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Service

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# **Fishlake Forest Plan Modification**

## **Monitoring Plan**

**In Compliance With 36 CFR 219.12**

**Fishlake National Forest  
115 East 900 North  
Richfield, Utah**

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## Current Fishlake National Forest Plan Monitoring Program

Table V-1 Monitoring Requirements (Current LRMP)

Program	Activity, Practice, Effect	Monitoring Item Code	Monitoring Techniques or Data Sources	Annual Costs (Thousands of Dollars)	Precision/Reliability	Measurement Frequency	Reporting Period	Standards—Acceptable Limits Indicating No Need for Further Planning Action
Recreation	Developed Sites; Actual Use	A07	Recreation Information Management (RIM) System; estimates samples, 20% of sites/yr. RIM Use Source Documents	3.0	Moderate/Moderate	Various continuing in accordance with random sampling procedures	Annual	Less than 10% planned use or more than 50% planned use a site annually over a three year period.
	Developed Sites; Condition	334	RIM facility condition and routine inspections	3.0	Low/Moderate	Continuous	Annual	Facility condition below RIM condition class 2.
	Dispersed Actual Use	A08	RIM Source Documents RIM System estimates; Statistical samples; trails and roads traffic counts; trail registers estimates	4.0	Low/Low	Various continuing in accordance with random sampling procedures	Annual	When use is more than 10% +- of the Recreation Opportunity Spectrum (ROS) social setting criteria for the ROS class annually over a three year period.
	Dispersed campsite condition	A08	Frissell site inspection	4.0	High/Moderate	Sample selected heavy use areas	Annual	Sites in facility condition class 5 will be rehabilitated.
	Off-road vehicle damage	A08	Area Reviews	3.0	Moderate/Moderate	Continuous	Annual	ORV use mutes stable. Road and trail density stable not more than 2% increase/yr. Use not conflicting with management goals.

Program	Activity, Practice, Effect	Monitoring Item Code	Monitoring Techniques or Data Sources	Annual Costs (Thousands of Dollars)	Precision/Reliability	Measurement Frequency	Reporting Period	Standards—Acceptable Limits Indicating No Need for Further Planning Action
	Trail condition	A12	Project Trail Inspections	6.0	High/High	20%/yr.	Annual	Rate of soil erosion acceptable. Varies one maintenance level class from that prescribed in local trail management plan.
Cultural Resources	Acres Surveyed/ Sites Evaluated	A02 A03	Actual acres by class of survey. Annual report. Project work records	.5	High/High	Periodic	Annual	Applicable surveys completed prior to disturbance—each project. Meet assigned targets.
	Sites located and protected	A04	Sample 25% of significant or unevaluated sites at completion of project. Revisit 5 significant or unevaluated sites previously recorded, on an annual basis.	1.0	High/High	Periodic	Annual	Cultural resource surveys completed prior to ground disturbance projects. Known cultural resources not disturbed without appropriate adverse effect mitigation.
Visuals	Monitor compliance of visual quality objective on project or activity basis	A14	10% of District work plans, 100% of Environmental Impact Statements, 10% of Special Use Applications	1.0	High/High	Annual	Annual	Failure to meet intended visual quality objectives of the management area. 10% of project.
Fish and Wildlife	Wildlife Habitat Diversity		Vegetation inventories	2.5	Low/Moderate	5 years	5 years	Meets standards in Forest Direction
	Modification of Ecosystem		Acres treated or modified	0.5	High/High	Annual	Annual	Meets standards in Forest Direction
	Big game habitat condition		Trend analysis	15.0	Moderate/Moderate	20 percent per year	5 years	Stable or Upward trend

