United States Department of Agriculture

Biennial Monitoring Evaluation Report Overview

for the Salmon-Challis National Forest

May 2024

Forest Service

Salmon-Challis National Forest

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Introduction

Purpose

The purpose of the biennial monitoring evaluation report is to help the responsible official determine whether a change is needed in forest plan direction, such as plan components or other plan content that guide management of resources in the plan area. The biennial monitoring evaluation report represents one part of the Forest Service's overall monitoring program for this national forest unit. The biennial monitoring evaluation report is not a decision document—it evaluates monitoring questions and indicators presented in the Plan Monitoring Program chapter of the forest plan, in relation to management actions carried out in the plan area. Appendix A displays the monitoring plan modification that was required by statute.

Monitoring and evaluation are continuous learning tools that form the backbone of adaptive management. For this reason, we will produce an evaluation report every two years. This report indicates whether a change to the forest plan, management activities, monitoring program or forest assessment may be needed based on the new information. The full 2024 biennial monitoring report for the Salmon-Challis National Forest is available at https://www.fs.usda.gov/main/scnf/landmanagement/planning in the quick links section.

Objectives

There are several objectives for this report and may include the following:

- Assess the current condition (i.e., status) and trend of selected forest resources.
- Document implementation of the Plan monitoring Program including changed conditions or status of key characteristics used to assess accomplishments and progress toward achievement of the selected Land and Resource Management Plan components.
- Evaluate relevant assumptions, changed conditions, management effectiveness, and progress towards achieving the selected desired conditions, objectives, and goals described in the Forest Plan
- Assess the status of previous recommended options for change based on previous monitoring & evaluation reports.
- Document any scheduled monitoring actions that have not been completed and the reasons and rationale why it has not.
- Present any new information not outlined in the current plan monitoring program that is relevant to the evaluation of the selected monitoring questions.
- Present recommended change opportunities to the responsible official.

How to Use the Report

This report is a tool and a resource for the Forest Service to assess the condition of forest resources in relation to Forest Plan direction and management actions. It is also a tool and a resource for the public to learn more about how the Forest Service is managing forest resources.

The biennial monitoring evaluation report is designed to help the public, as well as Federal, State, local government, and Tribal entities anticipate key steps in the overall monitoring program. These steps include upcoming opportunities for public participation and how the public will be informed of those opportunities, and how public input will be used as the monitoring program progresses. The biennial monitoring evaluation report is also intended to help people better understand reported results in relation to past monitoring reports, future monitoring reports and the broader-scale monitoring strategy that is issued at the Forest Service Regional level.

The Importance of Public Participation

We informed the public of the availability of the biennial monitoring report for the Salmon-Challis National Forest, through the web at https://www.fs.usda.gov/main/scnf/landmanagement/planning in the quick links section. This forum and others used with Plan revision efforts will be used to encourage and solicit public feedback on the effectiveness of the Forest Plans. Additionally, throughout the year the Forest works with State, County, and Local Governments, interested groups and people, regulatory agencies, permit and contract holders, along with others to discuss many matters some of which directly inform the Forest on Plan effectiveness.

About Our Forest Plan Monitoring Program

Roles and Responsibilities

The Forest Plan Monitoring Program requires a coordinated effort of many people, from the people who collect the data, to the people outside the Forest Service who provide feedback and assistance, to the decision maker.

The Salmon-Challis National Forest Supervisor is the responsible official for the forest and plan is presented the biennial reports along with the determinations for consideration. If warranted, the responsible official may base on this make amendments or revisions to the forest plan, change management activities, and/or change the monitoring program.

How Our Plan Monitoring Program Works

Monitoring and evaluation requirements have been established through the National Forest Management Act (NFMA) at 36 CFR 219. Additional direction is provided by the Forest Service in Chapter 30 – Monitoring – of the Land Management Handbook (FSH 1909.12).

The Salmon-Challis National Forest monitoring program was updated in May of 2016 for consistency with the 2012 planning regulations [36 CFR 219.12 (c)(1)]. The Salmon-Challis Forest Plan was administratively changed to include the updated monitoring program See Appendix A. Monitoring questions and indicators were selected to inform the management of resources on the plan area and not every plan component was determined necessary to track [36 CFR 219.12(a)(2)]. See the Plan Monitoring Program in Appendix A for discussion on how the monitoring questions were selected to be consistent with the 2012 planning regulations 36 CFR 219.12.

Providing timely, accurate monitoring information to the responsible official and the public is a key requirement of the plan monitoring program. The biennial report is the vehicle for disseminating this information.

In the context of forest planning there are three main monitoring goals:

- Are we implementing the Forest Plan implemented properly? Are we meeting our management targets and project guidelines? (implementation monitoring)
- Are we achieving our Forest Plan management goals and desired outcomes? (effectiveness monitoring)
- Does our hypothesis testing indicate we may need to change the Forest Plan? (validation monitoring)

Implementation monitoring is important for tracking progress and accomplishments. However, it is effectiveness and validation monitoring that drive and support the adaptive management process. Effectiveness monitoring evaluates condition and trend relative to desired conditions. Validation monitoring tests hypotheses and provides information that might necessitate changes to desired conditions in the plan (e.g. is what we think the desired state should be really accurate?). Providing timely, accurate monitoring information to the responsible official and the public is a key requirement of the plan monitoring program.

Challis and Salmon National Forest LRMP Monitoring Plan Modification

Introduction

The 2012 planning rule, which is found at 36 Code of Federal Regulations (CFR) 219, guides forest plan monitoring across the Forest Service. The planning rule at 36 CFR 219.12 (c) (1) requires the responsible official to modify the monitoring program to meet the requirements of the 2012 planning rule by May 2016. The Salmon-Challis National Forest conformance strategy focuses on addressing the purpose of the forest plan monitoring program as described in 36 CFR 219.12(a)(1), which includes the need for monitoring information that enables the responsible official to determine if a change in plan components in the plan area may be needed.

In addition, each forest plan monitoring program must contain one or more monitoring questions and associated indicators addressing each of the following eight requirements, which are noted at 36 CFR 219.12(a)(5):

1. The status of select watershed conditions.
2. The status of select ecological conditions including key characteristics of terrestrial and aquatic ecosystems.
3. The status of focal species to assess the ecological conditions required at 36 CFR 219.9.
4. The status of a select set of the ecological conditions required under 36 CFR 219.9 to contribute to the recovery of federally listed threatened and endangered species, conserve proposed and candidate species, and maintain a viable population of each species of conservation concern.
5. The status of visitor use, visitor satisfaction, and progress toward meeting recreation objectives.
6. Measurable changes on the plan area related to climate change and other stressors that may be affecting the plan area.
7. Progress toward meeting the desired conditions and objectives in the plan, including for providing multiple use opportunities.
8. The effects of each management system to determine that they do not substantially and permanently impair the productivity of the land (16 U.S.C. 1604(g)(3)(C)).

The purpose of forest plan monitoring and evaluation is to evaluate, document, and report how well the forest is implementing the forest plan, how well the forest plan is working, and if the forest plan purpose and direction remain appropriate. Monitoring determines actual conditions and circumstances and compares them with assumptions and expected or desired results. Monitoring information should enable the responsible official to determine is a change in plan components or other plan content that guide management of resources on the plan area may be needed.

Types of Monitoring

The monitoring identified in this forest plan is not all of the monitoring conducted on a national forest. Other forms of monitoring, which address other laws, policies, and site- specific decisions are also ongoing. Three categories of monitoring (see Forest Service Manual 1925.21) comprise both forest plan and individual project monitoring:

- Implementation Monitoring – Used to determine if plans, prescriptions, projects, and activities were implemented as designed and in compliance with the forest plan.

- Effectiveness Monitoring – Used to determine if plans, prescriptions, projects, and activities are effective in accomplishing Plan goals, and objectives, and moving toward desired conditions; and
- Validation Monitoring – Used in cases of uncertainty to determine if initial data, assumptions, and coefficients used to predict outcomes in the development of the Plan are correct.
- Most monitoring at the national forest level is in the first two categories. Emphasis of the forest plan monitoring program under the 2012 planning rule is the second category.

Forest Plan Monitoring and Evaluation

The proposed monitoring program for the Salmon-Challis National Forest is presented below in a set of tables, each related to one of the eight required items listed above. For clarity, monitoring questions for terrestrial ecosystems and aquatic ecosystems are presented in separate tables. In the tables, each row represents a single monitoring question and associated indicators. Rows begin with selected desired conditions and objectives that lead to the monitoring question. Next, the monitoring question and associated indicators are listed. The desired conditions are generally complex statements that cannot be fully monitored.

Therefore, the monitoring questions and indicators focus on some core aspect of the desired condition that we are capable of monitoring and will provide information for the forest supervisor to use to determine if changes to the plan or management actions are needed.

Some monitoring questions and indictors may address more than one of these required topics. Monitoring questions and indicators that address more than one of the eight required items are repeated for each such item. Questions and indicators are based on one or more desired conditions, objectives, or other components in the plan, but not every plan component has a corresponding monitoring question.

The monitoring questions and associated indicators are designed to inform the management of resources on the plan area, including by testing relevant assumptions, tracking relevant changes, and measuring management effectiveness and progress toward achieving or maintaining the plan's desired conditions or objectives, as defined in the 2012 planning rule. Both the questions and indicators use the best available science to provide relevant information regarding the conditions across the national forest and for individual resources.

The entire monitoring program must be within the financial and technical capability of the forest, augmented by broader-scale monitoring by the Region, if needed, and other monitoring with partners.

We expect to achieve monitoring and evaluation per the proposed program. We also expect that partnerships can be developed to accomplish more in monitoring and evaluation. Details of the plan monitoring program, including monitoring and analysis protocols, will be part of a separate monitoring guide.

Challis National Forest LRMP Monitoring Plan

Plan Components	Monitoring Question	Monitoring Indicator
Provide developed outdoor recreation opportunities for the general public.	How is the Forest's developed recreation program meeting visitor needs and providing for public health and safety at Forest facilities?	• Level of visitor satisfaction • Recreation facility condition • Recreation use at developed sites. • Number of passing and failing tests per water system • Number of public water systems (ex. campground) in use or decommissioned

Emphasize dispersed area recreation over developed site recreation. Provide a broad spectrum of dispersed recreation opportunities.	How is the Forest's dispersed recreation program meeting visitor needs?	• Level of visitor satisfaction • Trail miles maintained/improved to standard. • Miles of new trail constructed. • Trail miles meeting standard
Identify, protect, interpret and manage the significant cultural resources on Forest lands.	Are heritage resources being protected and are mitigation measures sufficient to prevent damage to heritage resources from federal actions, looting, environmental disturbance, and other actions?	• Number of historic properties recorded and evaluated for the National Register • Number of eligible historic properties being impacted by federal actions, looting, environmental disturbance, and other actions
Preserve and protect Wilderness as an example of natural ecosystems for future generations.	What is the condition of campsites within of designated Wilderness areas? What is the amount, distribution, and potential conflicts among Wilderness visitors?	• Condition of upland and river campsites • Number of motorized and/or mechanized intrusions
Manage special areas consistent with the intent in which they were established.	Do water resource projects meet criteria established in the Wild and Scenic Rivers Act?	• Impacts to Outstandingly Remarkable Wild and Scenic River Values from projects within river corridors

Plan Components	Monitoring Question	Monitoring Indicator
Provide habitat to ensure viability and recovery of Threatened and Endangered and Forest Service Sensitive plants and animals.	How are forest management activities and/or natural events affecting ecological conditions that contribute to the recovery of federally listed threatened and endangered species, conserve proposed and candidate species?	• Quality of aquatic habitat for salmonid presence and/or distribution, spawning, and other cold water aquatic life • Compliance with state water quality sediment, turbidity, and temperature standards and maintenance of beneficial uses • Effects of management activities on maintenance and protection of watershed health (e.g. sediment) • Anadromous and resident salmonid redd count trends. • Water temperature • Changes in number of fish barriers • Changes in stream channel morphology • Sage-grouse habitat suitability and condition
Maintain or improve the current productivity level of wildlife and fish habitat.	How are forest management activities and natural events affecting the ecological conditions of terrestrial and aquatic ecosystems?	• Ground and vegetation cover and species composition in non-forested communities. • Water temperature • Function and condition of lentic riparian systems • Changes in riparian vegetation composition • Forested ecosystem condition- species composition, disturbance, extent • Aspen stand condition
Maintain a high-quality allotment administration program. Manage all allotments to maintain suitable range in satisfactory (rangeland which is in an ecological state of fair or better and with and upward or stable trend) condition and improve suitable range that is in less than satisfactory condition. Riparian areas condition and trend will slowly improve within allotments.	Are current allotment management strategies effective in meeting or moving toward desired conditions?	• Sage-grouse habitat suitability and condition • Ground and vegetation cover and species composition in non-forested communities. • Changes in stream channel morphology • Function and condition of lentic riparian systems • Changes in riparian vegetation composition

Plan Components	Monitoring Question	Monitoring Indicator
Maintain noxious weed control program at or above current level.	Are our management actions reducing the occurrence of invasive species?	• Acres of invasive plant infestations • Number of acres treated for invasive plants
Meet needs of local dependent mills and allow for moderate growth in demand. Fuel wood offered will meet local demand throughout the planning period. Maintain or provide for increase in livestock grazing to maintain local ranching economy. Ensure that locatable, common variety, and energy minerals are developed in environmentally acceptable ways and in concert with other resources and in compliance with current laws and regulations.	Are goods and services being provided in accordance with forest plan goals, objectives, and desired conditions?	• Total timber sale program quantity • Number of fuelwood cords sold. • Level of authorized livestock grazing • Number of approved Locatable Plans of Operation (POOs) • Quantity of common variety mineral materials sold
Provide soil and water guidance to other resource activities to protect and improve water quality and soil productivity.	What are the effects of forest plan management activities to soil and water resources?	• Quality of aquatic habitat for salmonid spawning and cold-water aquatic life • Compliance with state water quality sediment, turbidity, and temperature standards and maintenance of beneficial uses • Effects of management activities on maintenance and protection of watershed health (e.g. sediment) • Changes in stream channel morphology • Function and condition of lentic riparian systems • Changes in riparian vegetation composition • Effectiveness and applicability of current practices to maintain water quality. • Soil quality, productivity, and function

