the ESU-level viability criteria (non-negligible risk of extinction over 100-year time period) based on current abundance and productivity information.

Sockeye survival from smolt to adult has declined by an estimated 74% to 81% since the early 1960s, which is correlated with hydropower development. NMFS has not estimated the risk of absolute extinction for the Snake River sockeye salmon because this ESU is currently at extremely low abundances and maintained through the captive broodstock program (McClure *et al*. 2003).

2.1.1.2. Status of Critical Habitat

NMFS reviews the status of designated critical habitat affected by the proposed action by examining the condition and recent trends of primary constituent elements (PCEs) throughout the designated area (also referred to as 'essential elements' in the critical habitat designations for Snake River salmon).[2] The PCEs consist of the physical and biological features identified as essential to the conservation of the listed species in the documents that designate critical habitat (Table 3).

Designated critical habitat for listed salmonids is described in the Federal Register notices listed previously in Table 2. In brief, designated critical habitats for listed Snake River salmon and steelhead include most accessible streams used by anadromous fish in the mainstem Lower Snake River, and the Salmon, Clearwater, Imnaha, Tucannon, and Grande Ronde River Basins. The action area encompasses all designated critical habitat areas for ESA-listed anadromous fish in the State of Idaho, plus the downstream areas that may be affected by activities occurring from the adoption of the MIRR.

In many parts of the Columbia River Basin, including the Snake River Basin, land management and development activities have: (1) Reduced connectivity (i.e., the flow of energy, organisms, and materials) between streams, riparian areas, floodplains, and uplands; (2) elevated fine sediment yields, degrading spawning and rearing habitat; (3) reduced large woody material that traps sediment, stabilizes streambanks, and helps form pools; (4) reduced vegetative canopy that minimizes solar heating of streams; (5) caused streams to become straighter, wider, and shallower, thereby reducing rearing habitat and increasing water temperature fluctuations; (6) altered peak flow volume and timing, leading to channel changes and potentially altering fish migration behavior; and (7) altered floodplain function, water tables and base flows (Henjum *et al.* 1994; McIntosh *et al.* 1994; Rhodes *et al.* 1994; Wissmar *et al*. 1994; NRC 1996; Spence *et al*. 1996; Lee *et al.* 1997; and Ecovista 2004).

Freshwater critical habitats for listed Snake River Chinook salmon and steelhead provide an extensive network of migration corridors, and spawning and rearing areas that support at least one of the PCEs. The quality of the PCEs varies throughout the designated area, from streams that marginally support one or more elements, to streams that fully support all three freshwater elements (spawning, rearing, and migration) with minor to moderate impairments.

More than half of the designated critical habitats for Snake River spring/summer Chinook salmon and steelhead occur on USFS or BLM lands that are largely intact and are predominately

[2] The term 'primary constituent element' or the acronym 'PCE' are used in this Opinion to refer to both PCEs and essential elements.

forest and range lands with streams that are in fair to excellent condition. Where PCEs are impaired on Federal lands, the primary causes have been timber harvests in riparian areas and landslide-prone slopes; road systems developed for timber harvest and other management activities; over-grazed riparian areas; and isolated instances of intensive alteration of streams and valley bottoms by mining. The critical habitat designated on non-Federal lands tends to be located in large valleys where the majority of people in the region live and work; consequently, many of the PCEs on non-Federal lands are impaired by effects of urban or agricultural activities and road networks.

Critical habit for Snake River fall Chinook salmon is designated in the lower mainstems of the Snake, Clearwater, and Salmon Rivers, and these areas are where the vast majority of spawning and rearing occurs. Critical habitat also includes the mainstems of the Snake and Columbia Rivers, which are used as a migration corridor. Much of the critical habitat designated for fall Chinook salmon in the State of Idaho has water temperatures that are severely altered by releases of cold water from Dworshak and Hells Canyon Reservoirs in the summer. Additionally, the pools created by the Lower Snake River dams have reduced river currents and the abundance of shallow stream margins that are important habitat features for juvenile rearing and outward migration.

Critical habitat for Snake River sockeye salmon consists of the spawning and rearing areas in several lakes in the Upper Salmon River drainage, and the system of water bodies used as a migration corridor between the Stanley Basin and the ocean. The spawning and rearing areas in the lakes used by sockeye are in fair to good condition; however, passage to and from the lakes is impaired by many man-made obstacles.

At the time each habitat area was designated as critical habitat, that area contained one or more PCEs within the acceptable range of values required to support the biological processes for which the species use that habitat. The PCEs within the action area that will be affected by this project include sites for freshwater spawning, rearing, migration, and foraging (Table 3). The habitat conditions of the action area are further discussed in the Environmental Baseline.

Table 3. Types of sites and essential physical and biological features designated as PCEs, and the species life stage each PCE supports.

Site	Essential Physical and Biological Features	ESA-listed Species Life Stage
Snake River Steelhead[a]		
Freshwater spawning	Water quality, water quantity, and substrate	Spawning, incubation, and larval development
Freshwater rearing	Water quantity & floodplain connectivity to form and maintain physical habitat conditions	Juvenile growth and mobility
	Water quality, and forage (aquatic invertebrate and fish species that support growth and maturation).	Juvenile development
	Natural cover - shade, large wood, log jams, beaver dams, aquatic vegetation, large rocks and boulders, side channels, and undercut banks.	Juvenile mobility and survival
Freshwater migration	Free of artificial obstructions, water quality and quantity, and natural cover	Juvenile and adult mobility and survival
Snake River Spring/Summer and fall Chinook Salmon		
Spawning & Juvenile Rearing	Spawning gravel, water quality and quantity, cover/shelter, food, riparian vegetation, and space	Juvenile and adult.
Migration	Substrate, water quality and quantity, water temperature, water velocity, cover/shelter, food (for juveniles), riparian vegetation, space, safe passage	Juvenile and adult.
Snake River Sockeye Salmon		
Spawning & Juvenile Rearing	Spawning gravel, water quality and quantity, water temperature, food, riparian vegetation, and access	Juvenile and adult.
Migration	Substrate, water quality and quantity, water temperature, water velocity, cover/shelter, food (for juveniles), riparian vegetation, space, safe passage	Juvenile and adult.

a Additional PCEs pertaining to estuarine, nearshore, and offshore marine areas have also been described for Snake River steelhead. These PCEs will not be affected by the proposed action and have therefore not been described in this Opinion.

2.1.2. Environmental Baseline

'Environmental baseline' includes the past and present impacts of all Federal, state, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of state or private actions which are contemporaneous with the consultation in process (50 CFR 402.02). An environmental baseline that does not meet the

biological requirements of a listed species may increase the likelihood that adverse effects of the proposed action will result in jeopardy to a listed species or in destruction or adverse modification of a designated critical habitat.

NMFS describes the environmental baseline in terms of the biological requirements for habitat features and processes necessary to support all life stages of each listed species within the action area. Each listed species considered in this Opinion resides in or migrates through the action area. Thus, for this action area, the biological requirements for salmon and steelhead are the habitat characteristics that support successful completion of spawning, rearing, and freshwater migration.

Each ESA-listed species considered in this Opinion (Table 2) resides in or migrates through the action area. Thus, for this action area, the biological requirements for salmon and steelhead are the habitat characteristics that would support successful spawning, rearing and migration of the ESA-listed species considered in this consultation, and the PCEs for freshwater spawning sites, rearing sites and migration corridors associated with those species.

The biological requirements of salmon and steelhead in the action area vary depending on the life history stage present and the natural range of variation present within that system (Groot and Margolis 1991, NRC 1996, Spence *et al*. 1996). Generally, during spawning migrations, adult salmon and steelhead require clean water with cool temperatures and access to thermal refugia, dissolved oxygen near 100% saturation, low turbidity, adequate flows and depths to allow passage over barriers to reach spawning sites, and sufficient holding and resting sites. Anadromous fish select spawning areas based on species-specific requirements of flow, water quality, substrate size, and groundwater upwelling. Embryo survival and fry emergence depend on substrate conditions (*e.g.*, gravel size, porosity, permeability, and oxygen concentrations), substrate stability during high flows, and low water temperatures. Habitat requirements for juvenile rearing include seasonally suitable microhabitats for holding, feeding, and resting. Migration of juveniles to rearing areas, whether the ocean, lakes, or other stream reaches, requires access to these habitats. Physical, chemical, and thermal conditions may all impede movements of adult or juvenile fish.

In general, the environment for ESA-listed species in the Columbia River Basin has been dramatically affected by the development and operation of the FCRPS. Storage dams have eliminated stretches of mainstem spawning and rearing habitat, and have altered the natural flow regime of the Snake and Columbia Rivers, decreasing spring and summer flows, increasing fall and winter flow, and altering natural thermal patterns. The FCRPS kills or injures a large portion of the smolts passing through the system (NMFS 2004). The reservoirs slow the water velocity and increase temperatures, thus delaying smolt migration timing and increasing predation in the migratory corridor (NMFS 2004, NRC 1996). Formerly complex mainstem habitats have been reduced to single channels (predominately), with reduced floodplains and off-channel habitats eliminated or disconnected from the main channel (Sedell and Froggatt 2000; ISG 2000; and Coutant 1999). Loss of floodplain access alters the hydrology by preventing energy dissipation of high flows and reduces organic matter input from riparian interaction affecting primary productivity. The amount of large woody debris in these rivers has declined, reducing habitat complexity and altering the rivers' food webs (Maser and Sedell 1994).