Program	Activity, Practice, Effect	Monitor-ing Item Code	Monitoring Techniques or Data Sources	Annual Costs (Thousands of Dollars)	Precision/ Reliability	Measure-ment Frequency	Reporting Period	Standards—Acceptable Limits Indicating No Need for Further Planning Action
	MIS: Fish Bonneville Cutthroat Trout		Electro shocking & gill netting	1.0	Moderate/ Moderate	1 stream per year	Annual	No decrease attributed to management activities
	MIS: Threatened Plant Species		Vegetation Surveys	2.0	Moderate/ Moderate	Annual	Annual	No change attributed to management activities
	MIS: Nongame Species		Plot census	2.5	Moderate/ Moderate	Annual	Annual	Maintain stable trend
	MIS: Macroinvertebrate		Stream sampling/ laboratory counts	5.0	Moderate/ Moderate	5 streams per year	Annual	BCI above 75.
	T&E and Sensitive Animals		Visual reconnaissance	1.5	Moderate/ Moderate	Annual	Annual	No decrease attributed to management activities.
	Habitat Condition Inventory		Stream Survey	2.0	Moderate/ High	Annual	Annual	Meets prescribed standard.
	Snag Management		Condition Survey	1.0	Moderate/ Moderate	Annual	Annual	Meets prescribed standard.
Range	Permitted AUM		Annual Range Report	2.0	High/ High	Annual	Annual	Permitted AUMs meet assigned targets. Average increases as projected meet planned outputs, +10%.
	Forage Utilization		Vegetation Analysis	15.0	Moderate/ Moderate	Each Allotment every 4 yrs.	Annual	Meet utilization standards on 90% of allotments.
	Check compliance Suitability		on site reviews	25.0	High/ High	Annual	As action is needed	Compliance with conditions in grazing permits.
	Range Trend		Frequency analysis	10.0	Moderate/ Moderate	5 years	5 years	Stable or upward trend on 90% of allotments.
Timber	Sales	E06	Forest sales records	3.0	High/ High	Quarterly	Annual	Meet assigned sales targets in timber sales offered. Meet Forest Plan objectives.

Program	Activity, Practice, Effect	Monitor-ing Item Code	Monitoring Techniques or Data Sources	Annual Costs (Thousands of Dollars)	Precision/ Reliability	Measure-ment Frequency	Reporting Period	Standards—Acceptable Limits Indicating No Need for Further Planning Action
	Assure restocking of treated areas within 5 years following final harvest, except when a longer regeneration period is allowed by the management prescription	E03	District Stand Files; regeneration exams and plantation survival surveys; silvicultural prescriptions	2.5	High/ High	100% Sample	5-year Reports	Meet assigned reforestation targets. Treated acres restocked within required time periods.
	Assure that timber manipulation will not favor an increase in forest pests (insects, diseases, etc.).	P39	Stand exams, ground & aerial post surveys post sale reviews, prescriptions	2.0	Moderate/ Moderate	20% Sample	Annual	Destructive insect and disease organisms to not increase following management activities
	Assure that treatment objectives (area in acres) by forest type and stand size, class are being met during plan implementation	E03	District Stand File Activity Reporting (S2K)	No Increase	High/ High	100% Summary	Annual	Not more than 20% deviation from forestwide area targets by type and stand size.
	Assure that cutting methods prescribed in the management area prescriptions are being utilized for project implementation	E03	District Stand File Reporting (S2K); Administrative and ID Team Reviews	8.0	Moderate/ Moderate	25% Sample Annually	Annual	Not more than 20% deviation from management area prescription (Tree Stand Management Activities on a forestwide basis).
	Assure lands classified as not suitable for timber production are reviewed every ten years	E06	Silvicultural Exams, Stage I Inventory, FORPLAN	3.0	High/ High	Each 10 year Period.	10-years	Date [sic] indicates unsuitable lands may be suitable.
	Assure that timber sold does not exceed the allowable sale quantity	E06	10-year & 5-year sale Programs; Cut & Sold Reports;	1.0	High/ High	100% Sample	Annual	Allowable quantity not exceeded.

Program	Activity, Practice, Effect	Monitoring Item Code	Monitoring Techniques or Data Sources	Annual Costs (Thousands of Dollars)	Precision/Reliability	Measurement Frequency	Reporting Period	Standards—Acceptable Limits Indicating No Need for Further Planning Action
	established for the 10 year period		District Stand File activity reporting					
	a) Regulated timber offered	E06	Accomplishment Reports	.5	High/High	100% Sample	Annual	Allowable quantity not exceeded.
	b) Unregulated timber offered	E06	Accomplishment Reports	.5	High/High	100% Sample	Annual	Allowable quantity not exceeded.
Water	Water Quality		Establish baseline stations. Establish short term data stations. Utilize STORET Data System. Forest wide Monitoring Plan	5.0	Moderate/Moderate	Annual	Annual	Meet state water quality standards and project plan objectives.
	Potable Water Compliance to Protect Public Health and Safety		Bacteriological Sampling	6.0	Moderate/Low	Monthly during use season	Annual	State water quality standards.
	Changes in riparian Areas Due to Management		Vegetative and cover Analysis	4.0	Moderate/Moderate	Annual	Annual	10% decrease from ground cover, forage utilization & bank cover standards.
	Best Management practices effectiveness and compliance on land disturbing projects		Project evaluations by disciplinary Team members	4.0	Moderate/Moderate	Annually until land stabilization is completed	Annual	Meet projected Plan objectives.
Minerals	Onsite Inspection for Compliance with Operating Plans.		Onsite Review	60.0	High/High	Routinely	Routinely	Compliance with Operating Plans
Human & Community	Human Resource Manpower Programs	Y27&36 Y29&38 Y31&40	Enrollee Counts Management Attainment Report	1.0	High/High	Quarterly	Annually	Meet targets.