Plan Components	Monitoring Question	Monitoring Indicator
Improve watershed condition on the Forest.	Are we effectively protecting and improving watershed conditions through forest plan management activities?	• Quality of aquatic habitat for salmonid spawning and cold-water aquatic life • Compliance with state water quality sediment, turbidity, and temperature standards and maintenance of beneficial uses. • Effects of management activities on maintenance and protection of watershed health (e.g. sediment) • Changes in stream channel morphology • Riparian habitat condition • Changes in riparian vegetation composition • Effectiveness and applicability of current practices to maintain water quality. • Soil quality, productivity, and function • Water quality chemistry analysis (select locations as needed)
Manage riparian areas according to the Riparian Standards and Guidelines. Protect or improve riparian dependent resources during management activities within or affecting riparian areas.	Are we effectively protecting and improving aquatic ecosystems and riparian conditions through forest plan management activities?	• Quality of aquatic habitat for salmonid spawning and cold-water aquatic life • Compliance with state water quality sediment, turbidity, and temperature standards and maintenance of beneficial uses • Effects of management activities on maintenance and protection of watershed health (e.g. sediment) • Changes in stream channel features • Changes in riparian vegetation composition Function and condition of lentic riparian systems • Effectiveness and applicability of current practices to maintain water quality

Plan Components	Monitoring Question	Monitoring Indicator
Meet state air quality standards. Meet federal and state ambient air quality and visibility standards and other applicable air quality direction. (FCRONRW)	To what degree are atmospheric pollutants changing natural ecosystems in the plan area?	• Changes in water chemistry related to air pollution. • Compliance with state air quality standards □
Develop a well-planned and executed fire protection and fire use program that is cost efficient and response to land and resource management goals and objectives.	Are fires being managed to accomplish resource management and protection objectives?	• Total acres burned (forested and non-forested) • Acres and number by type of fire (I-V) or by size class • Acres identified for resource benefit
Use prescribed fire to accomplish resource management objectives.	Are fuels reduction projects protecting property, human health and safety, and reducing the potential for unwanted fire effects (in the wildland-urban interface (WUI) and non-WUI)?	• Acres of hazardous fuels reduction in WUI and non-WUI

Salmon National Forest LRMP Monitoring Plan

Plan Components	Monitoring Question	Monitoring Indicator
Improve the quality of recreation experience and increase the PAOT (Person At One Time) capacity of developed recreation sites in heavy use areas.	How is the Forest's developed recreation program meeting visitor needs and providing for public health and safety at Forest facilities?	• Level of visitor satisfaction • Recreation facility condition • Recreation use at developed sites. • Number of passing and failing tests per water system • Number of public water systems (ex. campground) in use or decommissioned
Increase emphasis on managing dispersed recreation use in areas providing Semi primitive and Roaded Natural recreation opportunities and maintain the generally high quality of these settings. Improve the condition of priority trails in designated wilderness management areas featuring semi-primitive recreation opportunities and nationally designated trails and maintain other high use system trails in a usable condition.	How is the Forest's dispersed recreation program meeting visitor needs?	• Level of visitor satisfaction • Trail miles maintained/improved to standard. • Miles of new trail constructed. • Trail miles meeting standard

Plan Components	Monitoring Question	Monitoring Indicator
Locate, determine the significance of, and where appropriate, preserve, protect, and interpret historical and archeological sites.	Are heritage resources being protected and are mitigation measures sufficient to prevent damage to heritage resources from federal actions, looting, environmental disturbance, and other actions?	• Number of historic properties recorded and evaluated for the National Register. Number of eligible historic properties being impacted by federal actions, looting, environmental disturbance, and other actions.
Provide for a quality wilderness experience in the Salmon National Forest portion of the Frank Church--River of No Return Wilderness consistent with Frank Church--River of No Return Wilderness Management Plan objectives.	What is the condition of campsites within designated Wilderness areas? What is the amount, distribution, and potential conflicts among Wilderness visitors?	• Condition of upland and river campsites • Number of motorized/mechanized intrusions
In accordance with guidelines in the approved Frank Church-River of No Return Wilderness Management Plan and the approved Management Plan for the Salmon Wild and Scenic River, the Forest will encourage the County to develop and implement zoning of private riverside lands that is compatible with the Forest Management Guidelines. Where the County does not implement compatible zoning requirements, the Forest will schedule and acquire scenic easements to meet the objectives of the Plan.	Do water resource projects meet criteria established in the Wild and Scenic Rivers Act?	• Impacts to Outstandingly Remarkable Wild and Scenic River Values from projects within river corridors

Plan Components	Monitoring Question	Monitoring Indicator
Provide National Forest portion of the habitat needed to meet Regional Wildlife and Fish Management objectives. o Habitat for each vertebrate wildlife species on the Forest will be managed to insure viable or target populations. o Place emphasis on improving key ecosystems including but not limited to riparian, aspen, aquatic, snag, and old growth. o Manage and provide habitat for recovery of endangered and threatened species as specified in the Species Management Plan for the Salmon National Forest.	How are forest management activities and/or natural events affecting ecological conditions that contribute to the recovery of federally listed threatened and endangered species, conserve proposed and candidate species, and maintain a viable population of each species of concern?	• Quality of aquatic habitat for salmonid distribution, spawning, and other cold water aquatic life • Compliance with state water quality sediment, turbidity, and temperature standards and maintenance of beneficial uses • Effects of management activities on maintenance and protection of watershed health (e.g. sediment) • Anadromous and resident salmonid redd count trends. • Water temperature • Changes in number of fish barriers • Changes in stream channel morphology • Sage-grouse habitat suitability and condition
Maintain adequate structural diversity of vegetation on Forest lands to ensure habitat for minimum viable or target populations of all wildlife species and to provide representations of the various ecological stages of endemic plant communities. • Provide habitat diversity through vegetation treatments in conjunction with other resource activities designed to maintain or improve wildlife or fisheries habitat. • Provide habitat for populations of all native vertebrate species of fish and wildlife.	How are forest management activities and natural events affecting the ecological conditions of terrestrial and aquatic ecosystems?	• Ground and vegetation cover and species composition in non-forested communities. • Water temperature • Function and condition of lentic riparian systems • Changes in riparian vegetation composition • Forested ecosystem condition- species composition, disturbance, extent • Aspen stand condition

Plan Components	Monitoring Question	Monitoring Indicator
Manage all allotments to maintain suitable rangelands that are presently in satisfactory condition and improve suitable rangelands that are in poor or fair condition. • Improve and maintain environmental quality of NFS ranges by managing the grazing in harmony with the needs of other resources and their uses. • Search out and apply techniques to resolve livestock grazing problems or conflicts with other resource uses within riparian areas. • Coordinate range improvement and management activities with wildlife habitat needs, especially on key habitat areas such as winter ranges, calving areas, riparian areas, and sage-grouse leks. • Maintain proper stocking and livestock distribution to protect riparian ecosystems.	Are current allotment management strategies effective in meeting or moving toward desired conditions?	• Sage-grouse habitat suitability and condition • Ground and vegetation cover and species composition in non-forested communities. • Changes in stream channel morphology • Function and condition of lentic riparian systems • Changes in riparian vegetation composition □
Control noxious weeds as needed to protect the value of other resources and comply with State law.	What management actions are being taken to address invasive species?	• Acres of invasive plant infestations • Number of acres treated for invasive plants
Provide a continuous flow of raw material available to dependent manufacturing communities. Provide a personal use and commercial firewood program to meet the demands of local Forest communities. Contribute to the maintenance of viable rural economics by promoting stability of family ranches and farms. Encourage the legitimate exploration and extraction of leasable and locatable minerals from National Forest lands while maintaining or improving other resource values.	Are goods and services being provided in accordance with forest plan goals, objectives, and desired conditions?	• Total timber sale program quantity • Number of fuelwood cords sold. • Level of permitted livestock grazing • Number of approved Locatable Plans of Operation (POOs) • Quantity of common variety mineral materials sold

Plan Components	Monitoring Question	Monitoring Indicator
Maintain watershed conditions and water quality such that downstream beneficial uses are protected and compliance with State standards is achieved. • Maintain soil productivity, minimize man-caused soil erosion, and maintain the integrity of associated ecosystems.	What are the effects of forest plan management activities to the productivity of the land?	• Effectiveness and applicability of current practices to maintain water quality. • Soil quality, productivity, and function
Maintain watershed conditions and water quality such that downstream beneficial uses are protected and compliance with State standards is achieved. • Conduct management and resource development within riparian zones in a manner compatible with protection of water quality and fish habitat. • Prevent stream channel instability, loss of channel cross-sectional areas, and loss of water quality resulting from activities that alter vegetative cover. • Riparian zones will be managed in a manner compatible with protection of water quality and fish habitat. • Search out and apply techniques to resolve livestock grazing problems or conflicts with other resource uses within riparian areas. • Manage forest cover types in riparian areas to perpetuate tree cover and provide healthy stands, high water quality and wildlife and fish habitats.	Are we effectively protecting and improving aquatic ecosystems and riparian conditions through forest plan management activities?	• Quality of aquatic habitat for salmonid spawning and cold-water aquatic life. • Compliance with state water quality sediment, turbidity, and temperature standards and maintenance of beneficial uses • Effects of management activities on maintenance and protection of watershed health (e.g. sediment) • Changes in stream channel morphology • Function and condition of lentic riparian systems • Changes in riparian vegetation composition • Effectiveness and applicability of current practices to maintain water quality. • Soil quality, productivity, and function
Meet state air quality standards.	What are the effects of atmospheric pollutants to natural ecosystems?	• Changes in water chemistry related to air pollution. • Compliance with state air quality standards.

Plan Components	Monitoring Question	Monitoring Indicator
Provide a cost-effective level of fire protection to minimize the combined costs of protection and damages and prevent loss of human life.	Are fires being managed to accomplish resource management and protection objectives?	• Total acres burned (forested and non-forested) • Acres and number by type of fire (I-V) or by size class • Acres identified for resource benefit
Use prescribed fire to treat hazardous fuel conditions, accomplish range improvement, wildlife habitat improvement, and to create a diversified Forest condition when it is cost efficient.	Are fuels reduction projects protecting property, human health and safety, and reducing the potential for unwanted fire effects (in the wildland-urban interface (WUI) and non-WUI)?	• Acres of hazardous fuels reduction in WUI and non-WUI

United States Department of Agriculture

Biennial Monitoring Evaluation Report

Salmon-Challis National Forest

Challis Land Resource Management Plan

Forest Service Salmon-Challis National Forest May 2024

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Introduction

The 2012 planning rule, which is found in the Code of Federal Regulations at 36 CFR 219, guides forest plan monitoring across the Forest Service. The Salmon-Challis National Forest conformance strategy focuses on addressing the purpose of the forest plan monitoring program as described in 36 CFR 219.12(a)(1), which includes the need for monitoring information that enables the responsible official to determine if a change in plan components or other plan content that guide management of resources on the plan area may be needed. The Biennial Monitoring Report evaluates new information gathered through the plan monitoring program and relevant information from the broader-scale strategy and makes this information available to the public. The monitoring evaluation report must indicate whether or not a change to the plan, management activities, or the monitoring program, or a new assessment, may be warranted based on the new information. The biennial monitoring evaluation report is used to inform adaptive management of the plan area. Any testing of assumptions, another rule-stated purpose of monitoring, would be addressed where relevant to one of the four determinations to be made.

This report presents monitoring information for 2022-2023 and is organized in two main parts. The first part presents findings for each monitoring question in the monitoring plan and the data source and monitoring result for each indicator for each monitoring question. The monitoring questions and associated indicators address each of the eight requirements which are noted at 36 CFR 219.12(a)(5). The second part is a discussion of four determinations from the which include whether or not a change to the plan, management activities, or the monitoring program, or a new assessment, may be warranted based on the new information.

The Salmon-Challis National Forest is guided by the Challis Land and Resources Management Plan (LRMP) and the Challis LRMP. This report discusses the Challis LRMP. The Challis Forest Plan was completed in 1988 and revision is currently underway. Over the past 15 years there have been several amendments and corrections to the Forest Plan that are presented in Appendix B.

Monitoring Evaluation

Monitoring Question 1

How is the Forest's developed recreation program meeting visitor needs and providing for public health and safety at Forest facilities?

Indicator #1

Level of visitor satisfaction.

Data source:

Monitoring result: See Appendix A

Indicator #2

Recreation facility condition

Data source:

Monitoring result: See Appendix A

Indicator #3

Recreation use at developed sites

Data source:

Monitoring result: See Appendix A

Indicator #4

Number of passing and failing tests per water system

Data source:

Monitoring result: See Appendix A

Indicator #5

Number of public water systems (ex. campground) in use or decommissioned

Data source:

Monitoring result: See Appendix A

Monitoring Question 2

How is the Forest's dispersed recreation program meeting visitor needs?

Indicator #1

Level of visitor satisfaction

Data Source:

Monitoring Results: See Appendix A

Indicator #2

Trail miles maintained/improved to standard

Data source:

Monitoring result: See Appendix A

Indicator #3

Miles of new trail constructed

Data source:

Monitoring result: See Appendix A

Indicator #4

Trail miles meeting standard

Data source:

Monitoring result: See Appendix A

Monitoring Question 3

Are heritage resources being protected and are mitigation measures sufficient to prevent damage to heritage resources from federal actions, looting, environmental disturbance, and other actions?