Other anthropogenic activities that have degraded aquatic habitats or affected native fish populations in the Snake River Basin include stream channelization, elimination of wetlands, construction of flood control dams and levees, construction of roads (many with impassable culverts), timber harvest, splash dams, mines, water withdrawals, unscreened water diversions, agriculture, livestock grazing, urbanization, outdoor recreation, fire exclusion/suppression, artificial fish propagation, fish harvest, and introduction of non-native species (Henjum *et al*. 1994; Rhodes *et al*. 1994; NRC 1996, Spence *et al*. 1996, Lee *et al*. 1997, NMFS 2004). In many watersheds, land management and development activities have: (1) Reduced connectivity for the flow of energy, organisms, and materials between streams, riparian areas, floodplains, and uplands; (2) elevated fine sediment yields which can degrade spawning and rearing habitat; (3) reduced large woody material that traps sediment, stabilizes streambanks, and helps form pools; (4) reduced vegetative canopy that minimizes solar heating of streams; (5) caused streams to become straighter, wider, and shallower, thereby reducing rearing habitat and increasing water temperature fluctuations; (6) altered peak flow volume and timing, leading to channel changes and potentially altering fish migration behavior; and (7) altered floodplain function, water tables and base flows (Henjum *et al*. 1994; McIntosh *et al*. 1994; Rhodes *et al*. 1994; Wissmar *et al*. 1994; NRC 1996; Spence *et al*. 1996; and Lee *et al*. 1997).

The action area covers 18 subbasins (4th field Hydrologic Unit Code [HUCs]), encompassing all areas potentially affected directly or indirectly by this programmatic consultation. Because of the potential for downstream effects and cumulative effects within watersheds, the action area generally encompasses the entire subbasins where listed species and designated critical habitat occur. The area is geographically divided up into three subbasins, the Snake River (portions of HUCs 17060101 and 17060103), Salmon River (HUCs 17060201-17060210), and the Clearwater River (HUCs 17060301-17060306).

The Snake River is the largest basin (108,000 mi$^{2)}$ in the Columbia River drainage, but the Hells Canyon complex dams (Browlee, Oxbow, and Hells Canyon) at river mile 247 blocks anadromous fish passage to the upper reaches. Major Idaho tributaries to the lower Snake Basin include Sheep Creek, Granite Creek, the Salmon River, and the Clearwater River. The Imnaha River enters the Snake River within Oregon, and the Grande Ronde River enters the Snake River further north in Washington.

The Salmon River is approximately 425 miles long, is a tributary to the Snake River at river mile 188.2, and drains approximately 14,000 mi^2. It has the most stream miles of habitat available to anadromous fish in the action area. Major tributaries include the Little Salmon River, South Fork Salmon River, Middle Fork Salmon River, Panther Creek, North Fork Salmon River, Lemhi River, Pahsimeroi River, and East Fork Salmon River; but a number of smaller tributaries (e.g. White Bird, Slate, John Day, Bargamin, Sabe, etc.) contain varying amounts of anadromous fish habitat as well (IDFG 1990).

The Clearwater River is a tributary to the Snake River at Lewiston, Idaho, and drains approximately 9,645 mi^2. There are four major tributaries that drain into the mainstem Clearwater River: the Lochsa, Selway, South Fork Clearwater, and North Fork Clearwater rivers, but a number of smaller tributaries (e.g. Potlatch, Lapwai, Pete King, White Sand, Brushy

Fork, Mill, Johns, Meadow, Crooked, American, Red, etc.) contain varying amounts of anadromous fish habitat as well. Dworshak Dam, located 2 miles above the mouth of the North Fork Clearwater River, is the only major water regulating facility in the basin. Dworshak Dam was constructed in 1972 and eliminated access to one of the most productive systems for anadromous fish in the basin (Ecovista 2004).

The Snake, Salmon, and Clearwater basins are somewhat unique, in that large sections of riparian and floodplain habitats have retained their composition, structure, and function due to wilderness designations or other protective management. The State of Idaho has all or portions of five wilderness areas, including the Frank Church River of No Return (largest wilderness area in the contiguous United States), Hells Canyon, Sawtooth, Gospel-Hump, and Selway-Bitterroot. Specific management guidelines for wilderness areas generally prohibit motorized activities and allow natural processes to function in an undisturbed manner. In addition to designated wilderness areas, Idaho also has the Hells Canyon National Recreation Area and the Sawtooth National Recreation Area, which have restrictions on their land management activities.

Priority Watersheds

Priority watersheds, also known as key watersheds, are areas which provide for high quality habitat and stable populations of listed fish species. Priority watersheds were designated as part of the strategies for managing anadromous and inland native fish in the Columbia Basin. Priority watersheds are a cornerstone of most species conservation strategies (Lee *et al*. 1997). Concern for the continued viability of salmonids on Federally managed forest lands has led to establishment of the concept of "priority watersheds" in which high priority is given to protecting stream habitat (Reeves and Sedell 1992; USDA and USDI 1993). The goal of these watersheds is to maintain the best habitats and fish populations. Generally, watersheds are chosen that have the highest potential for rehabilitation. This assessment of IRAs and roadless area management alternatives includes Chinook, steelhead and bull trout priority watersheds.

Of the IRAs, 57% contain priority watersheds identified for conservation of threatened and endangered fish species, including steelhead, spring-summer Chinook salmon, and bull trout. In Idaho, no priority watersheds are designated for fall-run Chinook. More than 40% of the acreage in designated priority watersheds for these aquatic species is located in IRAs.

Several of the listed fish priority watersheds contribute to species richness by providing habitat for several of the species. Of the IRAs that contain priority watersheds, 15 provide priority watershed areas for all three species (steelhead trout, Chinook salmon, and bull trout). About 50 IRAs are priority watersheds for two species. These roadless areas provide important habitat for multiple species and are of very high value to aquatic biodiversity, warranting management that will maintain their aquatic integrity.

Fish Strongholds

Fish strongholds were identified in the Interior Columbia Basin Ecosystem Management Plan (ICBEMP) assessment (Lee *et al*. 1997) for seven key native salmonids including steelhead, spring/summer Chinook salmon, and fall-run Chinook salmon. The ICBEMP salmonid strongholds are directly associated with strong populations which have the following characteristics: (1) All major life-history forms that historically occurred within the watershed are present; (2) numbers are stable or increasing and the local population is likely to be at half or more of its historic size or density; and (3) the populations or metapopulation within the watershed, or within a larger region of which the watershed is a part, probably contains at least 5,000 individuals or 500 adults.

In Idaho, there were no ICBEMP strongholds identified for either spring/summer or fall-run Chinook salmon, because Chinook salmon did not meet the ICBEMP criteria for fish strongholds, since they had lower population numbers that subsequently brought about their ESA-listing status. However, there are a number of areas and IRAs containing suitable habitat that could support larger stronghold populations, particularly if the out-of-basin issues were resolved.

Both fish strongholds and priority watersheds are valuable for their contribution to conservation and recovery of species and their habitats. A joint letter dated July 9, 2004, by the USFS, NMFS, BLM, USFWS, and the Environmental Protection Agency (USDA *et al*. 2004) stated that protection of population strongholds for listed or proposed species is a key component of a framework for incorporating the aquatic and riparian habitat component of the Interior Columbia Basin Strategy into BLM and USFS Plan revisions. The intent of protecting population strongholds is that these areas will provide high quality habitat for species, and support expansion and/or recolonization of species to adjacent watersheds.

Strongholds should conserve key processes likely to influence the persistence of populations or metapopulations (Rieman and Dunham 2000). Even small areas can contribute significant value, depending on their location and contribution to interconnecting populations, by providing for a larger metapopulation, smaller distance to a source population, and greater contribution to genetic and phenotypic diversity.

Analysis conducted for ICBEMP (Lee *et al*. 1997) indicates that strong fish populations are often associated with areas of low road density. Their analysis showed that increasing road densities and their accompanying effects were associated with declines in the status of listed fish. In Idaho, 32% of the strong populations for these species are in roadless areas. Larger stronghold areas are of particular interest because they have a greater potential to provide for larger interconnected populations (metapopulations) of the species due to their lack of roads and fewer culverts. Larger populations are able to better withstand disturbances and therefore have a greater chance of persistence.

2.1.2.1. Summary for Snake River, Salmon River, and Clearwater Basin

The biological requirements of the ESA-listed species are not being met under the environmental baseline. Conditions in the action area would have to improve for recovery to occur. Additional degradation of the baseline, or delay in improvement of these conditions, would probably further decrease the likelihood of survival and recovery of the listed species under the environmental baseline.