Indicator #1

Number of eligible historic properties being impacted by federal actions, looting, environmental disturbance, and other actions.

Data Source: Project inventory reports and monitoring reports

Monitoring Results: During the 2022-2023 reporting period 24 sites were monitored throughout the Salmon-Challis National Forest. Twenty-eight sites showed signs of deterioration. Impacts were mostly due to cattle grazing, trailing, or trampling; however, other impacts included erosion and natural weathering, dispersed camping and recreational use, and road use.

Table 1. Sites monitored for impact from looting, environmental disturbance, and other actions.

Year	# Sites Monitored	# Sites Deteriorated	% Sites Deteriorated
2022	42	13	31
2023	41	15	37

Indicator #2

Number of historic properties recorded and evaluated for the National Register of Historic Places

Data source: Project inventory reports

Monitoring result: During the 2022-2023 reporting period a total of 62 sites were evaluated for the National Register of Historic Places (50 in 2022 and 12 in 2023). No sites were nominated or listed on the National Register.

Monitoring Question 4

What is the condition of campsites within designated Wilderness areas? What is the amount, distribution, and potential conflicts among Wilderness visitors?

Indicator #1

Condition of upland and river campsites

Data Source:

Monitoring Results: See Appendix A

Indicator #2

Number of motorized/mechanized intrusions

Data Source:

Monitoring Results: See Appendix A

Monitoring Question 5

Are goods and services being provided in accordance with forest plan goals, objectives, and desired conditions?

Indicator #1

Impacts to Outstandingly Remarkable Wild and Scenic River Values from projects within river corridors

Data Source: PIBO Monitoring Program, USDA Forest Service, 2022

Monitoring Results:

Monitoring Question 6

How are forest management activities and/or natural events affecting ecological conditions that contribute to the recovery of federally listed threatened and endangered species, conserve proposed and candidate species?

Indicator #1

Quality of aquatic habitat for salmonid distribution, spawning, and other cold water aquatic life

Data Source:

Monitoring Results: The Pacfish/Infish Biological Opinion Effectiveness Monitoring Program (PIBO) compares stream habitat characteristics of in managed locations (primarily grazed) to those of streams likely to be functioning properly. This is done to evaluate status of stream habitat and to document changes in habitat conditions (e.g. "trend") over the 22-year period of PIBO sampling (2001-2023). Attributes measured during PIBO sampling are included in Table 2. Please note that PIBO sampling occurred in 2023 but analysis was not yet available at the time of this report.

On the Challis National Forest, the Big Lost and Upper Salmon sub-basins were analyzed for trend and status. The Little Lost, Lower Middle Fork Salmon, Upper Middle Fork Salmon, and Pahsimeroi sub-basins were not evaluated as there weren't enough sampling locations to carry out the analysis. Eighteen locations were sampled in the Big Lost sub-basin and 11 locations were sampled in the Upper Salmon sub-basin.

Table 2. Stream habitat attributes

STREAM HABITAT ATTRIBUTES
Average bank angle (°)
d_{50} (median substrate particle size)
Percent fine sediment (<6 mm diameter, in pool tails)
Large Wood frequency (pieces /km)
Residual pool depth (m)
Percent pool habitat
Bank stability (% bank covered with plants or rock)
Percent of bank with undercuts (bank angle <90°)

In the Big Lost sub-basin, there was no statistically significant change in total index or in any of the individual stream habitat attributes. Number of sites showing positive versus negative change for stream habitat attribute were often comparable. The Upper Salmon sub-basin total index a showed statistically significant decreasing trend at a rate greater than reference sites. This is undesirable and suggests that management could be playing a negative role in site condition. Two stream habitat attributes showed significant change: percent fine sediment in poot tails and bank stability. Percent fine sediment show undesirable change while bank stability showed desirable change. Both attributes show markedly different trends compared to reference site trends.

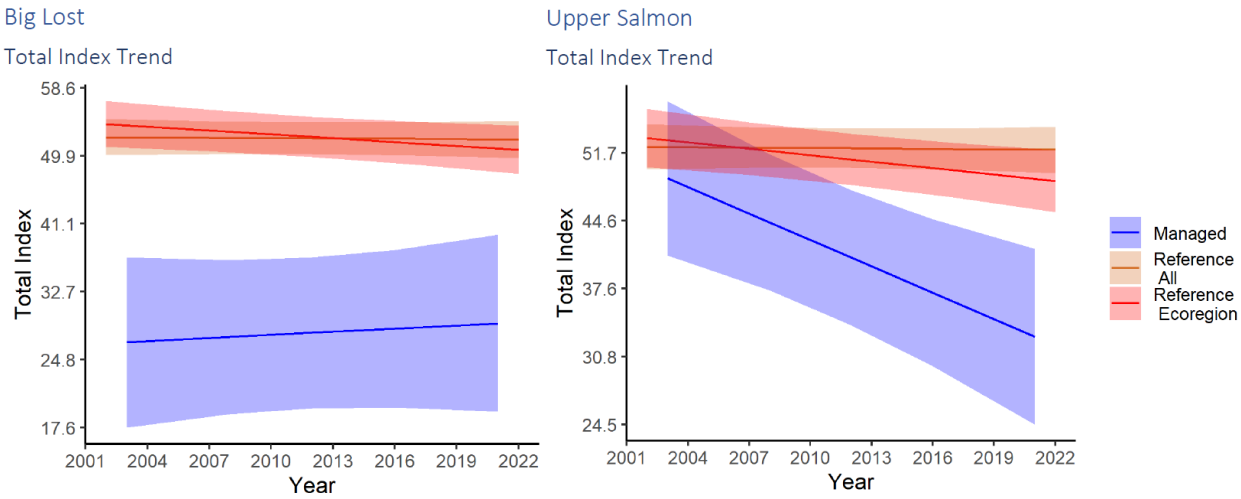

Figure 1. Total index trends in the Big Lost and Upper Salmon sub-basins compared to ecoregion reference and all reference trends.

Indicator #2

Compliance with state water quality sediment, turbidity, and temperature standards and maintenance of beneficial uses

Data Source: : Idaho Department of Environmental Quality 2022 Integrated Report (published April, 2022), a biennial report describing ongoing efforts to monitor, assess, track, and restore the chemical, physical, and biological integrity of Idaho waters (https://www2.deq.idaho.gov/admin/LEIA/api/document/download/16619).

Monitoring result: States are required under Sections 303(d), 305(b), and 314 of the Clean Water Act to maintain a list of impaired water bodies that do not meet beneficial uses. Stream segments are grouped into Assessment Units (AUs) for classification. AUs that do not support beneficial uses but have an approved TMDL (Total Maximum Daily Load) or do not require a TMDL are listed as Category 4. AUs that do not support beneficial uses and a TMDL is still needed are listed as Category 5 (the 303(d) list of impaired waters). Assessments provided in the 2022 Integrated Report utilize data and information from a 5-year period from 2016 to 2022. Because the 2024 Integrated Report (covering the period from 2022 to 2024) has not yet been published, the 2022 report provides the most current assessment of compliance with State water quality standards. However, this does not include any changes that may have occurred during the 2022-2023 timeframe of this biennial monitoring report.

Out of 5448 stream miles on the Challis National Forest, 2510 miles fully support beneficial uses, 1568 miles are not assessed, 958 miles are impaired with an existing TMDL or TMDL not required, and 412 miles are listed as impaired (303(d) list). The 303(d)-listed streams are shown in the table below. No lakes on the Challis National Forest are listed as impaired (303(d) list).

Table 3. Impaired waters by assessment unit.

Assessment Unit Name	Assessment Unit ID	Stream miles on NFS lands	Parameter
Baiya Naokwaide - source to mouth	ID17040217SK023_02	7.98	Combined biota/habitat bioassessments
Basin Creek - East Basin Creek to mouth	ID17060201SL048_03	2.36	Sedimentation/siltation
Big Lost River - Burnt Creek to Thousand Springs Creek	ID17040218SK024_02	35.73	Combined biota/habitat bioassessments
Big Lost River - Summit Creek to and including Burnt Creek	ID17040218SK025_02	22.99	Combined biota/habitat bioassessments
Big Lost River - Summit Creek to and including Burnt Creek	ID17040218SK025_04	4.96	Temperature
Burnt Creek - source to Long Creek	ID17060202SL024_02	7.92	Combined biota/habitat bioassessments
Cape Horn Creek - Banner Creek to mouth	ID17060205SL020_03	4.11	Temperature
Cherry Creek-confluence of Left Fork Cherry and Lupine Creek	ID17040218SK049_04	2.08	Escherichia coli (e. Coli)
Corral Creek - source to mouth	ID17040218SK041_02	18.03	Escherichia coli (e. Coli)
East Fork Salmon River - Germania Creek to Herd Creek	ID17060201SL103_02	32.6	Combined biota/habitat bioassessments
Fall Creek - source to mouth	ID17040218SK032_04	2.22	Combined biota/habitat bioassessments
Furnace Creek - source to mouth	ID17060206SL032_02	19.12	Temperature

Assessment Unit Name	Assessment Unit ID	Stream miles on NFS lands	Parameter
Knapp Creek - source to mouth	ID17060205SL025_02	28.1	Combined biota/habitat bioassessments
Muldoon Canyon Creek - source to mouth	ID17040218SK037_02	25.94	Escherichia coli (e. Coli)
Pass Creek - source to mouth	ID17040218SK009_02	46.92	Combined biota/habitat bioassessments
Pass Creek - source to mouth	ID17040218SK009_03	3.99	Combined biota/habitat bioassessments and escherichia coli (e. Coli)
Patterson Creek - source to and including Inyo Creek	ID17060202SL035_02	28.36	Combined biota/habitat bioassessments
Right Fork Iron Bog Creek - source to mouth	ID17040218SK055_02	16.29	Combined biota/habitat bioassessments
Sawmill Creek	ID17040217SK014_02	33.46	Escherichia coli (e. Coli)
South Fork Lawson Creek - source to mouth	ID17060202SL005_02	9.17	Combined biota/habitat bioassessments
Star Hope Creek - Lake Creek to mouth	ID17040218SK035_02	17.1	Escherichia coli (e. Coli)
Star Hope Creek - Lake Creek to mouth	ID17040218SK035_04	7.63	Escherichia coli (e. Coli)
Star Hope Creek - source to Lake Creek	ID17040218SK036_02	20.41	Escherichia coli (e. Coli)
West Fork Camas Creek - source to mouth	ID17060206SL024_03	5.21	Temperature
Yankee Fork Creek - Jordan Creek to mouth	ID17060201SL032_04	9	Temperature

Indicator #3

Effects of management activities on maintenance and protection of watershed health (e.g. sediment)

Data source: Salmon-Challis National Forest Watershed Monitoring Program – measurement of fine sediment at depth in spawning habitat, 2022 and 2023 data, trends, and analysis.

Monitoring result: A total of 13 sites were monitored in 2022 on the Challis National Forest. Percent fine sediment at depth in spawning habitat (particles less than 0.25 inches in diameter) ranged from 13.7% to 35.3%, with a median value of 25.1%. Three sites showed high levels of fine sediment (greater than 30%) in 2022. A total of 16 sites were monitored in 2023 on the Challis National Forest. Percent fine sediment at depth in spawning habitat ranged from 9.1% to 35.6%, with a median value of 27.7%. Seven sites showed high levels of fine sediment (greater than 30%) in 2019.

Fine sediment at depth is an indicator of the quality of spawning habitat for anadromous and resident fish species. Fine sediment in streams can also be an indicator of erosion and sedimentation that result from various land management activities as well as natural sources. The 57 current monitoring sites on the Challis National Forest are monitored every 2 to 5 years, depending on the type of site and data needs.

Therefore, comparison of these data statistics from year to year do not indicate trends because different sites are sampled each year. Data trends for a particular site are generally fairly undefined, as a fair amount of variation occurs between sample years for a variety of reasons, and data continuity is limited at many sites. Examining trends over a longer time period, such as a rolling 5-year average, is more informative than examining year-to-year trends. Interpretation of depth fines values should also take into account analysis of watershed processes.

Preliminary analysis is provided in the 2022 Watershed Monitoring Report and the 2023 Watershed Monitoring Report. Results of these preliminary analyses indicate that the factors that have the greatest influence on percent fines are channel type, stream gradient, and geology. Land use factors such as roads, grazing, and fire showed limited correlation with percent fines. The result of this monitoring has further focused the monitoring program, and future monitoring will focus on a set of "key" monitoring sites to examine trends and influences in streams that are the most sensitive to changes in sediment transport and deposition. Further analysis to determine the relationship between land management activities and fine sediment in streams is forthcoming.

Indicator #4

Anadromous and resident salmonid redd count trends

Data Source: North and South Zone Fisheries files, Rocky Mountain Research Station (RMRS), Idaho Department of Fish and Game (IDFG), and Shoshone Bannock Tribe

Monitoring Results: Redd surveys are completed across the Forest by different agencies for anadromous and resident salmonids. Spawning habitat is not a limiting factor for redd development on the Forest. Factors outside of forest management influence trends in redd counts on the Forest. Across the Challis National Forest outside of the Middle Fork of the Salmon River, the Fisheries Program surveyed 12 kilometers for bull trout in 2022 and 11 kilometers in 2023 as part of biological opinion (BO) required monitoring. The crews found 10 redds in 2022 and 0 redds in 2023 with an overall redd densities of 0.83 in 2022. They also surveyed 5 kilometers for chinook salmon in 2023 as part of BO required monitoring but did not observe any redds. No redd surveys for chinook salmon were conducted in 2022.

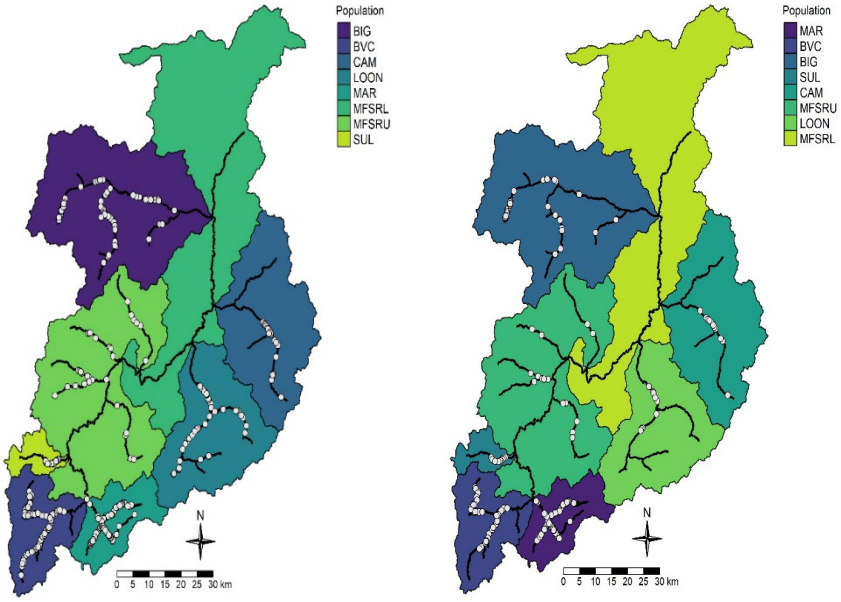

Figure 2. Distribution of Chinook salmon redds in the Middle Fork Salmon River in 2022 (left) and 2023 (right)

Idaho Department of Fish and Game (IDFG) along with tribal and Forest Service partners counted Chinook salmon redds in the Middle Fork of the Salmon River in both 2022 and 2023 using a combination of aerial, ground, and raft counts. In 2022, IDFG counted 842 redds. This is a 133% increase from counts in 2021 and is 16% above the annual mean of counts from 1995 to present. Counts in 2023 found 322 redds, a 62% decrease from 2022 counts. This is 55% below the annual mean of counts from 1995 to present. Both 2022 and 2023 counts were 63% and 86% below the highest count recorded in 2003 at 2,271 redds.

Indicator #5
Water temperature

Data Source: North and South Zone District files and aquatic data-base programs

Monitoring Results: Water Temperature is collected across the Forest for diversion, grazing, and natural condition monitoring. Temperature loggers were placed on the Challis end of the Forest in 2022-2023 in watersheds representing natural conditions. There is no indication of a significant change in temperatures across the forest for these reporting years.

Indicator #6
Changes in number of fish barriers

Data Source: Forest Service INFRA and WIT databases

Monitoring Results: The Salmon-Challis National Forest did not complete any changes to fish barriers on the Challis portion of the Forest.

Indicator #7
Changes in stream channel morphology

Data source: Salmon-Challis National Forest Watershed Monitoring Program – collection of channel type data, and general field observations.

Monitoring result: Channel type data have been collected for all 55 current monitoring sites on the Challis National Forest. Channel type data collected between 1993 and 2010 have been shown to have many errors. Collection of channel type data between 2015 and 2019 has helped to refine these data and provide baseline channel morphology information at these monitoring sites. The ability to detect changes in channel morphology at these sites is limited by data availability, but in some cases, the watershed monitoring program has provided a good assessment of short-term channel morphology changes that occur following wildfire and post-fire flood events.

Indicator #8
Sage-grouse habitat suitability and condition

Data Source: Salmon-Challis National Forest Fourth Order Habitat Assessment Framework (HAF) (Stiver et.al. 2015) and VGS Vegetation/GIS Data System.

Monitoring Results: There were no habitat suitability surveys (HAF 4 surveys) completed on the Forest in 2022-2023.

Monitoring Question 7

How are forest management activities and natural events affecting the ecological conditions of terrestrial and aquatic ecosystems?

Indicator #1
Ground and vegetation cover and species composition in non-forested communities

Data Source: Forest Inventory Analysis, 2004 – 2017, Phase 2 Vegetation Subplot Species

Monitoring Results: The Salmon-Challis National Forest did not conduct any upland monitoring in non-

forested vegetation types that would provide recent information on ground cover, vegetation cover or species composition. There was some data collection for effectiveness monitoring in areas that were aerially treated for invasive species but those areas comprise only a very small portion of the forest on the North Fork Ranger District (a few thousand acres). Ground cover was also monitored in the sagebrush types in the burn area of the 2022 Moose Fire in 2023 but again, the area is small in comparison to the entire forest. Information from previous reports is included here but as indicated, does not contain any updated information since 2017.

Based on FIA data collected through 2017, in mid and tall sagebrush communities, which comprise the majority of the non-forested acres on the Salmon-Challis National Forest, sagebrush species had an average cover of 18% but varied from 3 to 65% in plots where present. Bluebunch wheatgrass, which is considered a cornerstone species of most of the mid and tall sagebrush communities, had an average cover of 12%, but varied from 3 to 55% in plots where present. Idaho fescue, a common co-dominant in these vegetation types, had an average cover of 13% and varied from 3 to 40%. Cheatgrass occurred in 64 subplots, with an average cover of 11%, but varied from 3 to 50%.

Indicator #2

Water temperature

Data Source: North and South Zone District files and aquatic data-base programs

Monitoring Results: Water Temperature is collected across the Forest for diversion, grazing, and natural condition monitoring. Temperature loggers were placed on the Challis end of the Forest in 2022-2023 in watersheds representing natural conditions. There is no indication of a significant change in temperatures across the forest for these reporting years.

Indicator #3

Function and condition of lentic riparian systems

Data source: Groundwater Dependent Ecosystem (GDE) inventory.

Monitoring result: In 2022 and 2023, the monitoring crew completed reconnaissance on 102 Groundwater Dependent Ecosystems using the GDE Level 1 methodology on the Salmon-Challis National Forest. No GDE's Inventoried were located on the Challis National Forest. This work greatly added to the Forest inventory of groundwater and karst systems.

Indicator #4

Changes in riparian vegetation composition

Data Source: Salmon-Challis National Forest Multiple Indicator Monitoring (MIM)

Monitoring Results: Long-term MIM or, in some cases, Windward Greenline, monitoring is conducted at approximately 194 riparian designated monitoring areas (DMAs) across the Salmon-Challis National Forest. All of these DMAs fall within grazing allotments. These sites are read on a 5-year schedule, with approximately 20% of the sites being read each year. The long-term indicators that are collected in the MIM monitoring provide data to assess current condition and trend of streamside vegetation as well as streambanks and channels. They also help determine if local livestock management grazing management strategies and other land management actions are making progress toward achieving long-term goals and objectives for streamside riparian vegetation and aquatic resources (TR 1737-23, 2011).

Based on the most recent compilation of this data (August 2023) there are 159 DMAs that are in late seral (LS) or potential natural community (PNC) status. This equates to roughly 82% of all DMAs monitored.

Thirty DMAs, or 16%, are in mid-seral (MS) status and five DMAs, or about 1%, are in early seral status. There are no DMAs at very early seral status. Under its riparian management strategy, the Forest has set a desired condition of Late Seral (LS) for riparian vegetation. It is important to note that data is reflective of information across the Salmon and Challis National Forests.

Indicator #5

Forested ecosystem condition- species composition, disturbance, extent

Data Source: Forest Inventory and Analysis and Forest Health Protection Reports

Monitoring Results: Forest composition information for the Challis NF is collected by the Forest Inventory and Analysis program. That data is located and accessible for download via the FIA DataMart website. FIA DataMart | US Forest Service Research and Development (usda.gov) The most recent forest inventory for Idaho was completed in 2019. The Challis NF insect and disease disturbance information is collected by the Forest Health Protection program. The most recent report on forest insects and disease condition and extent for Idaho is from 2022 and can be found on the Forest Health Protection website. Forest Health Highlights (usda.gov)

Indicator #6

Aspen stand condition

Data Source: Forest Inventory and Analysis Report

Monitoring Results: Presence and condition of aspen stands on the Challis NF is assessed via the Forest Inventory and Analysis program. That data is located and accessible for download via the FIA DataMart website. FIA DataMart | US Forest Service Research and Development (usda.gov) The most recent forest inventory for Idaho was completed in 2019.

Monitoring Question 8

Are current allotment management strategies effective in meeting or moving toward desired conditions?

Indicator #1

Sage-grouse habitat suitability and condition

Data Source: 4th Order Habitat Assessment Framework Data via VGS report.

Monitoring Results: There were no habitat suitability surveys (HAF 4 surveys) completed on the Forest in 2022-2023.

Indicator #2

Ground and vegetation cover and species composition in non-forested communities

Monitoring Results: See Indicator #1 under monitoring question # 7

Indicator #3

Changes in stream channel morphology

Data source: See Monitoring Question #6, Indicator #7.

Monitoring result: See Monitoring Question #6, Indicator #7.

Indicator #4

Function and condition of lentic riparian systems

Data source: See Monitoring Question #7, Indicator #3.

Monitoring result: See Monitoring Question #7, Indicator #3.

Indicator #5

Changes in riparian vegetation composition

Monitoring Results: See Indicator #4 under monitoring question # 7

Monitoring Question 9

Are our management actions reducing the occurrence of invasive species?

Indicator #1

Acres of invasive plant infestations

Data Source: Salmon-Challis National Forest Geographic Information System library layer, 2023

Monitoring Results: The following table indicates those acres which have been identified as having invasive species present, including lands within designated Wilderness. It is estimated that about 20% of the Forest outside of Wilderness has been inventoried. Although not a listed noxious weed species in the State of Idaho, cheatgrass acreage has been included here as the Salmon-Challis National Forest has been completing aerial treatment of this invasive grass. The Forest has emphasized inventory of cheatgrass over the past two years and is reflected in the data below. Reported acres cover both the Salmon and Challis National Forests.

Table 4. Inventoried acres containing invasive species.

Species	Infested Acres
Black henbane	368
Canada thistle	3,639
Cheatgrass	49,302
Common St. Johnswort	33
Dalmatian toadflax	156
Diffuse knapweed	12
Dyers woad	0
Field bindweed	59
Hoary alyssum	3,280
Houndstongue	2,984
Knotweed	7
Leafy spurge	1,274
Musk thistle	2,044
Oxeye daisy	363

Perennial pepperweed	0
Puncturevine	23
Rush skeletonweed	11,495
Russian knapweed	0
Salt cedar	1
Scotch thistle	1
Spotted knapweed	57,453
Sulphur cinquefoil	626
Whitetop	106
Yellow toadflax	851
TOTAL	**134,077**

Indicator #2

Number of acres treated for invasive plants

Data Source: Salmon-Challis National Forest GI interface with Forest Activity (FACTS) reporting database, FY22 and FY23.

Monitoring Results: Because of unique opportunities available like Cheatgrass Challenge, emphasis on fuels management, and partnership interest, the Salmon-Challis has been able to implement a very successful cheatgrass aerial treatment program. Even so, acres treated are not keeping up with even that which is inventoried, and noxious and invasive acreage continues to increase. Biological control agents are being released but they are a much smaller part of the treatment program.

Table 5. Noxious Weed Acres treated by Fiscal Year

Common Name	FY22	FY23
Black henbane	0	109
Canada thistle	439	601
Cheatgrass	3,257	12,880
Common St. Johnswort	1	264
Common tansy	0	55
Dalmatian toadflax	0	0
Diffuse knapweed	0	0
Dyer's woad	0	0
Field bindweed	5	74
Gypsyflower (houndstongue)	169	347
Hoary alyssum	201	360
Knotweed	0	0
Leafy spurge	47	3
Medusahead	0	5
Nodding plumeless thistle (musk thistle)	49	245

Common Name	FY22	FY23
Oxeye daisy	0	118
Perennial pepperweed	0	0
Puncturevine	49	19
Rush skeletonweed	121	3,355
Russian knapweed	0	1
Salt cedar	0	0
Scotch cottonthistle	21	0
Spotted knapweed	2,082	5,022
Sulphur cinquefoil	121	122
Whitetop	23	1
Yellow toadflax	0	176
TOTAL	**6,585**	**23,757**

Monitoring Question 10

Are goods and services being provided in accordance with forest plan goals, objectives, and desired conditions?

Indicator #1

Total timber sale program quantity

Data Source: Periodic Timber Sale Accomplishment Report (PTSAR)

Monitoring Results:

FY22:

Contracts	1287 ccf
Wood Permits	990 ccf
FY22 Total	**2277 ccf**

FY23:

Contracts	2342 ccf
Wood Permits	3418 ccf
FY23 Total	**5760 ccf**

Indicator #2

Number of fuelwood cords sold

Data Source: Timber Information Management System (TIM)

Monitoring Results:

FY22:
Firewood Permits 3170 Cords

FY23:
Firewood Permits 4109 Cords

Indicator #3

Level of permitted livestock grazing

Data Source: The Forest Service's Natural Resource Manager database was used to summarize forest wide information on grazing permits and permitted use.

Monitoring Results: In 2022, there were a total of 104,580 head months (HMs) of cattle grazing, 693 HMs of horse grazing and 18,652 HMs of sheep grazing, for a total of 123,925 HMs of livestock grazing permitted on the Salmon-Challis National Forest. In 2023, the Forest permitted a total of 102,719 HMs of cattle grazing, 693 HMs of horse grazing and 10,055 HMs of sheep grazing for a total of 113,467 HMs of livestock grazing.

Indicator #4

Number of approved locatable plans of operations

Data Source: NRM Dashboard for Locatable Minerals and Mineral Materials.

Monitoring Results: In 2023, one plan implemented on the Lost River Ranger District.