Stochastic events in fresh water (flooding, drought, snow pack conditions, volcanic eruptions, etc.) play an important role in a species' survival and recovery. The survival and recovery of these species partially depends on their ability to persist through periods of low natural survival due to ocean conditions, climatic conditions, and other conditions outside the action area. Freshwater survival is particularly important during these periods because enough smolt must be produced so that a sufficient number of adults can survive to complete their oceanic migration, return to spawn, and perpetuate the species. Therefore it is important to maintain or restore Proper Functioning Condition (PFC) in order to sustain ESA-listed species through these periods.

2.1.3. Effects of the Action

'Effects of the action' means the direct and indirect effects of an action on the listed species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action, that will be added to the environmental baseline (50 CFR 402.02). Effects of the action that reduce the ability of a listed species to meet its biological requirements may increase the likelihood that the proposed action will result in jeopardy to that listed species or in destruction or adverse modification of a designated critical habitat.

This proposed Federal action represents a programmatic decision, and therefore, will have no direct effects on listed species or their habitats. Any effects would occur later at the project level when site-specific decisions are made regarding road construction/reconstruction, timber cutting, sale, or removal, and discretionary mining. The effects identified in this analysis would be indirect effects in that they would occur later in time pursuant to this programmatic decision.

In their BA, the USFS stated that road construction, reconstruction, and timber harvest in IRAs over the past 5 years has been minimal and has not resulted in a change to the roadless character of the IRAs; due largely to implementation of the 2001 Roadless Rule. The USFS further states that given roadless area values, along with current and projected future budgets, it is likely that road construction, reconstruction, and timber harvest will continue in IRAs at low rates similar to the past five years. The USFS does acknowledge that road and timber activities could increase if priorities, needs, or budgets for vegetation management increased in the future.

Locatable mineral activities pursuant to the General Mining Law of 1872, including road construction and reconstruction, would not be affected. The USFS may authorize the use or sale of common variety minerals, and associated road construction or reconstruction to access these minerals if such use is incidental to activity allowed under this rule. Road construction and/or

reconstruction would be permitted to access specific phosphate deposits in the GFRG theme; however, these deposits do not overlap anadromous fisheries. Surface use and occupancy would be prohibited in the WLR, SAHTS and Primitive themes. Surface use and occupancy would be permitted in the BCR and GFRG theme, but only if allowed under the Forest Plan. This allowance is the same as the existing 2001 Roadless Rule, and since Forest Plan decisions on surface use and occupancy apply, it is the same as existing Forest Plans. Both of these have been previously consulted on.

The MIRR alternative has IRAs designated in all the themes. The less permissive of the themes (WLR, Primitive, SAHTS) will have the least opportunity for road construction/reconstruction, timber cutting activities, and other ground disturbing activities, and therefore will have the lowest risk of negative effects to aquatic species and their habitats. Activities permitted in the more permissive themes (BCR-CPZ and GFRG) will have a higher likelihood of contributing to negative effects in the IRAs. The BCR theme (outside of CPZ) falls somewhere in the middle of the other themes, since activities that might result in effects to aquatic species and their habitats are somewhat prohibited with limited exceptions. In their BA, the USFS identified all of the current IRA acres under the existing 2001 Roadless Rule as fitting under the BCR theme. Table 4 shows the theme designations for the proposed MIRR along with designated critical habitat (DCH), aquatic strongholds, and priority watersheds within the IRAs by fish species.

Table 4. Anadromous Snake River fish species baseline information in Idaho with the Modified Idaho Roadless Rule and theme designation

Fish Species	Baseline Information in Idaho	Total	IRA Overlap	WLR	PRIM	BCR	BCR CPZ	GFRG	SAHTS
Steelhead	Range (acres)	11,533,768	3,133,791 (27%)	470,666 (4.1%)	324,966 (2.8%)	1,858,244 (16.1%)	231,425 (2.0%)	81,434 (0.7%)	26,225 (0.2%)
	DCH (miles)	8,338	980 (12%)	67 (0.8%)	114.7 (1.4%)	472 (5.6%)	68.5 (0.8%)	7.6 (0.09%)	22 0.3%
	Strongholds (acres)	55,795	54,034 (97%)	0	44,902 (80.5%)	162 (0.3%)	0	0	8,970 (16.1%)
	Priority Watersheds (acres)	3,955,900	1,111,588 (28%)	82,783 (2.1%)	193,899 (4.9%)	728,768 (18.4%)	52,660 (1.3%)	998 (0.03%)	21,776 (0.5%)
Fall-run Chinook Salmon	Range (acres)	790,397	40,307 (5%)	0	131 (0.02%)	28,513 (3.6%)	11,650 (1.5%)	0	0
	DCH (miles)	792	0	0	0	0	0	0	0
Spring / Summer Chinook Salmon	Range (acres)	10,512,895	2,980,941 (28%)	470,631 (4.5%)	300,460 (2.8%)	1,752,799 (16.7%)	211,990 (2%)	80,911 (0.8%)	26,115 (0.3%)
	DCH (miles)	6,415	643 (10%)	65 (1%)	32 (0.5%)	347 (5.4%)	46 (0.7%)	7 (0.1%)	0
	Priority Watersheds (acres)	4,888,127	1,885,767 (38%)	431,466 (8.8%)	91,112 (1.9%)	1,124,360 (23%)	117,497 (2.4%)	20,908 (0.4%)	100,424 (2%)
Sockeye Salmon	Range (acres)	1,655,707	346,822 (21%)	18,785 (1.1%)	19,640 (1.2%)	193,126 (12%)	56,999 (3.4%)	37,947 (2.3%)	0
	DCH (miles)	1,583	216 (14%)	10 (0.6%)	21 (1.3%)	78 (4.9%)	29 (1.8%)	0	0
	DCH (lake acres)	3098	0	-	-	-	-	-	-

The USFS provided the activities projections shown in Table 5 to help anticipate the scope of actions that might occur across the range of the IRAs under the MIRR; however, the USFS did not include these projections into their proposed action. Therefore, they are shown in this Opinion for informational purposes only and were not used to determine the magnitude of effects of the proposed action on anadromous fish. However, the projections do provide insight into the kind of activities that could have effects on ESA-listed anadromous fish.

Table 5. USFS projected activities with implementation of the Modified Idaho Roadless Rule

	Purpose	Type	Annually	Over 15 Years
Roads	Timber Roads	Permanent	0.0	0.0
		Temporary	1.2	18.0
		Reconstruct	1.1	16.5
		Total	**2.3**	**34.5**
	Other Roads	Permanent	0.8	12.0
		Temporary	0.2	3.0
		Reconstruct	0.0	0.0
		Total	**1.0**	**15.0**
	Total Roads	Permanent	0.8	12.0
		Temporary	1.4	21.0
		Reconstruct	1.1	16.5
		Grand Total	**3.3**	**49.5**
Timber	Harvest (MMBF)	-	5.04	75.6
	Harvest (acres)	-	1,000	15,000

Roads

Road construction, reconstruction, maintenance, use, and even the presence of roads in a watershed can have numerous adverse effects to aquatic ecosystems. Roads can have effects which not only vary in the amount of effects, but can be short in duration (pulse disturbance), or can be longer in duration (press disturbance). Road effects generally tend to be press disturbances and are generally associated with habitat alteration (Niemi *et al*. 1990, Yount and Niemi 1990). Watershed and aquatic habitat recovery tends to be more rapid from pulse disturbances than from press disturbances (Allan and Flecker 1993). Gurtz and Wallace (1984) hypothesized that stream biota may not be able to recover from the effects of anthropogenic disturbances, such as roads or timber harvest, because they have no analogues in the natural disturbance regime and organisms may not have evolved the appropriate breadth of habitat or reproductive requirements. In discussing the principal potential effects associated with roads, it must be acknowledged that not every road would necessarily exhibit any or all of these effects. Also, the effects of roads may vary with physical and biological conditions and the physical location of the road (Luce *et al*. 2001).

Potential effects from roads include increasing sediment loads in streams; modifying watershed hydrology, stream flows, and stream channel morphology; increasing habitat fragmentation and

loss of connectivity; and degrading water quality, including increasing the risk of chemical pollution, and altering water temperature regimes (Furniss *et al*. 1991, USDA Forest Service 2000). These physical alterations can potentially result in a variety of adverse effects to aquatic species, including increased mortality of food sources; loss of spawning and rearing habitat, including sediment deposition in pools; increased mortality of eggs and alevins from lower levels of oxygen in stream gravels; increased susceptibility to disease and predation; increased reproductive failure; shifts in macro invertebrate communities associated with increased sediment and diminished water quality; increased susceptibility to over harvest and poaching; loss of protective cover and resting habitat, such as large woody debris, overhanging banks, and deep pools; changes in channel structure; increased competition from nonnative species; loss of habitat caused by habitat degradation, barriers to passage, increased gradient, high temperatures, and other factors; and loss of habitat connectivity, increasing vulnerability of subpopulations to catastrophic events and loss of genetic fitness.

Trombulak and Frissell (2000) concluded that, although all species and ecosystems are not affected to the same degree by roads, in general, roads are associated with negative effects for both terrestrial and aquatic ecosystems including changes in species composition and population size. While the localized effect of an individual road or stream crossing may not have a substantial adverse effect, the total effect of road networks and multiple crossings increases the potential for major adverse effects to aquatic habitats (USDA Forest Service 2000). Analysis done for ICBEMP (Lee *et al*. 1997) indicates that strong fish populations are often associated with low road density.