Indicator #5

Quantity of common variety mineral materials sold

Data Source: Fiscal Year 2023. NRM Dashboard for Locatable Minerals and Mineral Materials

Monitoring Results: In 2023, seven permits were sold on the South Zone.

Monitoring Question 11

What are the effects of forest plan management activities to soil and water resources?

Indicator #1

Quality of aquatic habitat for salmonid spawning and cold-water aquatic life

Data source: See Monitoring Question #6, Indicator #1

Monitoring result: See Monitoring Question #6, Indicator #1

Indicator #2

Compliance with state water quality sediment, turbidity, and temperature standards and maintenance of beneficial uses.

Data source: See Monitoring Question #6, Indicator #2

Monitoring result: See Monitoring Question #6, Indicator #2

Indicator #3

Effects of management activities on maintenance and protection of watershed health (e.g. sediment)

Data source: See Monitoring Question #6, Indicator #3

Monitoring result: See Monitoring Question #6, Indicator #3

Indicator #4

Changes in stream channel morphology

Data source: See Monitoring Question #6, Indicator #7

Monitoring result: See Monitoring Question #6, Indicator #7

Indicator #5

Function and condition of lentic riparian systems

Data source: See Monitoring Question #7, Indicator #3.

Monitoring result: See Monitoring Question #7, Indicator #3.

Indicator #6

Changes in riparian vegetation composition

Data Source:

Monitoring Results: See Indicator #4 under monitoring question # 7

Indicator #7

Effectiveness and applicability of current practices to maintain water quality

Data source: Salmon-Challis National Forest Best Management Practice (BMP) Monitoring Program.
Monitoring result: BMP implementation and effectiveness monitoring were conducted at one project site on the Challis National Forest in 2022 and 2023:

Indicator #8

Soil quality, productivity, and function

Data source: No soil condition monitoring or pre- and post-disturbance soil monitoring were conducted on the Challis National Forest in 2022 or 2023.

Monitoring result: N/A

Monitoring Question 12

Are we effectively protecting and improving watershed conditions through forest plan management activities?

Indicator #1

Quality of aquatic habitat for salmonid spawning and cold-water aquatic life.

Data source: See Monitoring Question #6, Indicator #1

Monitoring result: See Monitoring Question #6, Indicator #1

Indicator #2

Compliance with state water quality sediment, turbidity, and temperature standards and maintenance of beneficial uses

Data source: See Monitoring Question #6, Indicator #2

Monitoring result: See Monitoring Question #6, Indicator #2

Indicator #3

Effects of management activities on maintenance and protection of watershed health (e.g. sediment)

Data source: See Monitoring Question #6, Indicator #3

Monitoring result: See Monitoring Question #6, Indicator #3

Indicator #4

Changes in stream channel morphology

Data source: See Monitoring Question #6, Indicator #7

Monitoring result: See Monitoring Question #6, Indicator #7

Indicator #5

Riparian habitat condition

Data source: See Monitoring Question #6, Indicator #1 and Monitoring Question #7, Indicator #4

Monitoring result: See Monitoring Question #6, Indicator #1 and Monitoring Question #7, Indicator #4

Indicator #6

Changes in riparian vegetation composition

Data source:

Monitoring result: See Indicator #4 under monitoring question # 7

Indicator #7

Effectiveness and applicability of current practices to maintain water quality.

Data source: See Monitoring Question #11, Indicator #7

Monitoring result: See Monitoring Question #11, Indicator #7

Indicator #8

Soil quality, productivity, and function

Data source: See Monitoring Question #11, Indicator #8

Monitoring result: See Monitoring Question #11, Indicator #8

Indicator #9

Water quality chemistry analysis (select locations as needed)

Data source: See Monitoring Question #14, Indicator #1

Monitoring result: See Monitoring Question #14, Indicator #1

Monitoring Question 13

Are we effectively protecting and improving aquatic ecosystems and riparian conditions through forest plan management activities?

Indicator #1

Quality of aquatic habitat for salmonid spawning and cold-water aquatic life.

Data source: See Monitoring Question #6, Indicator #1

Monitoring result: See Monitoring Question #6, Indicator #1

Indicator #2

Compliance with state water quality sediment, turbidity, and temperature standards and maintenance of beneficial uses

Data source: See Monitoring Question #6, Indicator #2

Monitoring result: See Monitoring Question #6, Indicator #2

Indicator #3

Effects of management activities on maintenance and protection of watershed health (e.g. sediment)

Data source: See Monitoring Question #6, Indicator #3

Monitoring result: See Monitoring Question #6, Indicator #3

Indicator #4

Changes in stream channel features

Data source: See Monitoring Question #6, Indicator #7

Monitoring result: See Monitoring Question #6, Indicator #7

Indicator #5

Function and condition of lentic riparian systems

Data source: See Monitoring Question #7, Indicator #3.

Monitoring result: See Monitoring Question #7, Indicator #3.

Indicator #6

Changes in riparian vegetation composition

Data source:

Monitoring result: See Indicator #4 under monitoring question # 7

Indicator #7

Effectiveness and applicability of current practices to maintain water quality.

Data source: See Monitoring Question #11, Indicator #7

Monitoring result: See Monitoring Question #11, Indicator #7

Monitoring Question 14

To what degree are atmospheric pollutants changing natural ecosystems in the plan area?

Indicator #1

Changes in water chemistry related to air pollution.

Data source: Salmon-Challis National Forest air quality monitoring program, sampling of air quality indicators at Wilderness Lakes.

Monitoring result: The Salmon-Challis National Forest conducts long term monitoring of atmospheric pollutants in three lakes within the Frank Church-River of No Return Wilderness. One of these lakes is located on the Challis National Forest (Crimson Lake). The air quality within this Class II airshed is generally excellent. However, no monitoring was conducted in 2022 or 2023, and any changes during this timeframe cannot be quantified. The last sampling at this lake occurred in 2015.

Indicator #2

Compliance with state air quality standards.

Data source: Idaho Department of Environmental Quality (DEQ) Air Quality Monitoring Program

Monitoring result: Idaho DEQ maintains a statewide monitoring network to measure the levels of five ambient air criteria pollutants identified by the federal Clean Air Act: particulate matter (PM10 and PM2.5), carbon monoxide, nitrogen dioxide, sulfur dioxide, and ozone. Standards for compliance set forth by Idaho DEQ are met via obtaining approvals for burning from the Montana/Idaho Airshed Management System (https://mi.airshedgroup.org/).

Monitoring Question 15

Are fires being managed to accomplish resource management and protection objectives?

Indicator #1

Total acres burned (forested and non-forested).

Data source: Fire Stat and Wildcad

Monitoring result: Total acres burned in 2022 were 19506 and in 687 in 2023.

Indicator #2

Acres and number by type of fire (I-V) or by size class

Data source: Fire Stat and Wildcad

Monitoring result:

Table 6. Fire size by class

Challis N.F.	Fires By Size Class			
	2022		2023	
Size Class	# Fires	Acres	#	Acres

			Fires	
A	12	1.65	7	0.86
B	4	3.5	1	1
C	2	26	0	0
D	2	363	0	0
E	0	0	1	685
F	0	0	0	0
G	2	19112	0	0
Total	22	19506	8	686

Indicator #3

Acres identified for resource benefit

Data source: FACTS and Wildcad

Monitoring result: Five fires were managed for resource benefit in 2022 accounting for 274 acres, and in 2023 two fires were managed for resource benefit accounting for 686 acres.

Monitoring Question 16

Are fuels reduction projects protecting property, human health and safety, and reducing the potential for unwanted fire effects (in the wildland-urban interface (WUI) and non-WUI)?

Indicator #1

Acres of hazardous fuels reduction in WUI and non- WUI

Data Source: FACTS

Monitoring Results:

Table 7. Acres of WUI and non-WUI fires

	2022	**2023**	**TOTAL**
WUI TOTAL	1,280	520	1,799
Non-WUI	241	675	916
TOTAL	1,521	1,195	2,716

Determinations

Based on evaluations that were conducted, the following are the determinations for adaptive management, per 36 CFR 219.12(d)(2):

NEED FOR CHANGING THE FOREST PLAN
In September 2019, the Salmon-Challis National Forest announced it will evaluate the 1988 Salmon Forest Plan and the 1987 Challis Forest Plan separately. A draft assessment for the Salmon National Forest is expected in 2025 and a timeline will be developed for the Challis National Forest.

NEED FOR CHANGING MANAGEMENT ACTIVITIES
In September 2019, the Salmon-Challis National Forest announced it will evaluate the 1988 Salmon Forest Plan and the 1987 Challis Forest Plan separately. A draft assessment for the Salmon National Forest is expected in 2025 and a timeline will be developed for the Challis National Forest.

NEED FOR CHANGING THE MONITORING PROGRAM
In September 2019, the Salmon-Challis National Forest announced it will evaluate the 1988 Salmon Forest Plan and the 1987 Challis Forest Plan separately. A draft assessment for the Salmon National Forest is expected in 2025 and a timeline will be developed for the Challis National Forest.

NEED FOR CONDUCTING AN ASSESSMENT TO DETERMINE PRELIMINARY NEED TO CHANGE THE PLAN
In September 2019, the Salmon-Challis National Forest announced it will evaluate the 1988 Salmon Forest Plan and the 1987 Challis Forest Plan separately. A draft assessment for the Salmon National Forest is expected in 2025 and a timeline will be developed for the Challis National Forest.

Appendix A – Monitoring Items Not Evaluated in Detail

Some Monitoring Question were not completed for this biennial report. The Forest lacked capacity to determine a response to the indicator in a timely fashion. For more information contact the Recreation Program Lead, Nick Schade at nicholas.schade@usda.gov.

Appendix B: Amendments and Corrections to the Challis Forest Plan

Challis Forest Plan Amendments
Amendment #1 - Amend the Frank Church River of No Return Wilderness Management Plan to incorporate administrative action.
Amendment #2 - Decision to not implement the 1992 Challis National Forest Travel Plan
Amendment #3 through #8 - Amend Plan to add RNA
Amendment #10 - Amend the Frank Church River of No Return Wilderness Management Plan for outfitter and guide camp operations
Amendment #11 – Incorporation of Interim Strategies for Managing Anadromous Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California (PacFish)
Amendment #12 – Incorporation of Inland Native Fish Strategy (InFish)
Amendment #13 – Amendment to designate Big Hill as a communication site
Amendment #14 through #16 - Amend Plan to add RNA
Amendment #17 – Incorporates the revised Frank Church River of No Return Wilderness Management Plan
Amendment #18 – Amend the Management Indicator Species list
Amendment #19 – Amend the Forest Plan to incorporate changes from the 2009 decision to implement the Salmon-Challis National Forest Travel Planning and OHV Route Designation Project

United States Department of Agriculture

Biennial Monitoring Evaluation Report

Salmon-Challis National Forest

Salmon Land Resource Management Plan

Forest Service Salmon-Challis National Forest May 2024

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Introduction

The 2012 planning rule, which is found in the Code of Federal Regulations at 36 CFR 219, guides forest plan monitoring across the Forest Service. The Salmon-Challis National Forest conformance strategy focuses on addressing the purpose of the forest plan monitoring program as described in 36 CFR 219.12(a)(1), which includes the need for monitoring information that enables the responsible official to determine if a change in plan components or other plan content that guide management of resources on the plan area may be needed. The Biennial Monitoring Report evaluates new information gathered through the plan monitoring program and relevant information from the broader-scale strategy and makes this information available to the public. The monitoring evaluation report must indicate whether or not a change to the plan, management activities, or the monitoring program, or a new assessment, may be warranted based on the new information. The biennial monitoring evaluation report is used to inform adaptive management of the plan area. Any testing of assumptions, another rule-stated purpose of monitoring, would be addressed where relevant to one of the four determinations to be made.

This report presents monitoring information for 2022-2023 and is organized in two main parts. The first part presents findings for each monitoring question in the monitoring plan and the data source and monitoring result for each indicator for each monitoring question. The monitoring questions and associated indicators address each of the eight requirements which are noted at 36 CFR 219.12(a)(5). The second part is a discussion of four determinations from the which include whether or not a change to the plan, management activities, or the monitoring program, or a new assessment, may be warranted based on the new information.

The Salmon-Challis National Forest is guided by the Challis Land and Resources Management Plan (LRMP) and the Salmon LRMP. This report discusses the Salmon LRMP. The Salmon Forest Plan was completed in 1987 and revision is currently underway with resource assessments and need for change statements completed in July of 2018. Over the past 15 years there have been several amendments and corrections to the Forest Plan that are presented in Appendix B.

Monitoring Evaluation

Monitoring Question 1

How is the Forest's developed recreation program meeting visitor needs and providing for public health and safety at Forest facilities?

Indicator #1

Level of visitor satisfaction.

Data source:

Monitoring result: See Appendix A

Indicator #2

Recreation facility condition

Data source:

Monitoring result: See Appendix A

Indicator #3

Recreation use at developed sites

Data source:

Monitoring result: See Appendix A

Indicator #4

Number of passing and failing tests per water system

Data source:

Monitoring result: See Appendix A.

Indicator #5

Number of public water systems (ex. campground) in use or decommissioned

Data source:

Monitoring result: See Appendix A

Monitoring Question 2

How is the Forest's dispersed recreation program meeting visitor needs?

Indicator #1

Level of visitor satisfaction

Data Source:

Monitoring Results: See Appendix A

Indicator #2

Trail miles maintained/improved to standard

Data source:

Monitoring result: See Appendix A

Indicator #3

Miles of new trail constructed

Data source:

Monitoring result: See Appendix A

Indicator #4

Trail miles meeting standard

Data source:

Monitoring result: See Appendix A

Monitoring Question 3

Are heritage resources being protected and are mitigation measures sufficient to prevent damage to heritage resources from federal actions, looting, environmental disturbance, and other actions?