The biological opinion issued by NMFS for PACFISH identified roads as a primary cause of salmonid decline, and indicated that roads may have unavoidable effects on streams, regardless of how well they are located, designed, or maintained. In discussing the effects of management activities in inventoried roadless areas in the Pacific Northwest, the ecosystem management assessment team (USDA *et al*. 1993) concluded that such activities would increase the risk of damage to aquatic and riparian habitat and could potentially reduce the capacity and capability of key watersheds important for maintaining salmonid populations.

Roads contribute more sediment to streams than any other land management activity (Gibbons and Salo 1973, Meehan 1991), and most land management activities, such as mining, timber harvest, grazing, recreation and water diversions are dependent on roads. The majority of sediment from timber harvest activities is related to roads and road construction (Chamberlin *et al*. 1991, Dunne and Leopold 1978, Furniss *et al*. 1991, MacDonald and Ritland 1989, Megahan *et al*. 1978) and associated increased erosion rates (Beschta 1978, Meehan 1991, Reid 1993, Reid and Dunne 1984, Swanson and Dyrness 1975, Swanston and Swanson 1976). Serious degradation of fish habitat can result from poorly planned, designed, located, constructed, or maintained roads (Furniss *et al*. 1991, MacDonald *et al*. 1991).

Roads directly affect natural sediment and hydrologic regimes by altering streamflow, sediment loading, sediment transport and deposition, channel morphology, channel stability, substrate composition, stream temperatures, water quality, and riparian conditions within a watershed (Jones *et al*. 2000, Lee *et al*. 1997, Luce *et al*. 2001). Road-related mass soil movements can continue for decades after the roads have been constructed (Furniss *et al*. 1991). Megahan *et al*.

(1992) found that 88% of landslides within Idaho were associated with roads. Such habitat alternations can adversely affect all life-stages of fishes, including migration, spawning, incubation, emergence, and rearing (Furniss *et al*. 1991, Henjum *et al*. 1994, MacDonald *et al*. 1991).

Stream crossings can also be a major source of sediment to streams resulting from channel fill around culverts and subsequent road crossing failures (Furniss *et al*. 1991). Plugged culverts and fill slope failures are frequent and often lead to catastrophic increases in stream channel sediment, especially on old abandoned or unmaintained roads (Weaver *et al*. 1987). Unnatural channel widths, slope, and stream beds can occur upstream and downstream of stream crossings, and these alterations in channel morphology may persist for long periods of time. Because improper culverts can reduce or eliminate fish passage (Belford and Gould 1989), road crossings are a common fish passage barrier (Clancy and Reichmuth 1990, Clarkin *et al*. 2003, Evans and Johnson 1980).

Under the MIRR, in general, road construction would be prohibited under the WLR, Primitive, and SAHTS themes; only temporary roads would be allowed under the BCR and BCR CPZ themes; and both permanent and temporary roads would be allowed under the GFRG theme. However, even temporary roads present many of the same risks posed by permanent roads, although some may be of shorter duration. Temporary roads are often designed to lower standards than permanent roads, are typically not well maintained, and are associated with additional ground disturbance during their removal. Also, use of temporary roads in a watershed to support timber harvest or other activities may involves construction of multiple roads over time, providing a more continuous disturbance to the watershed than a single, well-designed, maintained, and use-regulated road. While temporary roads may be used for periods ranging up to 10 years before decommissioning, their short- and long-term effects on aquatic species and habitats can be extensive. The MIRR requires that temporary roads minimize surface disturbance, be used only for their specified purpose, and be decommissioned upon completion of the project or expiration of the contract or permit, whichever is sooner.

Although the intent on decommissioning roads is to accomplish actions that result in the stabilization and restoration of unneeded roads to a more natural state, road decommissioning can have many of the same effects associated with road construction or reconstruction. However, the long-term effect of having fewer roads on the landscape generally means having a lower risk of both pulse and press disturbances, and with less potential for large-scale effects on the aquatic environment.

Roads may facilitate increased use of areas by humans, who themselves often cause diverse and persistent ecological effects, including the introduction and spread of noxious weeds, fish, and other aquatic organisms (Trumbulak and Frissell 2000). In the BCR theme, permanent roads may only be constructed for the six exceptions (items 1a-e and 2 listed on page 7 of this Opinion). Temporary roads may be constructed to facilitate timber harvest; however in the case of temporary roads, they may only be used for the specified purpose and are not to be open to the public so that established use does not become a pattern. New roads also increase the ease of access into formally remote areas. Perhaps more importantly, roads often increase the efficiency with which natural resources can be exported. Human uses of the landscape made increasingly

possible by roads include hunting and fishing, recreation, and changes in use of the land and water. Native fish populations in previously inaccessible areas are often vulnerable to even small increases in fishing effort (Trumbulak and Frissell 2000).

In considering the contributions of large roadless areas for conservation of aquatic habitats and species, comparisons can be drawn from research in other areas lacking roads and with minimal levels of human disturbance. For example, in evaluating the role of wilderness areas in conserving aquatic biological integrity in Western Montana, Hitt and Frissell (1999) concluded that, although the presence of designated wilderness does not guarantee aquatic biological integrity due to factors such as fish stocking practices and impacts from adjacent roads, the importance of wilderness in aquatic conservation is extraordinary. Their analysis showed that more than 65% of waters that were rated as having high aquatic biological integrity were found within subwatersheds containing wilderness. They also concluded that, given the relative rarity of unprotected areas that support a relatively greater degree of aquatic biological integrity, undisturbed areas warrant permanent protection. Reeves *et al*. (1995) suggest reserves on the scale of watersheds are needed for anadromous salmonid conservation and that reserves with good habitat conditions and functionally intact ecosystems are likely to be found in wilderness and roadless areas on Federal lands.

To fulfill the commitments in the LRMPs biological opinions, areas of unroaded and low road density were evaluated by an interagency Road Density Analysis Team (RDAT). The RDAT identified those areas important to ESA-listed Chinook salmon, steelhead, and bull trout. The RDAT concluded that the low road density areas represent important areas for the conservation of listed fish species and recommended that these areas should be an important component in the development of any conservation strategy for those listed fish species (RDAT 2000, pp 21-22).

The broad view of the ecological effects of roads reveals multiple potential adverse effects. Although better road designs and use of best management practices have been helpful at mitigating many adverse effects, it is unlikely that the consequences of roads are ever completely mitigated or remediated. Thus it is critical to retain remaining roadless or near-roadless portions of the landscape in their natural state (Trumbulak and Frissell 2000).

Building roads within fish strongholds and/or priority watersheds could reduce their value for contributing to the conservation and recovery of anadromous fish species and their habitats. Although the joint executive letter of July 9, 2004 (USDA *et al* 2004), stated that protection of population strongholds for listed or proposed species is a key component of a framework for the aquatic and riparian habitat component of the Interior Columbia Basin Strategy into BLM and USFS Forest Plan revisions, adoption of the MIRR does allow for future actions within IRAs that could have adverse effects.

Such projects would then be subject to individual ESA consultations, which would then put the matter before interdisciplinary teams and biologists to duly analyze the potential impacts, and provide adequate protection for ESA-listed species and their habitat. Any future actions, however, must incorporate the aquatic protection measures found in PACFISH and the SWIE ACS, but it may be difficult to make assessments of multiple projects on landscape level through conducting project-specific consultations.

Timber Cutting

The effects of activities associated with timber cutting are often difficult to separate from the effects of roads and road construction. In their BA, the USFS uses "timber cutting" as a broad term that includes timber harvest (removal of commercial products) as well as other actions that result in the cutting of a tree with no removal of a commercial product, such as slashing, chipping, mulching, precommercial thinning, or personal use firewood. The road systems developed for timber cutting are often a significant factor affecting aquatic habitats, as discussed previously.

Negative effects from timber cutting itself tend to increase when activities occur on environmentally sensitive terrain with steep slopes comprised of highly erodible soils (Lee *et al*. 1997). Some of the potential effects to aquatic habitat from timber harvest can include the following (Beschta *et al*. 1987, Chamberlin *et al*. 1991, Hicks *et al*. 1991): increasing erosion; increasing sediment supply and storage in channels; modifying watershed hydrology, channel morphology, and stream flow, including the timing or magnitude of runoff events; decreasing stream bank stability; changes in water quality and quantity; decreased recruitment of large woody debris to aquatic habitats; diminishing habitat complexity; altering energy relationships involving water temperature, snowmelt and freezing; and altering riparian composition and function.

If present, these physical changes in habitat would have many of the same biological effects as previously listed under the previous section of road effects. With the recent increased emphasis on use of best management practices and other protective measures in the design and implementation of timber harvest activities, the effects can often be mitigated to some extent. Cumulatively, however, timber harvest activities within a watershed can have pronounced and lasting effects to aquatic habitat (Chamberlin *et al*. 1991).

Although burning is not included as a primary activity of the MIRR, burning and related activities (fuel reductions, prescribed fire, brush removal, scarification) are often mentioned in the BA when describing actions within the activity of timber cutting. Even in the description for the Primitive theme, the BA states that although rare, "timber harvest would be associated with fuel reductions needed to reduce uncharacteristic wildland fire effects to communities or municipal water supply systems". Therefore, burning is as a related activity that could occur due to implementation of the MIRR.

Agencies often use underburning, broadcast burning, and pile burning following timber harvest to achieve their fuel treatment objectives. Whether fires are natural or prescribed, they can lead to slope failure and stream sedimentation. In general, however, prescribed fires that burn within prescription are often smaller in scale and burn with lower intensities because of pre-fire fuels treatments and tree retention objectives (Gresswell 1999). Similar to wildfire, prescribed fire can affect riparian vegetation composition, structure, and function (Beche *et al*. 2005), large woody debris, shade, sediment transport, and aquatic species. Fires can also alter the nutrient properties

of the soil and make nutrients more available to streams. Destruction of the riparian canopy can open streams up to increased solar radiation and affect the degree of thermal loading to stream channels (Meehan *et al.* 1991. Pg 5).

Another risk from prescribed fire includes the potential of escaped fire situations. The use of fire retardants, foams, and wetting agents are sometimes used with prescribed burns, and particularly with escaped fires. The use of retardants can cause direct mortality to fish, and have indirect effects through prey base mortality (Meehan *et al.* 1991. Pg 291). Agencies often believe the proposed fuel treatment activities to be beneficial, because they may reduce the severity and extent of future fires in the action area, thereby possibly preventing uncontrollable, stand-replacing fires.

Discretionary Mining

The IRAs contain salable, leasable, and locatable mineral resources. Discretionary mining includes activities associated with saleable minerals (i.e. sand, stone, gravel, pumice, pumicite, cinders and clay) and leasable minerals (i.e. oil, oil shale, gas, coal, phosphate, potassium, sodium, sulphur, gilsonite, geothermal resources and hardrock minerals). Locatable minerals, such as gold and silver, are subject to the General Mining Law of 1872 and are not discretionary. The MIRR does not seek to impose limits regarding activities undertaken regarding locatable minerals, and therefore, locatable minerals will not be discussed further in this section. Mining for these materials occurs as surface mining or underground mining. Although any mining activity may have negative effects on aquatic ecosystems, the largest impacts have generally been associated with surface mining (Lee *et al*. 1997).

Mining activities can affect aquatic ecosystems in a number of ways: through the addition of large quantities of sediments, the addition of solutions contaminated with metal or acids, the acceleration of erosion, increased bank and streambed instability, changes in channel formation and stability, and removal of riparian vegetation (Lee *et al*. 1997).

In general, surface mining causes higher stream flows and greater storm flow volumes than underground mining due to a greater amount of surface area disturbance. This happens through removal of vegetation and topsoil, spoils, and general compaction of the area. Stream channels can adjust to increased flows and sediment loads, but such alterations can have adverse effects on the quality of aquatic habitat.

Sediments can enter streams through erosion of mine tailings (Besser and Rabeni 1987), by direct discharge of mining wastes to aquatic systems, and through movement of groundwater (Davies-Colley *et al*. 1992). Coarse sediments delivered to channels are likely to be deposited relatively quickly, affecting nearby aquatic habitat. Finer materials settle out more slowly and may create turbid water conditions for long distances downstream, affecting primary production and biomass by reducing the amount of light available to algae and rooted aquatic plants (Lee *et al*. 1997). Increases in turbidity can cause direct mortality to aquatic species, reduce growth and feeding activity (Nelson et al. 1991), and can affect the abundance and diversity of benthic

invertebrates (Lee *et al*. 1997). Excessive fine sediment deposition in stream substrates can degrade spawning habitat for salmonids, and eliminate habitat for some bottom dwelling aquatic species by filling in spaces in gravels (Nelson *et al*. 1991).

Often mining operations need road access involving road construction and reconstruction. Ground disturbance, such as road and equipment pad construction, associated with mining activities can result in adverse impacts to aquatic habitats and species (Meehan 1991).

2.1.3.1. Effects on Listed Species

Since the proposed action is rule-making rather than an on-the-ground activity, it should not have direct effects on the ESA-listed anadromous fish species or their habitat. The effects of the MIRR would occur indirectly through subsequent actions proposed by the individual national forests. However, those proposed actions would be subject to project level ESA-consultation and the standards and guidelines of individual Forest Plans. The Forest Plans have been modified to include either the provisions of PACFISH or the SWIE ACS. NMFS expects the USFS will act in accordance with PACFISH and the SWIE ACS when bringing forward future projects.

2.1.3.1.1. Snake River Spring/Summer Chinook Salmon. Figure 1 shows the roadless areas located in Idaho and Figure 2 displays the range of spring/summer Chinook salmon in Idaho. About 100 roadless areas in Idaho have habitat that supports spring/summer Chinook salmon. Table 4 shows that the IRA overlap for spring/summer Chinook in Idaho is 2,980,941 acres or a 28% overlap with the entire range in Idaho, a 10% overlap with designated critical habitat, and a 38% overlap with priority watersheds. Of the IRA acreage overlap within the range of spring/summer Chinook salmon, only 2.8% of the total range occurs within the more permissive themes of BCR-CPZ and GFRG, with another 16.7% falling within the BCR theme.

Depending on the scope and nature of future proposed projects in the IRAs, any of the potential effects discussed previously under the sections on roads, timber cutting and burning, and minerals, could occur within the action area. The USFS, however, must design the projects to be aligned within the prohibitions and permissions of the MIRR and the management theme(s) assigned to that IRA. The projects must also follow the standards and guidelines of individual Forest Plans, and PACFISH or the SWIE ACS.

All projects which have the potential to cause adverse effects to ESA-listed anadromous fish would be subject to consultation with NMFS under section 7 of the ESA. However, future projects will be brought forward by the line officer, who has the discretion to direct the project's design and purpose and need. Thus the overall intent of a project, even though it must be consistent with the MIRR and Forest Plan standards and guidelines, is still up to the line officer in charge. Individual ESA consultations will then be brought forward to the biologists and interdisciplinary teams to suitably analyze the potential impacts, and provide adequate protection against smaller, incremental effects on ESA-listed species and their habitat. Nevertheless, with

only 2.8% of spring/summer Chinook range falling within the more permissive themes, future land management actions should not significantly impact the population, particularly since projects having adverse effects must go through the ESA consultation process.

Table 6 shows there are 13 IRAs larger than 100,000 acres each that support Snake River spring/summer Chinook salmon populations; however, four of these IRAs are located within the Clearwater drainage where spring/summer Chinook are not listed under the ESA. These larger areas are of particular importance because they have a greater potential to provide for larger interconnected populations (metapopulations) of the species due to their lack of ground-disturbing activities, such as roads and associated culverts, timber cutting, and burning. Larger species populations are able to better withstand disturbances and therefore have a greater chance of persistence.

Table 6. Larger IRAs (>100,000 acres) supporting Snake River spring/summer Chinook salmon

National Forest	IRA	Acres	WLR	PRIM	BCR	BCR CPZ	GFRG	SAHTS
Clearwater*	Bighorn - Weitas	254,400	0	0	246,400	0	0	8,000
Clearwater*	North Lochsa Slope	111,900	0	82,500	15,100	0	0	14,300
Clearwater*	Hoodoo	153,900	151,900	0	0	0	0	2,000
Challis Sawtooth	Boulder-White Clouds	427,300	231,200	87,300	79,800	28,900	0	0
Challis Sawtooth	Loon Creek	109,600	0	0	102,100	7,500	0	0
Salmon-Challis	Camas Creek	103,900	0	0	93,400	10,500	0	0
Salmon-Challis	Lemhi Range	305,200	0	0	304,700	500	0	0
Boise	Peace Rock	191,700	0	137,400	44,700	2,500	0	0
Boise Challis	Red Mountain 916	114,600	85,900	11,800	16,300	0	600	0
Boise Payette	Needles	157,400	93,500	12,900	51,000	0	100	0
Boise Sawtooth	Smoky Mountains	336,300	0	233,700	76,800	25,800	0	0
Payette	Secesh	236,500	110,300	7,700	106,100	12,400	0	0
Nez Perce*	West Meadow Creek	115,600	0	0	112,500	3,100	0	0
Totals	**-**	**2,618,400**	**672,900**	**573,300**	**1,248,900**	**91,200**	**700**	**24,300**

* Although Snake River spring/summer Chinook salmon are found within the Clearwater River drainage, they are not listed under the ESA.

Within these larger IRAs that support spring/summer Chinook salmon, 700 acres fall within the GFRG theme and 91,200 acres fall within the BCR-CPZ theme. These two themes are the more

permissive themes that are most likely to allow for projects that may have adverse effects on ESA-listed anadromous fish. Another 1,248,900 acres fall within the BCR theme. Protection of these larger IRAs for purposes of the survival and recovery of anadromous fish is vital; however, the smaller IRAs play a significant role in the aquatic environment as well. Although the larger-sized IRAs offer a higher potential for anadromous fish, the smaller-sized IRAs also offer protection, especially when considered collectively. When species are at the point of needing the protection of being listed under the ESA, their population size, range, and/or habitat are already seriously threatened. Losing the quality of habitat afforded by both the larger and the smaller IRAs would only increase plight of the species.