Indicator #1

Number of eligible historic properties being impacted by federal actions, looting, environmental disturbance, and other actions.

Data Source: Project inventory reports and monitoring reports

Monitoring Results: During the 2022-2023 reporting period 24 sites were monitored throughout the Salmon-Challis National Forest. Twenty-eight sites showed signs of deterioration. Impacts were mostly due to cattle grazing, trailing, or trampling; however, other impacts included erosion and natural weathering, dispersed camping and recreational use, and road use.

Table 1. Sites monitored for impact from looting, environmental disturbance, and other actions.

Year	# Sites Monitored	# Sites Deteriorated	% Sites Deteriorated
2022	42	13	31%
2023	41	15	36.6%

Indicator #2

Number of historic properties recorded and evaluated for the National Register of Historic Places

Data source: Project inventory reports

Monitoring result: During the 2022-2023 reporting period a total of 62 sites were evaluated for the National Register of Historic Places (50 in 2022 and 12 in 2023). No sites were nominated or listed on the National Register.

Monitoring Question 4

What is the condition of campsites within designated Wilderness areas? What is the amount, distribution, and potential conflicts among Wilderness visitors?

Indicator #1 Schade

Condition of upland and river campsites

Data Source:

Monitoring Results: See Appendix A

Indicator #2

Number of motorized/mechanized intrusions

Data Source:

Monitoring Results: See Appendix A

Monitoring Question 5

Are goods and services being provided in accordance with forest plan goals, objectives, and desired conditions?

Indicator #1

Impacts to Outstandingly Remarkable Wild and Scenic River Values from projects within river corridors

Data Source:

Monitoring Results: See Appendix A

Monitoring Question 6

How are forest management activities and/or natural events affecting ecological conditions that contribute to the recovery of federally listed threatened and endangered species, conserve proposed and candidate species?

Indicator #1

Quality of aquatic habitat for salmonid distribution, spawning, and other cold water aquatic life

Data Source: PIBO Monitoring Program, USDA Forest Service, 2022

Monitoring Results: The Pacfish/Infish Biological Opinion Effectiveness Monitoring Program (PIBO) compares stream habitat characteristics of in managed locations (primarily grazed) to those of streams likely to be functioning properly. This is done to evaluate status of stream habitat and to document changes in habitat conditions (e.g. "trend") over the 22-year period of PIBO sampling (2001-2023). Attributes measured during PIBO sampling are included in Table 1. Please note that PIBO sampling occurred in 2023 but analysis was not yet available at the time of this report. On the Salmon National Forest, the Lemhi and Middle Salmon-Panther sub-basins were analyzed for trend and status. The Pahsimeroi and Middle Salmon-Chamberlain were not evaluated as there weren't enough sampling locations to carry out the analysis.

Twenty-five locations were sampled in the Middle Salmon-Panther sub-basin and eight locations were sample in the Lemhi sub-basin.

Table 2. Stream habitat attributes

STREAM HABITAT ATTRIBUTES
Average bank angle (°)
d_{50} (median substrate particle size)
Percent fine sediment (<6 mm diameter, in pool tails)
Large Wood frequency (pieces /km)
Residual pool depth (m)
Percent pool habitat
Bank stability (% bank covered with plants or rock)
Percent of bank with undercuts (bank angle <90°)

In the Middle Salmon-Panther sub-basin, there was a statistically significant negative change and trend in the total index since 2001 which is not desirable. However, ecoregion reference also had a significant negative trend suggesting the trend in the sub-basin could be due to environmental factors rather than management. Additionally, out of 25 sites, 20 showed desirable change and one stayed the same while only four showed undesirable change suggesting that overall index is improving at more sites than it is worsening. Of the eight stream habitat attributes sampled, only median substrate particle size also showed a statistically significant change since 2001 with an undesirable decrease. Trend for D50 was not significant and is very similar to all reference and ecosystem reference trends. Like total index, this suggests that change could be due to environmental factors.

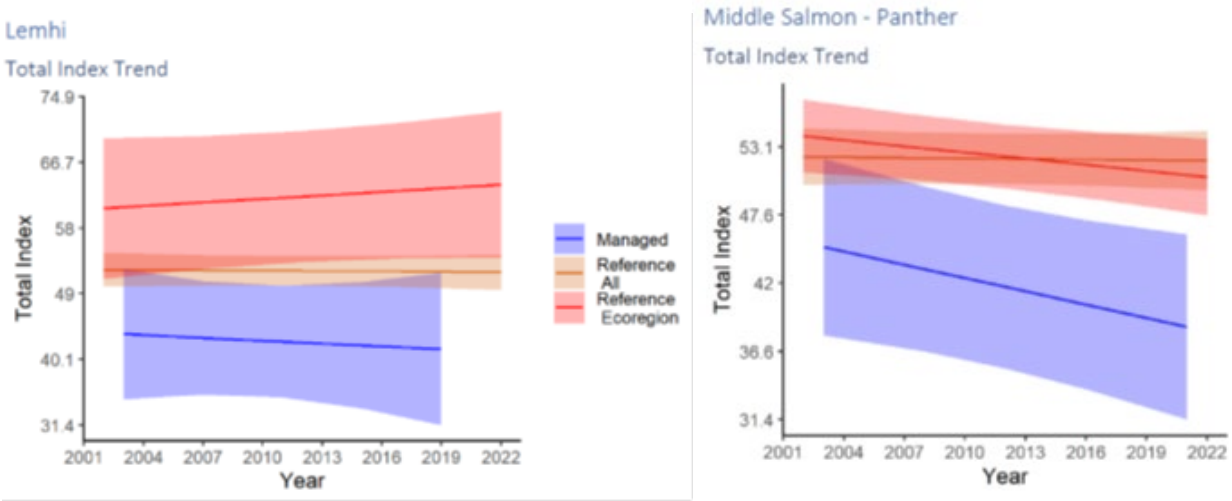

Figure 1. Total index trends in the Middle Salmon - Panther and Lemhi sub-basins compared to ecoregion reference and all reference trends.

Indicator #2

Compliance with state water quality sediment, turbidity, and temperature standards and maintenance of beneficial uses

Data source: Idaho Department of Environmental Quality 2022\ Integrated Report (published April 2022), a biennial report describing ongoing efforts to monitor, assess, track, and restore the chemical, physical, and biological integrity of Idaho waters (https://www2.deq.idaho.gov/admin/LEIA/api/document/download/16619).

Monitoring result: States are required under Sections 303(d), 305(b), and 314 of the Clean Water Act to maintain a list of impaired water bodies that do not meet beneficial uses. Stream segments are grouped into Assessment Units (AUs) for classification. AUs that do not support beneficial uses but have an approved TMDL (Total Maximum Daily Load) or do not require a TMDL are listed as Category 4. AUs that do not support beneficial uses and a TMDL is still needed are listed as Category 5 (the 303(d) list of impaired waters). Assessments provided in the 2022 Integrated Report utilize data and information from a 5-year period from 2016 to 2022. Because the 2024 Integrated Report (covering the period from 2018 to 2024) has not yet been published, the 2022 report provides the most current assessment of compliance with State water quality standards. However, this does not include any changes that may have occurred during the 2023 to 2024 timeframe of this report.

Out of 3184 stream miles on the Salmon National Forest, 1256 miles fully support beneficial uses, 732 miles are not assessed, 251 miles are impaired with an existing TMDL or TMDL not required, and 945 miles are listed as impaired (303(d) list). The 303(d)-listed streams are shown in the table below. Only one lake (Williams Lake) on the Salmon National Forest is listed under Category 4, and no lakes are listed as impaired (303(d) list).

Table 3. Impaired waters by assessment unit.

Assessment Unit Name	Assessment Unit ID	Stream miles on NFS lands	Parameter
Agency Creek - source to Cow Creek	ID17060204SL058_02	18.65	TEMPERATURE
Arnett Creek - source to mouth	ID17060203SL026_02	18.31	TEMPERATURE
Bear Valley Creek -Wright Creek to mouth	ID17060204SL016_04	2.78	TEMPERATURE
Bia Po'i Naokwaide - source to mouth	ID17060203SL084_02	15.89	TEMPERATURE
Big Deer Creek - South Fork Big Deer Creek to mouth	ID17060203SL005_03	2.98	COPPER
Big Eightmile Creek - source to diversion	ID17060204SL029b_02	18.1	TEMPERATURE
Big Eightmile Creek - source to diversion	ID17060204SL029b_03	8.15	TEMPERATURE
Big Timber Creek - Rocky Creek to Little Timber Creek	ID17060204SL033_03	7.02	TEMPERATURE
Boulder Creek - source to mouth	ID17060203SL086_02	13.38	TEMPERATURE
Canyon Creek - source to diversion (T16N, R26E, Sec.22)	ID17060204SL051b_03	6.45	ESCHERICHIA COLI (E. COLI) AND

Assessment Unit Name	Assessment Unit ID	Stream miles on NFS lands	Parameter
			TEMPERATURE
Canyon Creek - source to diversion (T16N, R26E, Sec.22)	ID17060204SL051b_02	64.65	TEMPERATURE
Carmen Creek - source to Freeman Creek	ID17060203SL063_02	20.46	TEMPERATURE
Colson Creek - source to mouth	ID17060203SL090_02	11.32	TEMPERATURE
Corn Creek - source to mouth	ID17060207SL040_02	8.53	TEMPERATURE
Dahlonega Creek - Nez Perce Creek to mouth	ID17060203SL073_03	4.67	TEMPERATURE
Deep Creek - Little Deep Creek to mouth	ID17060203SL020_03	2.31	TEMPERATURE
Deep Creek - source to Little Deep Creek	ID17060203SL022_02	17.35	TEMPERATURE
Deer Creek - source to mouth	ID17060204SL037_02	6.03	TEMPERATURE
East Boulder Creek - source to mouth	ID17060203SL031_02	14.38	TEMPERATURE
East Fork Hayden Creek - source to mouth	ID17060204SL023_02	11.34	TEMPERATURE
Hawley Creek - source to diversion (T15N, R27E, Sec. 03)	ID17060204SL050b_02	51.51	TEMPERATURE
Hawley Creek - source to diversion (T15N, R27E, Sec. 03)	ID17060204SL050b_03	4.41	TEMPERATURE
Hayden Creek -West Fork Hayden Creek to Bear Valley Creek	ID17060204SL020_03	6.52	TEMPERATURE
Haynes Creek - source to mouth	ID17060204SL004_02	11.2	TEMPERATURE
Horse Creek - source to Reynolds Creek	ID17060207SL044_02	35.64	TEMPERATURE
Horse Creek - source to Reynolds Creek	ID17060207SL044_03	5.28	TEMPERATURE
Hughes Creek - source to mouth	ID17060203SL081_03	6.14	TEMPERATURE
Hull Creek - source to mouth	ID17060203SL082_02	10.24	TEMPERATURE
Indian Creek - source to mouth	ID17060203SL083_03	11.37	TEMPERATURE
Iron Creek - North Fork Iron Creek to mouth	ID17060203SL048_03	3.02	TEMPERATURE
Lee Creek - source to mouth	ID17060204SL028_02	17.17	TEMPERATURE
Lemhi River - Peterson Creek to Hayden Creek	ID17060204SL024_02	19.78	TEMPERATURE
Little Timber Creek - source to diversion	ID17060204SL032b_02	13.38	TEMPERATURE

Assessment Unit Name	Assessment Unit ID	Stream miles on NFS lands	Parameter
McKim Creek - source to mouth	ID17060203SL057_03	0.91	TEMPERATURE
Mill Creek - source to diversion (T16N, R24E, Sec. 22)	ID17060204SL026b_02	10.53	TEMPERATURE
Moose Creek - Dolly Creek to Little Moose Creek	ID17060203SL035_02	7.95	TEMPERATURE
Moyer Creek - source to mouth	ID17060203SL018_02	39.97	TEMPERATURE
Moyer Creek - source to mouth	ID17060203SL018_03	7.3	TEMPERATURE
Musgrove Creek - source to mouth	ID17060203SL015_02	17.7	TEMPERATURE
Napias Creek - Arnett Creek to and including Moccasin Creek	ID17060203SL024_02	28.69	TEMPERATURE
Napias Creek - Arnett Creek to and including Moccasin Creek	ID17060203SL024_03	5.51	TEMPERATURE
Napias Creek - Arnett Creek to and including Moccasin Creek	ID17060203SL024_04	1.37	TEMPERATURE
Napias Creek - Moccasin Creek to mouth	ID17060203SL023_04	2.68	TEMPERATURE
Napias Creek - source to Arnett Creek	ID17060203SL025_02	20.64	TEMPERATURE
North Fork Iron Creek - source to mouth	ID17060203SL049_02	20.07	COPPER AND TEMPERATURE
North Fork Salmon River - Hughes Creek to mouth	ID17060203SL068_04	5.71	TEMPERATURE
North Fork Salmon River - Sheep Creek to Hughes Creek	ID17060203SL070_04	2.97	TEMPERATURE
North Fork Salmon River - source to Twin Creek	ID17060203SL078_02	17.47	TEMPERATURE
North Fork Salmon River - Twin Creek to Dahlonega Creek	ID17060203SL077_03	5.71	TEMPERATURE
North Fork Williams Creek - source to mouth	ID17060203SL044_02	6.42	TEMPERATURE
Owl Creek - East Fork Owl Creek to mouth	ID17060203SL087_03	1.99	TEMPERATURE
Panther Creek - Big Deer Creek to mouth	ID17060203SL002_05	12.98	TEMPERATURE
Panther Creek - Blackbird Creek to Napias Creek	ID17060203SL011_04	5.5	TEMPERATURE
Panther Creek - Napias Creek to Big Deer Creek	ID17060203SL010_05	6.08	TEMPERATURE
Panther Creek - Porphyry Creek to Blackbird Creek	ID17060203SL014_03	1.89	TEMPERATURE
Panther Creek - Porphyry Creek to Blackbird Creek	ID17060203SL014_04	4.76	TEMPERATURE
Panther Creek - source to Porphyry	ID17060203SL017_0	43.87	TEMPERATURE

Assessment Unit Name	Assessment Unit ID	Stream miles on NFS lands	Parameter
Creek	2		
Panther Creek - source to Porphyry Creek	ID17060203SL017_03	11.6	TEMPERATURE
Porphyry Creek - source to mouth	ID17060203SL016_02	9.5	TEMPERATURE
Salmon River - Carmen Creek to North Fork Salmon River	ID17060203SL039_07	10.15	TEMPERATURE
Salmon River - Indian Creek to Panther Creek	ID17060203SL029_07	17.89	TEMPERATURE
Salmon River - Iron Creek to Twelvemile Creek	ID17060203SL047_02	47.02	TEMPERATURE
Salmon River - North Fork Salmon Creek to Indian Creek	ID17060203SL032_07	11.25	TEMPERATURE
Salmon River - Panther Creek to Middle Fork Salmon River	ID17060203SL001_07	11.85	TEMPERATURE
Salmon River - Pollard Creek to Carmen Creek	ID17060203SL041_02	17.41	TEMPERATURE
Total		**944.62**	

Indicator #3

Effects of management activities on maintenance and protection of watershed health (e.g. sediment)

Data source: Salmon-Challis National Forest Watershed Monitoring Program – measurement of fine sediment at depth in spawning habitat, 2022 and 2023 data, trends, and analysis.