However, under the MIRR, projects could be proposed that are not entirely aligned with strategies that are protective of listed fish. Again, those projects undertaken pursuant to the MIRR which have the potential to cause adverse effects to ESA-listed anadromous fish would be subject to ESA consultation and must be designed to be consistent with PACFISH and the SWIE ACS. Individual consultations will then be brought forth to the biologists and interdisciplinary teams to suitably analyze the potential impacts, and then provide adequate protection for ESA-listed species and their habitat. Such a consultation procedure may be an avenue leading to small, incremental habitat losses that could add up in the long run. Also, it may be difficult to make assessments for multiple projects at the landscape level by conducting project-specific consultations.

The two more permissive themes together (GFRG and BCR-CPZ) comprise only 3.5% of the area for larger IRAs and only 2.8% of the total range containing spring/summer Chinook habitat. With the smaller percentages involved, applicable LRMP standard and guidelines still in effect, and individual consultations to still occur, it is anticipated that significant changes to spring/summer Chinook habitat would not occur.

2.1.3.1.2. Snake River Fall Chinook Salmon. Figure 1 shows the roadless areas located in Idaho and Figure 2 displays the range of Snake River fall Chinook salmon in Idaho. There are only six roadless areas in Idaho that have habitat that supports fall-run Chinook salmon. Table 4 shows that the IRA overlap for fall-run Chinook salmon in Idaho is 40,307 acres or approximately a 5% overlap with the entire range in Idaho None of it overlaps with designated critical habitat, since designated critical habitat for fall Chinook occurs only in mainstem rivers. Of the IRA acreage overlap, only 1.5% of the total range occurs within the more permissive theme of BCR-CPZ, none in GFRG, and another 3.6% falling within the BCR theme.

Road building, timber harvest, and related activities could have effects on anadromous fish species. Since Snake River fall Chinook salmon spawning and rearing occurs only in larger, mainstem rivers, such as the Salmon, Snake, and Clearwater Rivers, the magnitude of impacts from future projects would have to be large enough to impact a mainstem river (e.g. a road built on steep terrain). With only 1.5% of the total fall Chinook range falling within the more permissive themes, future land management actions should not significantly impact the fall Chinook salmon population, particularly since projects having adverse effects must go through the ESA consultation process.

Table 7. IRAs with fall-run Chinook salmon habitat

Forest	IRA	Acres	WLR	PRIM	BCR	BCR CPZ	GFRG	SAHTS
Nez Perce	John Day	10,300	0	0	10,300	0	0	0
Nez Perce	North Fork Slate Creek	10,400	0	0	10,400	0	0	0
Payette	Hells Canyon/ 7 Devils Scenic	29,200	0	29,200	0	0	0	0
Payette	Patrick Butte	68,700	0	20,800	43,700	4,200	0	0
Wallowa-Whitman	Big Canyon, Idaho	14,100	0	0	14,100	0	0	0
Wallowa-Whitman	Klopton Creek – Corral Creek	21,300	0	0	21,300	0	0	0

2.1.3.1.3. Snake River Basin Steelhead Distinct Population Segment (DPS). Figure 1 shows the roadless areas located in Idaho and Figure 2 displays the range of Snake River Basin steelhead in Idaho. About 100 roadless areas in Idaho have habitat that supports steelhead. Table 4 shows that the IRA overlap for steelhead in Idaho is 3,133,791 acres or 27% overlap with their entire range in Idaho, 12% overlap with designated critical habitat, a 97% overlap with stronghold areas, and a 28% overlap with priority watersheds. Of the IRA acreage overlap with steelhead range, only 2.7% of the total steelhead range occurs within the more permissive themes of BCR-CPZ and GFRG, and another 16.0% falling within the BCR theme.

Depending on the scope and nature of future proposed projects, any of the potential effects to anadromous fish discussed previously under roads, timber cutting and burning, and minerals, could occur within the IRAs. The USFS, however, must design the projects to be aligned within the permissions and restrictions of the MIRR and the management theme allocated to that IRA. The projects must also follow the standards and guidelines of individual Forest Plans, and PACFISH or the SWIE ACS. All projects which have the potential to cause adverse effects to ESA-listed anadromous fish would be subject to consultation with NMFS under section 7 of the ESA. Such a consultation procedure, however, may be an avenue leading to small, incremental habitat losses that could in the long run, add up to significant habitat loss. Nevertheless, with only 2.7% of steelhead range falling within the more permissive themes, future land management actions should not appreciably impact the steelhead population, particularly since projects having adverse effects must go through the ESA consultation process.

Table 8 displays larger IRAs (>100,000 acres) which support Snake River Basin steelhead populations. These larger areas are of interest because they have a greater potential to provide for larger interconnected populations (metapopulations) of the species due to their lack of roads and associated culverts. Larger populations are able to better withstand disturbances and therefore have a greater chance of persistence.

Table 8. Larger IRAs (>100,000 ac) supporting Snake River basin steelhead

National Forest	IRA	Acres	WLR	PRIM	BCR	BCR CPZ	GFRG	SAHTS
Clearwater*	Bighorn - Weitas	254,400	0	0	246,400	0	0	8,000
Clearwater*	North Lochsa Slope	111,900	0	82,500	15,100	0	0	14,300
Clearwater*	Hoodoo	153,900	151,900	0	0	0	0	2,000
Challis Sawtooth	Boulder-White Clouds	427,300	231,200	87,300	79,800	28,900	0	0
Challis Sawtooth	Loon Creek	109,600	0	0	102,100	7,500	0	0
Salmon-Challis	Camas Creek	103,900	0	0	93,400	10,500	0	0
Salmon-Challis	Lemhi Range	305,200	0	0	304,700	500	0	0
Boise	Peace Rock	191,700	0	137,400	44,700	2,500	0	0
Boise Challis	Red Mountain 916	114,600	85,900	11,800	16,300	0	600	0
Boise Payette	Needles	157,400	93,500	12,900	51,000	0	100	0
Boise Sawtooth	Smoky Mountains	336,300	0	233,700	76,800	25,800	0	0
Payette	Secesh	236,500	110,300	7,700	106,100	12,400	0	0
Nez Perce*	West Meadow Creek	115,600	0	0	112,500	3,100	0	0
Totals	**-**	**2,618,400**	**672,900**	**573,300**	**1,248,900**	**91,200**	**700**	**24,300**

Within these larger IRAs that support steelhead, 700 acres fall within the GFRG theme and 91,200 acres fall within the BCR-CPZ theme. These two themes are the more permissive themes that are most likely to allow for projects that may have adverse effects on ESA-listed anadromous fish. Another 1,248,900 acres fall within the BCR theme. Protection of these larger IRAs for purposes of the survival and recovery of anadromous fish is vital; however, the smaller IRAs play a significant role in the aquatic environment as well. Although the larger-sized IRAs offer a higher potential for anadromous fish, the smaller-sized IRAs also offer protection, especially when considered collectively. When species are at the point of needing the protection of being listed under the ESA, their population size, range, and/or habitat are already seriously threatened. Losing the quality of habitat afforded by both the larger and the smaller IRAs would only further diminish the plight of the species.

However, under the MIRR, projects could be proposed that are not entirely aligned with strategies that are protective of listed fish. Again, those projects which have the potential to cause adverse effects to ESA-listed anadromous fish would be subject to ESA consultation and must be designed to be consistent with PACFISH and the SWIE ACS. Individual consultations would then be brought forward to biologists and interdisciplinary teams to suitably analyze the

potential impacts, and then provide adequate protection for ESA-listed species and their habitat. Such a consultation procedure could be an avenue leading to small, incremental habitat losses for each project that could add up in the long run. Also, it may be difficult to make assessments for multiple projects at the landscape level by conducting project-specific consultations.

The two more permissive themes together (GFRG and BCR-CPZ) comprise only 3.5% of the acreage for larger IRAs and only 2.7% of the total range containing steelhead habitat. With the smaller percentages of land areas involved, applicable LRMP standard and guidelines still in effect, and individual consultations to still occur, it is anticipated that significant changes to steelhead habitat would not occur.

2.1.3.1.4. Snake River Sockeye Salmon. Table 9 displays the IRAs which are near lakes used for Snake River sockeye spawning or artificial propagation recovery efforts. None of the IRAs overlap with the lakes, since the IRAs end at the lake edge. All lakes have at least one side that has no roadless adjacency. All lakes except one touch the BCR theme, with Stanley Lake having no IRAs adjacent to it.