Monitoring result: A total of 7 sites were monitored in 2022 on the Salmon National Forest. Percent fine sediment at depth in spawning habitat (particles less than 0.25 inches in diameter) ranged from 10.0% to 30.2%, with a median value of 25.2%. One site showed high levels of fine sediment (greater than 30%) in 2022. A total of 28 sites were monitored in 2023 on the Salmon National Forest. Percent fine sediment at depth in spawning habitat ranged from 14.5% to 84.4%, with a median value of 22.6%. Two sites showed high levels of fine sediment (greater than 30%) in 2023.

Fine sediment at depth is an indicator of the quality of spawning habitat for anadromous and resident fish species. Fine sediment in streams can also be an indicator of erosion and sedimentation that result from various land management activities as well as natural sources. The 70 current monitoring sites on the Salmon National Forest are monitored every 2 to 5 years, depending on the type of site and data needs. Therefore, comparison of these data statistics from year to year do not indicate trends because different sites are sampled each year. Data trends for a particular site are generally fairly undefined, as a fair amount of variation occurs between sample years for a variety of reasons, and data continuity is limited at many sites. Examining trends over a longer time period, such as a rolling 10-year average, is more informative than examining year-to-year trends. Interpretation of depth fines values should also take into account analysis of watershed processes.

Post fire effects on fine stream sediment is being monitored following the 2022 Moose Fire. In 2023 six monitoring sites were sampled within, and near, the Moose Fire parameter. The results varied with increases

in fine sediment ranging from 6% to 20%. Monitoring of those six sites is expected to continue in 2024 and potentially 2025.

Preliminary analysis is provided in the 2022 Watershed Monitoring Report and the 2023 Watershed Monitoring Report. Results of these preliminary analyses indicate that the factors that have the greatest influence on percent fines are channel type, stream gradient, and geology. Land use factors such as roads, grazing, and fire showed limited correlation with percent fines. The result of this monitoring has further focused the monitoring program, and future monitoring will focus on a set of "key" monitoring sites to examine trends and influences in streams that are the most sensitive to changes in sediment transport and deposition. Further analysis to determine the relationship between land management activities and fine sediment in streams is forthcoming.

Indicator #4

Anadromous and resident salmonid redd count trends

Data Source: North and South Zone Fisheries files, Rocky Mountain Research Station (RMRS), Idaho Department of Fish and Game (IDFG), and Shoshone Bannock Tribe

Monitoring Results: Redd surveys are completed across the Forest by different agencies for anadromous and resident salmonids. Spawning habitat is not a limiting factor for redd development on the Forest. Factors outside of forest management influence trends in redd counts on the Forest. Across the Salmon National Forest, the Fisheries Program surveyed nine kilometers for bull trout in 2022 and 16.55 kilometers in 2023 as part of biological opinion (BO) required monitoring. The crews found five redds in 2022 and 30 redds in 2023 with overall redd densities of 0.56 and 1.81 redds/km respectively. They also surveyed three kilometers for chinook salmon in 2022 and 10.55 kilometers in 2023 as part of BO required monitoring, recording two redds in 2022 and 13 redds in 2023. Overall chinook salmon densities were 0.67 redds/km and 1.23 redds/km respectively. Survey effort was down from 2021-2022 but was within normal range for the past ten years.

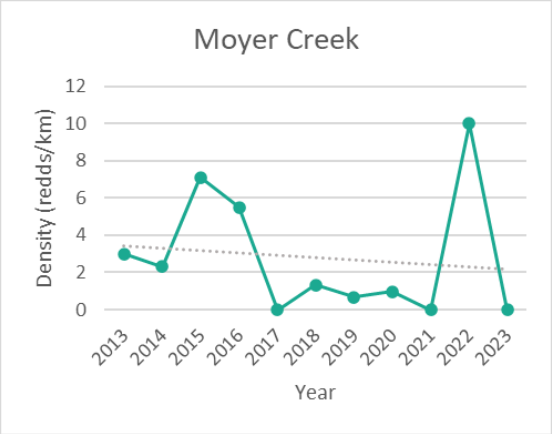

Figure 2. Chinook salmon redd counts from 2013 to 2023.

Redd count trends are difficult to ascertain, as many factors outside Forest control and influence can impact how many redds are recorded during surveys. Additionally, not all locations are surveyed yearly. On the Salmon National Forest, four streams have been consistently surveyed for redds on a yearly basis: Big Bear Creek, Big Timber Creek, Hughes Creek, and Moyer Creek. Of those, only Hughes and Moyer Creeks have chinook salmon. Bull trout redd counts in 2022 and 2023 were consistent with longer term trends in Big Bear, Hughes, and Moyer Creeks with most years since 2010 recording zero redds. Bull trout redd densities in 2022 and 2023 in Big Timber Creek were 1 and 0.67 redds/km which are very close to the annual mean of 0.75 redd/km since 2013 with trend increasing slightly. Trend for chinook in Hughes Creek is consistent at zero redds over the past ten years for BO required surveys. In Moyer Creek, chinook redd density was the highest it has been at 10 redds/km in 2022 and the lowest it has been at zero in 2023 with trend potentially decreasing slightly.

Indicator #5

Water temperature

Data Source: North and South Zone District files and aquatic data-base programs

Monitoring Results: Water Temperature is collected across the Forest for diversion, grazing, and natural condition monitoring. Temperature loggers were placed on the Salmon end of the Forest in 2022 and 2023 in watersheds representing natural conditions, allotments, and diversions. The Fisheries Program monitored 37 sites in 2022 and 52 sites in 2023 with a total of 69 different sites monitored over this two-year period. Twenty sites were monitored during both years.

Indicator #6

Changes in number of fish barriers

Data Source: Data Source: Forest Service INFRA and WIT databases

Monitoring Results: The Salmon-Challis National Forest did not complete any changes to fish barriers on the Salmon portion of the Forest.

Indicator #7

Changes in stream channel morphology

Data Source: Salmon-Challis National Forest Monitoring Program, collection of channel type data and general field observations.

Monitoring result: Channel type data have been collected for all 70 current monitoring sites on the Salmon National Forest. Channel type data collected between 1993 and 2010 have been shown to have many errors. Collection of channel type data between 2015 and 2019 has helped to refine these data and provide baseline channel morphology information at these monitoring sites. The ability to detect changes in channel morphology at these sites is limited by data availability, but in some cases, the watershed monitoring program has provided a good assessment of short-term channel morphology changes that occur following post-fire flood events.

Indicator #8

Sage-grouse habitat suitability and condition

Data Source: Salmon-Challis National Forest Fourth Order Habitat Assessment Framework (HAF) (Stiver et.al. 2015) and VGS Vegetation/GIS Data System.

Monitoring Results: There were no habitat suitability surveys (HAF 4 surveys) completed on the Forest in 2022-2023.

Monitoring Question 7

How are forest management activities and natural events affecting the ecological conditions of terrestrial and aquatic ecosystems?

Indicator #1

Ground and vegetation cover and species composition in non-forested communities

Data Source: Forest Inventory Analysis, 2004 – 2017, Phase 2 Vegetation Subplot Species

Monitoring Results: The Salmon-Challis National Forest did not conduct any upland monitoring in non-forested vegetation types that would provide recent information on ground cover, vegetation cover or species composition. There was some data collection for effectiveness monitoring in areas that were aerially

treated for invasive species but those areas comprise only a very small portion of the forest on the North Fork Ranger District (a few thousand acres). Ground cover was also monitored in the sagebrush types in the burn area of the 2022 Moose Fire in 2023 but again, the area is small in comparison to the entire forest. Information from previous reports is included here but as indicated, does not contain any updated information since 2017.

Based on FIA data collected through 2017, in mid and tall sagebrush communities, which comprise the majority of the non-forested acres on the Salmon-Challis National Forest, sagebrush species had an average cover of 18% but varied from 3 to 65% in plots where present. Bluebunch wheatgrass, which is considered a cornerstone species of most of the mid and tall sagebrush communities, had an average cover of 12%, but varied from 3 to 55% in plots where present. Idaho fescue, a common co-dominant in these vegetation types, had an average cover of 13% and varied from 3 to 40%. Cheatgrass occurred in 64 subplots, with an average cover of 11%, but varied from 3 to 50%.

Indicator #2

Water temperature

Data Source: North and South Zone District files and aquatic data-base programs

Monitoring Results: Water Temperature is collected across the Forest for diversion, grazing, and natural condition monitoring. Temperature loggers were placed on the Salmon end of the Forest in 2022 and 2023 in watersheds representing natural conditions, allotments, and diversions. The Fisheries Program monitored 37 sites in 2022 and 52 sites in 2023 with a total of 69 different sites monitored over this two-year period. Twenty sites were monitored during both years.

Indicator #3

Function and condition of lentic riparian systems

Data source: Groundwater Dependent Ecosystem (GDE) inventory.

Monitoring result: In 2022, the monitoring crew completed reconnaissance on 70 Groundwater dependent ecosystems using the GDE Level 1 methodology on the Salmon-Challis National Forest. 23 of the identified GDE's were located in the Lemhi sub basin and 47 were in the Middle Salmon-Panther subbasin.

In 2023 the monitoring crew completed reconnaissance on 32 GDE's. An Enterprise team completed reconnaissance on an additional 23 GDE's for a total of 55 GDE's. 7 GDE's were located in the Lemhi subbasin and 48 were located on the Middle Salmon-Panther subbasin. This work greatly added to the Forest inventory of groundwater and karst systems.

Indicator #4

Changes in riparian vegetation composition

Data Source: Salmon-Challis National Forest Multiple Indicator Monitoring (MIM)

Monitoring Results: Long-term MIM or, in some cases, Windward Greenline, monitoring is conducted at approximately 194 riparian designated monitoring areas (DMAs) across the Salmon-Challis National Forest. All of these DMAs fall within grazing allotments. These sites are read on a 5-year schedule, with approximately 20% of the sites being read each year. The long-term indicators that are collected in the MIM monitoring provide data to assess current condition and trend of streamside vegetation as well as streambanks and channels. They also help determine if local livestock management grazing management strategies and other land management actions are making progress toward achieving long-term goals and objectives for streamside riparian vegetation and aquatic resources (TR 1737-23, 2011).

Based on the most recent compilation of this data (August 2023) there are 159 DMAs that are in late seral (LS) or potential natural community (PNC) status. This equates to roughly 82% of all DMAs monitored. Thirty DMAs, or 16%, are in mid-seral (MS) status and five DMAs, or about 1%, are in early seral status. There are no DMAs at very early seral status. Under its riparian management strategy, the Forest has set a desired condition of Late Seral (LS) for riparian vegetation. It is important to note that data is reflective of information across the Salmon and Challis National Forests.

Indicator #5

Forested ecosystem condition- species composition, disturbance, extent

Data Source: FACTS, TIM, Project NEPA, Fire Stat, BARC (Burned Area Reflectance Classification), Monitoring Trends in Burn Severity (MTBS) See Appendix A

Monitoring Results: Forest composition information for the Salmon NF is collected by the Forest Inventory and Analysis program. That data is located and accessible for download via the FIA DataMart website. FIA DataMart | US Forest Service Research and Development (usda.gov) The most recent forest inventory for Idaho was completed in 2019. The Salmon NF insect and disease disturbance information is collected by the Forest Health Protection program. The most recent report on forest insects and disease condition and extent for Idaho is from 2022 and can be found on the Forest Health Protection website. Forest Health Highlights (usda.gov).

Indicator #6

Aspen stand condition

Data Source: Forest Inventory & Analysis and Forest Health Protection Reports

Monitoring Results: Presence and condition of aspen stands on the Salmon NF is assessed via the Forest Inventory and Analysis program. That data is located and accessible for download via the FIA DataMart website. FIA DataMart | US Forest Service Research and Development (usda.gov) The most recent forest inventory for Idaho was completed in 2019.

Monitoring Question 8

Are current allotment management strategies effective in meeting or moving toward desired conditions?

Indicator #1

Sage-grouse habitat suitability and condition

Data Source: 4th Order Habitat Assessment Framework Data via VGS report.

Monitoring Results: There were no habitat suitability surveys (HAF 4 surveys) completed on the Forest in 2022-2023.