Table 9. IRAs near lakes supporting sockeye salmon spawning and/or recovery efforts

Name	Adjacent Roadless Area	Lake Acres
Alturas Lake	Smoky Mountains	825
Pettit Lake	Smoky Mountains	391
Redfish Lake	Huckleberry & Hanson lakes	1,511
Stanley Lake	None	176
Yellow Belly Lake	Pettit	195

Protection of these IRAs for purposes of the survival and recovery of sockeye salmon is vital. However, under the MIRR, projects could be proposed that are not entirely aligned with strategies that are protective of listed fish. Again, those projects which have the potential to cause adverse effects to ESA-listed anadromous fish would be subject to ESA consultation, and activities would be required to be consistent with PACFISH and the SWIE ACS. Individual consultations will then be brought forward to the biologists and interdisciplinary teams to suitably analyze the potential impacts, and then provide adequate protection for ESA-listed species and their habitat. Such a consultation procedure could be an avenue leading to small, incremental habitat losses for each project that could add up in the long run. Since all of the lakes except Stanley Lake touch IRAs in the BCR theme, it will be particularly important for the USFS to design its projects to safeguard the water quality of the Stanley area lakes that support sockeye salmon.

With none of the lakes being adjacent to the two more permissive themes (BCR-CPZ and GFRG), applicable LRMP standard and guidelines for anadromous fish still in effect, and individual consultations to still occur, it is anticipated that significant changes to sockeye habitat would not occur.

2.1.3.2. Effects on Critical Habitat

Since the proposed action is rule-making rather than an on-the-ground activity, it should not have direct effects on designated critical habitat for ESA-listed anadromous fish species. The effects of the MIRR would occur indirectly through subsequent actions proposed by the individual national forests. However, those proposed actions would be subject to project level ESA-consultation and the standards and guidelines of individual Forest Plans. The Forest Plans have been modified to include either the provisions of PACFISH or the SWIE ACS.

For aquatic habitats, the indirect effects of disturbances associated with road construction and timber harvest could extend well beyond those areas directly impacted, given the influence that upslope areas and upstream reaches have on the condition of downstream habitat (Chamberlin *et al.* 1991). The types and extent of impacts on aquatic habitats would depend on road location and design, proximity to accessible habitat, mitigation measures applied, and the activities enabled. For fish populations, habitat alterations can adversely affect all life-stages, from egg to adult, and habitat essential for migration, spawning, incubation, emergence, rearing, feeding, and security (Furniss *et al*. 1991).

The duration of effects, or recovery time, is dependent on a variety of factors. Site productivity, rainfall, and length of growing season influence the rate and success of vegetation regrowth. The type, location, extent and duration of an activity, magnitude of adverse effects, dominant hydrologic and geomorphic processes within the watershed, overall watershed condition, and the effectiveness of mitigation and reclamation activities are some of the other factors influencing the duration of physical effects on a watershed and associated stream channels. The duration of biological effects can extend beyond the recovery time for the physical environment, and can be irreversible if a species is extirpated from the watershed.

Depending on the scope and nature of future proposed projects, any of the potential habitat effects discussed previously under roads, timber cutting (and burning), and minerals could occur within the IRAs and ultimately impact freshwater spawning, rearing, and migration. The USFS, however, must design the projects to be aligned within the permissions and restrictions of the MIRR and the management theme(s) allocated to that IRA. Spring/summer Chinook salmon have 0.8% of their entire Idaho designated critical habitat that falls within the more permissive themes of BCR-CPZ and GFRG, while steelhead have 0.89% of their designated critical habitat that falls within the more permissive themes. Neither fall Chinook nor sockeye salmon have any designated critical habitat falling within IRAs.

The projects must also follow the standards and guidelines of individual Forest Plans, and PACFISH or the SWIE ACS. All projects which have the potential to cause adverse effects to designated critical habitat would be subject to consultation with NMFS under section 7 of the ESA. Such a consultation process, however, may be an avenue leading to small, incremental habitat losses per project that could in the long run, add up to significant habitat loss. Nevertheless, with only small percentages of salmon and steelhead designated critical habitat

falling within the more permissive themes, future land management actions brought forward under the MIRR should not significantly impact their habitat, particularly since projects having adverse effects must go through the ESA consultation process.

2.1.3.3. Cumulative Effects

'Cumulative effects' are those effects of future state or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation (50 CFR 402.02). Cumulative effects that reduce the ability of a listed species to meet its biological requirements may increase the likelihood that the proposed action will result in jeopardy to that listed species or in destruction or adverse modification of a designated critical habitat.

There are likely to be numerous future state and private actions that will someday occur in the action area, but NMFS is not aware of any specific future non-Federal activities that would cause additional effects to listed species that are of a different nature than the types of actions that have affected the environmental baseline. NMFS expects that effects of state and private actions described under the environmental baseline would be similar in the future, with future effects proportional to human demographic trends in the action area.

U.S. Census data (http://quickfacts.census.gov/qfd/states/16/16035.html) indicates that some counties within the action area have decreasing populations while some have increasing populations; however, between 2000 and 2006, the overall population in the 11 Idaho counties that encompass the range of anadromous salmonids in Idaho increased by approximately 2.4%. In that same time period, the population of Idaho grew from 1,293,953 to 1,466,465 people, or a 13.3% increase. Thus, population growth within the action area lagged behind that of both Idaho as whole and the nation during that time period. From 1990 to 2000, population density in the action area increased from 3.2 to 3.5 persons per square mile, which remains much lower than either the densities for the State of Idaho as a whole or the nation, 15.6 and 79.6 persons per square mile, respectively.

Thus, NMFS assumes that future private and state actions will continue within the action area, increasing as population density rises. As the human population in the action area continues to grow, demand for agricultural, commercial, or residential development is also likely to grow. The effects of new development caused by that demand are likely to reduce the conservation value of the habitat within the action area. However, NMFS is not aware of specific future non-Federal activities within the action area that would cause greater effects to a listed species or to designated critical habitat than presently occurs.

Changes have already been observed in many species' ranges, consistent with changes in climate (ISAB 2007; Hansen *et al*. 2001). Future climate change may lead to fragmentation of suitable habitats that may inhibit adjustment of plants and wildlife to climate change through range shifts (ISAB 2007; Hansen *et al*. 2001). Changes due to climate change and global warming could be compounded considerably in combination with other disturbances such as fire. Fire frequency

and intensity have increased in the past 50 years, and especially in the past 15 years, in the shrub steppe and forested regions of the west (ISAB 2007). Larger climate-driven fires can be expected in Idaho in the future.

Changes in hydrology and temperature caused by changing climate have the potential to negatively impact aquatic ecosystems in Idaho, with salmonid fishes being especially sensitive. Average annual temperature increases due to increased carbon dioxide are affecting snowpack, peak runoff, and base flows of streams and rivers (Mote *et al*. 2003). Increases in water temperature may cause a shift in the thermal suitability of aquatic habitats (Poff *et al*. 2002). For species that require colder water temperatures to survive and reproduce, warmer temperatures could lead to significant decreases in available suitable habitat. Increased frequency and severity of flood flows during winter can affect incubating eggs and alevins in the streambed and over-wintering juvenile fish. Eggs of fall and winter spawning fish, including Chinook, coho, and sockeye salmon, may suffer high levels of mortality when exposed to increased flood flows (ISAB 2007).

Climate change has the potential to affect most freshwater life history stages of trout and salmon (ISAB 2007). If the factors causing long-term population declines are not remedied, coupled with possible effects of climate change, they could lead to further declines of wild-origin Snake River salmon and steelhead. Although the intensity of effects will vary spatially, the effects of possible climate change on anadromous fish are unknown. However, given the safeguards of the restrictions found within the more protective themes of the MIRR and the small amounts of land within the more permissive themes, coupled with the LRMPs and PACFISH or the SWIE ACS, it is unlikely that projects brought forward under the MIRR would exasperate any potential effects of climate change.

2.1.4. Conclusion

After reviewing the current status of Snake River Basin steelhead, Snake River fall Chinook salmon, Snake River spring/summer Chinook salmon, and Snake River sockeye salmon; the status of critical habitat; the environmental baseline for the action area; the effects of the proposed action; and cumulative effects, NMFS concludes that the action, as proposed, is not likely to jeopardize the continued existence of listed Snake River salmon and steelhead, or destroy or adversely modify designated critical habitat for those species.

2.1.5. Conservation Recommendations

Section 7(a) (1) of the ESA directs Federal agencies to use their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of the threatened and endangered species. The following recommendations are discretionary measures that NMFS believes are consistent with this obligation and therefore should be carried out by the USFS:

- In future actions developed under the auspices of the MIRR, the USFS should include conservation programs for the benefit of anadromous fish and their habitat as project

objectives in the planning document for those projects where anadromous fish are found within the action area.

- All projects proposed within IRAs where ESA-listed anadromous fish might be affected should be brought forward to the interagency Level 1 Teams for adequate pre-consultation with the regulatory agencies.

- The USFS should compile an annual report documenting what projects by IRA were completed under the MIRR, the scope of activities for those projects, and what management themes the activities occurred in.

Please notify NMFS if the USFS carries out any of these recommendations so that we will be kept informed of actions that minimize or avoid adverse effects and those that benefit listed species or their designated critical habitats.