Indicator #2

Ground and vegetation cover and species composition in non-forested communities

Monitoring Results: See Indicator #1 under monitoring question # 7

Indicator #3

Changes in stream channel morphology

Data source: See Monitoring Question #6, Indicator #7.

Monitoring result: See Monitoring Question #6, Indicator #7.

Indicator #4

Function and condition of lentic riparian systems

Data source: See Monitoring Question #7, Indicator #3.

Monitoring result: See Monitoring Question #7, Indicator #3.

Indicator #5

Changes in riparian vegetation composition

Monitoring Results: See Indicator #4 under monitoring question # 7

Monitoring Question 9

Are our management actions reducing the occurrence of invasive species?

Indicator #1

Acres of invasive plant infestations

Data Source: Salmon-Challis National Forest Geographic Information System library layer, 2023

Monitoring Results: The following table indicates those acres which have been identified as having invasive species present, including lands within designated Wilderness. It is estimated that about 20% of the Forest outside of Wilderness has been inventoried. Although not a listed noxious weed species in the State of Idaho, cheatgrass acreage has been included here as the Salmon-Challis National Forest has been completing aerial treatment of this invasive grass. The Forest has emphasized inventory of cheatgrass over the past two years and is reflected in the data below. Reported acres cover both the Salmon and Challis National Forests.

Table 4. Inventoried acres containing invasive species

Species	Infested Acres
Black henbane	368
Canada thistle	3,639
Cheatgrass	49,302
Common St. Johnswort	33
Dalmatian toadflax	156
Diffuse knapweed	12
Dyers woad	0
Field bindweed	59
Hoary alyssum	3,280

Houndstongue	2,984
Knotweed	7
Leafy spurge	1,274
Musk thistle	2,044
Oxeye daisy	363
Perennial pepperweed	0
Puncturevine	23
Rush skeletonweed	11,495
Russian knapweed	0
Salt cedar	1
Scotch thistle	1
Spotted knapweed	57,453
Sulphur cinquefoil	626
Whitetop	106
Yellow toadflax	851
TOTAL	**134,077**

Indicator #2

Number of acres treated for invasive plants

Data Source: Salmon-Challis National Forest GI interface with Forest Activity (FACTS) reporting database, FY22 and FY23.

Monitoring Results: Because of unique opportunities available like Cheatgrass Challenge, emphasis on fuels management, and partnership interest, the Salmon Challis has been able to implement a very successful cheatgrass aerial treatment program. Even so, acres treated are not keeping up with even that which is inventoried, and noxious and invasive acreage continues to increase. Biological control agents are being released but they are a much smaller part of the treatment program.

Table 5. Noxious Weed Acres treated by Fiscal Year

Common Name	FY22	FY23
Black henbane	0	109
Canada thistle	439	601
Cheatgrass	3,257	12,880
Common St. Johnswort	1	264
Common tansy	0	55
Dalmatian toadflax	0	0
Diffuse knapweed	0	0
Dyer's woad	0	0
Field bindweed	5	74

Gypsyflower (houndstongue)	169	347
Hoary alyssum	201	360
Knotweed	0	0
Leafy spurge	47	3
Medusahead	0	5
Nodding plumeless thistle (musk thistle)	49	245
Oxeye daisy	0	118
Perennial pepperweed	0	0
Puncturevine	49	19
Rush skeletonweed	121	3,355
Russian knapweed	0	1
Salt cedar	0	0
Scotch cottonthistle	21	0
Spotted knapweed	2,082	5,022
Sulphur cinquefoil	121	122
Whitetop	23	1
Yellow toadflax	0	176
TOTAL	**6,585**	**23,757**

Monitoring Question 10

Are goods and services being provided in accordance with forest plan goals, objectives, and desired conditions?

Indicator #1

Total timber sale program quantity

Data Source: Periodic Timber Sale Accomplishment Report (PTSAR)

Monitoring Results:

FY22:

Contracts	6087 ccf
Wood Permits	784 ccf
FY22 Total	**6871 ccf**

FY23:

Contracts	2356 ccf
Wood Permits	6524 ccf
FY23 Total	**8880 ccf**

Indicator #2

Number of fuelwood cords sold

Data Source: Timber Information Management System (TIM)

Monitoring Results:

FY22:

Firewood Permits 4835 Cords

FY23:
Firewood Permits 6305 Cords

Indicator #3

Level of permitted livestock grazing

Data Source: The Forest Service's Natural Resource Manager database was used to summarize forest wide information on grazing permits and permitted use.

Monitoring Results: In 2022, there were a total of 104,580 head months (HMs) of cattle grazing, 693 HMs of horse grazing and 18,652 HMs of sheep grazing, for a total of 123,925 HMs of livestock grazing permitted on the Salmon-Challis National Forest.

In 2023, the Forest permitted a total of 102,719 HMs of cattle grazing, 693 HMs of horse grazing and 10,055 HMs of sheep grazing for a total of 113,467 HMs of livestock grazing.

Indicator #4

Number of approved locatable plans of operations

Data Source: Fiscal year 2023 NRM Dashboard for Locatable Minerals and Mineral Materials.

Monitoring Results: In 2023, five Plans were implemented on the North Zone of the Forest.

Indicator #5

Quantity of common variety mineral materials sold

Data Source: FY 2023 NRM Dashboard for Locatable Minerals and Mineral Materials.

Monitoring Results: In 2023, eight permits were sold on the North Zone.

Monitoring Question 11

What are the effects of forest plan management activities to the productivity of the land?

Indicator #1

Effectiveness and applicability of current practices to maintain water quality

Data source: Salmon-Challis National Forest Best Management Practice (BMP) Monitoring Program.

Monitoring result: BMP implementation and effectiveness monitoring were conducted at 3 project sites on the Salmon National Forest in 2022 and 2023 (Table 6).

Table 6. BMP monitoring locations and type.

YEAR	CATEGORY	BMP NAME	PROJECT	DISTRICT
2023	Min B.	Active Non-Placer Mineral Operations	Lone Pine 2	Salmon-Cobalt

YEAR	CATEGORY	BMP NAME	PROJECT	DISTRICT
2023	Veg A.	Ground Based Skidding and Harvesting	Granite Mt. South	North Fork

The results of BMP implementation and effectiveness monitoring have indicated that project implementation is meeting the intent of the BMPs. BMP implementation monitoring for range management continues to be difficult to evaluate because of the lack of current Range NEPA. As in past years, BMP monitoring efforts in 2022 and 2023 have heightened awareness of BMPs and increased positive collaboration between Watershed staff and other resource specialists that are implementing projects.

Indicator #2

Soil quality, productivity, and function.

Data source: No soil condition monitoring or pre- and post-disturbance soil monitoring were conducted on the Salmon National Forest in 2022 or 2023.

Monitoring result: N/A

Monitoring Question 12

Are we effectively protecting and improving aquatic ecosystems and riparian conditions through forest plan management activities?

Indicator #1

Quality of aquatic habitat for salmonid spawning and cold-water aquatic life.

Data source: See Monitoring Question #6, Indicator #1

Monitoring result: See Monitoring Question #6, Indicator #1

Indicator #2

Compliance with state water quality sediment, turbidity, and temperature standards and maintenance of beneficial uses

Data source: See Monitoring Question #6, Indicator #2

Monitoring result: See Monitoring Question #6, Indicator #2

Indicator #3

Effects of management activities on maintenance and protection of watershed health (e.g. sediment)

Data source: See Monitoring Question #6, Indicator #3

Monitoring result: See Monitoring Question #6, Indicator #3

Indicator #4

Changes in stream channel morphology

Data source: See Monitoring Question #6, Indicator #7

Monitoring result: See Monitoring Question #6, Indicator #7

Indicator #5

Function and condition of lentic riparian systems

Data source: See Monitoring Question #7, Indicator #3

Monitoring result: See Monitoring Question #7, Indicator #3

Indicator #6

Changes in riparian vegetation composition

Data source: See Indicator #7 under monitoring question # 4

Monitoring result: See Indicator #7 under monitoring question # 4

Indicator #7

Effectiveness and applicability of current practices to maintain water quality.

Data source: See Monitoring Question #11, Indicator #1

Monitoring result: See Monitoring Question #11, Indicator #1

Indicator #8

Soil quality, productivity, and function

Data source: See Monitoring Question #11, Indicator #2

Monitoring result: See Monitoring Question #11, Indicator #2

Monitoring Question 13

To what degree are atmospheric pollutants changing natural ecosystems in the plan area?

Indicator #1

Changes in water chemistry related to air pollution.

Data source: Salmon-Challis National Forest air quality monitoring program, sampling of air quality indicators at Wilderness Lakes.

Monitoring result: The Salmon-Challis National Forest conducts long term monitoring of atmospheric pollutants in three lakes within the Frank Church-River of No Return Wilderness. Two of these lakes are located on the Salmon National Forest (Harbor and Golden Trout Lakes). The air quality within this Class II airshed is generally excellent. However, no monitoring was conducted in 2022 or 2023, and any changes during this timeframe cannot be quantified. The last sampling at these lakes occurred in 2012.

Indicator #2

Compliance with state air quality standards.

Data source: Idaho Department of Environmental Quality (DEQ) Air Quality Monitoring Program

Monitoring result: Idaho DEQ maintains a statewide monitoring network to measure the levels of five ambient air criteria pollutants identified by the federal Clean Air Act: particulate matter (PM10

and PM2.5), carbon monoxide, nitrogen dioxide, sulfur dioxide, and ozone. Standards for compliance set forth by Idaho DEQ are met via obtaining approvals for burning from the Montana/Idaho Airshed Management System (https://mi.airshedgroup.org/).

Monitoring Question 14

Are fires being managed to accomplish resource management and protection objectives?

Indicator #1

Total acres burned (forested and non-forested).

Data source: Fire Stat and Wildcad

Monitoring result: Total acres burned in 2022 were 133085 and in 24709 in 2023.

Indicator #2

Acres and number by type of fire (I-V) or by size class

Data source: Fire Stat and Wildcad

Monitoring result:

Table 7. Fire size by class

Salmon N.F.	Fires By Size Class			
	2022		2023	
Size Class	# Fires	Acres	# Fires	Acres
A	12	1.5	16	2.05
B	1	38.20	2	0.95
C	0		0	0
D	0		0	0
E	2	1144	0	0
F	1	2082	0	0
G	1	127330	1	24706
Total	26	133085	19	24709

Indicator #3

Acres identified for resource benefit

Data source: FACTS and Wildcad

Monitoring result: Five fires were managed for resource benefit in 2022 accounting for 2484 acres, and in 2023 3 fires were managed for resource benefit accounting for 1 acre.

Monitoring Question 15

Are fuels reduction projects protecting property, human health and safety, and reducing the potential for unwanted fire effects (in the wildland-urban interface (WUI) and non-WUI)?

Indicator #1

Acres of hazardous fuels reduction in WUI and non- WUI

Data Source: FACTS

Monitoring Results:

Table 8. Acres of WUI and non-WUI fuels treatments

	2022	2023	TOTAL
WUI	11,605	5,239	16,844
Non WUI	272	272	272
TOTAL	11,877	5,511	17,116

Determinations

Based on evaluations that were conducted, the following are the determinations for adaptive management, per 36 CFR 219.12(d)(2):

NEED FOR CHANGING THE FOREST PLAN
In September 2019, the Salmon-Challis National Forest announced it will evaluate the 1988 Salmon Forest Plan and the 1987 Challis Forest Plan separately. A draft assessment for the Salmon National Forest is expected in 2025 and a timeline will be developed for the Challis National Forest.

NEED FOR CHANGING MANAGEMENT ACTIVITIES
In September 2019, the Salmon-Challis National Forest announced it will evaluate the 1988 Salmon Forest Plan and the 1987 Challis Forest Plan separately. A draft assessment for the Salmon National Forest is expected in 2025 and a timeline will be developed for the Challis National Forest.

NEED FOR CHANGING THE MONITORING PROGRAM
In September 2019, the Salmon-Challis National Forest announced it will evaluate the 1988 Salmon Forest Plan and the 1987 Challis Forest Plan separately. A draft assessment for the Salmon National Forest is expected in 2025 and a timeline will be developed for the Challis National Forest.

NEED FOR CONDUCTING AN ASSESSMENT TO DETERMINE PRELIMINARY NEED TO CHANGE THE PLAN
In September 2019, the Salmon-Challis National Forest announced it will evaluate the 1988 Salmon Forest Plan and the 1987 Challis Forest Plan separately. A draft assessment for the Salmon National Forest is expected in 2025 and a timeline will be developed for the Challis National Forest.

Appendix A – Monitoring Items Not Evaluated in Detail

Some Monitoring Question were not completed for this biennial report. The Forest lacked capacity to determine a response to the indicator in a timely fashion. For more information contact the Recreation Program Lead, Nick Schade at nicholas.schade@usda.gov.

Appendix B: Amendments and Corrections to the Salmon Forest Plan

Salmon Forest Plan Amendments
Amendment #1 - Amend the Frank Church River of No Return Wilderness Management Plan to incorporate administrative action.
Amendment #2 - Establish grazing monitoring procedures.
Amendment #3 - Amend the Frank Church River of No Return Wilderness Management Plan for outfitter and guide camp operations
Amendment #4 – Incorporation of Interim Strategies for Managing Anadromous Fish-producing Watersheds in Eastern Oregon and Washington, Idaho, and Portions of California (PacFish)
Amendment #5 – Change acreage of RNA (Management Area 6A)
Amendment #6 - Allow for three timber sales to exceed standards and guidelines for Management Area 5B.
Amendment #7 – Establish a new management area (6.1) to manage the Lewis and Clark National Historic Trail
Amendment #8 – Incorporate the Lemhi Pass National Historic Landmark Management Plan
Amendment #9 – Incorporates the revised Frank Church River of No Return Wilderness Management Plan
Amendment #10 – Amend the Management Indicator Species list