2.1.6. Reinitiation of Consultation

Reinitiation of formal consultation is required and shall be requested by the Federal agency or by NMFS where discretionary Federal involvement or control over the action has been retained or is authorized by law and: (a) If the amount or extent of taking specified in the incidental take statement is exceeded; (b) if new information reveals effects of the action that may affect listed species or designated critical habitat in a manner or to an extent not previously considered; (c) if the identified action is subsequently modified in a manner that has an effect to the listed species or designated critical habitat that was not considered in the Opinion; or (d) if a new species is listed or critical habitat is designated that may be affected by the identified action (50 CFR 402.16).

Since this is a programmatic action, and LRMP direction based on PACFISH and/or the SWIE ACS will be applied to avoid or reduce adverse effects of any action taken pursuant to the MIRR. NMFS has projected that protection for ESA-listed salmon and steelhead would be adequate based on information provided by the USFS for the MIRR at protecting these valuable lands for purposes of survival and recovery of the ESA-listed Snake River salmon and steelhead. The USFS shall keep adequate records to document watershed conditions where MIRR projects are completed. If it is found that the environmental baseline is deteriorating for ESA-listed salmon or steelhead in those watersheds, the USFS must reinitiate consultation.

To reinitiate consultation, please contact the Idaho State Habitat Office of NMFS and refer to the NMFS Number assigned to this consultation.

2.2. Incidental Take Statement

Section 9(a) (1) of the ESA prohibits the taking of endangered species without a specific permit or exemption. Protective regulations adopted pursuant to section 4(d) extend the prohibition to threatened species. Among other things, an action that harasses, wounds, or kills an individual

of a listed species or harms a species by altering habitat in a way that significantly impairs its essential behavioral patterns is a taking (50 CFR 222.102). Incidental take refers to takings that result from, but are not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or applicant (50 CFR 402.02). Section 7(o)(2) exempts any taking that meets the terms and conditions of a written incidental take statement from the taking prohibition.

No incidental take is exempted with the issuance of this Opinion as a result of the USFS adopting the MIRR, although specific projects and their actions developed in accordance with the MIRR and associated LRMPs may cause effects that later constitute take of listed anadromous steelhead and salmon. No incidental take is exempted because, due to the programmatic nature of this action, NMFS can not be certain where or when take might occur. NMFS can not therefore identify how much, if any, take would occur. Any potential effects identified in this Opinion would occur later in time pursuant to the programmatic direction provided by the MIRR. Subsequent consultations on specifically proposed actions developed pursuant to the MIRR and relevant provisions of the LRPMs will serve as the basis for determining if an exemption from the ESA section 9 take prohibitions is warranted.

2.2.1. Amount or Extent of Take

The proposed programmatic MIRR provides both permissions and restrictions on land management actions that can take place within IRAs and is prescriptive in terms of the sideboards that would guide or limit project design. However, it does not specify what management actions would be carried out, when or where such actions would occur, or what conservation measures might be incorporated into the proposed action(s) to reduce potential adverse effects from such proposed projects. The programmatic nature of the MIRR does not support the determination of any anticipated level of incidental take. Therefore, NMFS is not providing any amount or extent of incidental take of ESA-listed salmon or steelhead with this Opinion.

2.2.2. Reasonable and Prudent Measures

Since there is not a take exemption provided under the ESA in this Opinion, NMFS is not providing any RPMs. Subsequent consultations on specifically proposed actions developed pursuant to the MIRR and relevant provisions of the LRPMs will serve as the basis for determining if an exemption from the ESA section 9 take prohibitions is warranted. At that time, NMFS would provide RPMs, as appropriate, to minimize the impacts of the taking(s) on the listed species in accordance with
50 CFR 402.14i.

2.2.3. Terms and Conditions

Since there is not a take exemption or any Reasonable and Prudent Alternatives provided under the ESA in this Opinion, NMFS is not providing any Terms and Conditions with this Opinion.

Subsequent consultations on specifically proposed actions developed pursuant to the MIRR and relevant provisions of the LRPMs will serve as the basis for determining if an exemption from the ESA section 9 take prohibitions is warranted. At that time, NMFS would provide Terms and Conditions, as appropriate, to minimize the impacts of the taking(s) on the listed species in accordance with 50 CFR 402.14i.

3. MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT

The consultation requirement of section 305(b) of the MSA directs Federal agencies to consult with NMFS on all actions, or proposed actions that may adversely affect EFH. Adverse effects include the direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components, if such modifications reduce the quality or quantity of EFH. Adverse effects to EFH may result from actions occurring within EFH or outside EFH, and may include site-specific or EFH-wide impacts, including individual, cumulative, or synergistic consequences of actions (50 CFR 600.810). Section 305(b) also requires NMFS to recommend measures that may be taken by the action agency to conserve EFH.

The Pacific Fishery Management Council (PFMC) designated EFH for groundfish (PFMC 1998a), coastal pelagic species (PFMC 1998b), and Chinook salmon, coho salmon, and Puget Sound pink salmon (PFMC 1999). The proposed action and action area for this consultation are described in the Introduction to this document. The action area includes areas designated as EFH for various life-history stages of coho salmon and Chinook salmon.

Based on information provided in the BA along with the analysis of effects presented in the ESA portion of this document, NMFS concludes that the proposed action will have the potential for adverse effects on EFH designated for Pacific Coast salmon. However, due to the programmatic nature of this consultation, the USFS has not specified what management actions would be carried out, when or where such actions would occur, or what mitigation measures might be incorporated into the proposed action(s) to reduce potential adverse habitat effects from such proposed projects. Therefore, although the potential for adverse effects exists from the USFS' adoption of the MIRR, NMFS does not know the type, amount, or extent of such effects.

3.1. EFH Conservation Recommendations

NMFS believes that conservation measures are often necessary to avoid, mitigate, or offset the impact of the proposed action on EFH. The programmatic MIRR provides both permissions and restrictions on land management actions that can take place within IRAs and is prescriptive in terms of the sideboards that would guide or limit project design. However, the USFS and the MIRR do not specify what management actions would be carried out, when or where such actions would occur, or what mitigation measures might be incorporated into the proposed action(s) to reduce potential adverse effects from such proposed projects. Thus, the programmatic nature of the MIRR does not support the determination of any EFH conservation

recommendations by NMFS. Subsequent consultations by the USFS on specifically proposed actions developed pursuant to the MIRR and relevant provisions of the LRMPs will serve as the basis for determining what conservation recommendations would be warranted for the proposed action. At that time, NMFS would provide EFH Conservation Recommendations, as appropriate, to minimize potential impacts on EFH.

3.2. Statutory Response Requirement

Federal agencies are required to provide a detailed written response to NMFS' EFH conservation recommendations within 30 days of receipt of such recommendations [50 CFR 600.920(j) (1)]. The response must include a description of measures proposed to avoid, mitigate, or offset the adverse affects of the activity on EFH. Since NMFS is not providing any EFH Conservation Recommendations, no statutory response is required.

3.3. Supplemental Consultation

The USFS must reinitiate EFH consultation with NMFS if the proposed action is substantially revised in a way that may adversely affect EFH, or if new information becomes available that affects the basis for NMFS' EFH Conservation Recommendations [50 CFR 600.920(k)]. This stipulation would include, but would not be limited to, such actions that modify the MIRR or any Forest Plan amendments.

4. DATA QUALITY ACT DOCUMENTATION AND PRE-DISSEMINATION REVIEW

Section 515 of the Treasury and General Government Appropriations Act of 2001 (Public Law 106-554) (Data Quality Act [DQA]) specifies three components contributing to the quality of a document. They are utility, integrity, and objectivity. This section of the Opinion addresses these DQA components, documents compliance with the DQA, and certifies that this Opinion has undergone pre-dissemination review.

Utility: Utility principally refers to ensuring that the information contained in this consultation is helpful, serviceable, and beneficial to the intended users.

This ESA consultation concludes that the proposed MIRR will not jeopardize the affected listed species. Therefore, the USFS can authorize this action in accordance with its authority. The intended users are the USFS' national forests found within the State of Idaho.

Individual copies were provided to the above-listed entities. This consultation will be posted on NMFS Northwest Region website (http://www.nwr.noaa.gov). The format and naming adheres to conventional standards for style.

Integrity: This consultation was completed on a computer system managed by NMFS in accordance with relevant information technology security policies and standards set out in

Appendix III, 'Security of Automated Information Resources,' Office of Management and Budget Circular A-130; the Computer Security Act; and the Government Information Security Reform Act.

Objectivity:

Information Product Category: Natural Resource Plan.

Standards: This consultation and supporting documents are clear, concise, complete, and unbiased; and were developed using commonly accepted scientific research methods. They adhere to published standards including NMFS ESA Consultation Handbook, ESA Regulations, 50 CFR 402.01, *et seq.*, and the MSA implementing regulations regarding EFH, 50 CFR 600.920(j).

Best Available Information: This consultation and supporting documents use the best available information, as referenced in the Literature Cited section. The analyses in this Opinion/EFH consultation contain more background on information sources and quality.

Referencing: All supporting materials, information, data and analyses are properly referenced, consistent with standard scientific referencing style.

Review Process: This consultation was drafted by NMFS staff with training in ESA and MSA implementation, and reviewed in accordance with Northwest Region ESA quality control and assurance processes.

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