Program	Activity, Practice, Effect	Monitoring Item Code	Monitoring Techniques or Data Sources	Annual Costs (Thousands of Dollars)	Precision/Reliability	Measurement Frequency	Reporting Period	Standards—Acceptable Limits Indicating No Need for Further Planning Action
Development		Y32&41						
	Community Stability & Productive Harmony		Citizen involvement (SRM); issues & concerns analysis	10.0	Moderate/Moderate	Annual	Annual & 5-yr. (prior to plan update)	Positive trends.
	Equal Employment Opportunity	Z01,Z08 Z15,Z36	Enrollee Counts Management Attainment Report	1.0	High/High	Quarterly	Annual	Meet targets.
Soils	Soil & Water Resource Improvements		Acres treated Management Attainment Report	0.5	High/High	Every 4 Months	Annual	Meet assigned targets.
	Accelerated Soil Loss Forestwide		Project Analysis Universal soil loss equation, see Appendix Q	2.5	Low/Low	Routinely	Routinely	Average soil loss not to exceed 1 to 5 tons per acre, depending on soil depth and natural erosion rate.
Facilities	Transportation System Management	L01	Traffic counts. Road Condition Surveys of selected roads	5.0	Moderate/Moderate	Periodic	Annual	Road design and maintenance classes and conditions meet Forest Plan & project needs.
	Roads Construction and Reconstruction	L01 thru L18	Project analysis	10.0	High/High	Annual	Annual	Meet assigned targets, answer project needs.
	Road Maintenance	C-19	Road Maintenance Plan Condition surveys	5.0	Moderate/Moderate	Annual	Annual	Meet targets, meet Maintenance management System benchmarks.
	Telecommunications	L33 thru L44	Telecommunication Plan Maintenance Cost Records Use Charges	75.0	High/High	Periodic	Annual	Cost effective. Meets Forest Telecommunication Plan.
	Administrative Sites		Project Inspections Analysis Administrative Site Plan	3.0	Moderate/Moderate	Annual	Annual	Meets health, safety and sanitation requirements, maintenance standards. Cost Effective.

Program	Activity, Practice, Effect	Monitoring Item Code	Monitoring Techniques or Data Sources	Annual Costs (Thousands of Dollars)	Precision/Reliability	Measurement Frequency	Reporting Period	Standards—Acceptable Limits Indicating No Need for Further Planning Action
	Special Uses Except Recreation	J01-L28	Permit Clauses Operating & Construction Plans	50.0	Moderate/Moderate	Semi-Annual	Annual	Meets applicable laws, regulations and permit requirements.
	Rights-of-Way	J02	Right-of-Way Acquisition Plan Assigned Targets	2.0	High/High	Annual	Annual	Meets targets. Adequate Forest Access.
	Land Adjustment	J13,15 16&17	Land adjustment plan Assigned target	1.0	Moderate/Moderate	Annual	Annual	Meets target & objectives
	Property Boundary Location	Y52	Boundary Location Plan targets	1.0	Moderate/Moderate	Semi-Annual	Annual	Meets targets. No encroachments. Follows Plan.
Protection	Fuel Treatment	P-11	Project analysis, Acres treated Management Attainment Report	2.0	Moderate/Moderate	Semi-Annual	Annual	Meets targets & management area standards for activity fuels loading (Tons/Area).
	Air Quality		Analysis of projects with indicated potential for pollution	1.0	Low/Low	Current	Annual	Meet applicable Federal & State Ambient Air Quality Standards.
	Insect & Disease		Project analysis detection surveys, acres treated	4.0	Low/Low	Annual	Annual	Meet targets or control objectives.
	Law Enforcement	P-24	Compliance patrols issuing posting & enforcing orders, investigations, numbers & types of incidents. Incidents reported by others	6.0	Moderate/	Annual	Annual	No loss of human life.
Economics	Capital Investments		Forest Reports	No Increase	High/High	Annual	Annual	Meet Forest Plan objectives & assigned targets.

Program	Activity, Practice, Effect	Monitoring Item Code	Monitoring Techniques or Data Sources	Annual Costs (Thousands of Dollars)	Precision/Reliability	Measurement Frequency	Reporting Period	Standards—Acceptable Limits Indicating No Need for Further Planning Action
	Returns to U.S. Treasury		Forest Reports	No Increase	High/High	Current	Annual	No targets assigned. Monitor for effect.
	Receipt Shares to Counties		Forest Reports	No Increase	High/High	Annual	Annual	No targets assigned. Monitor for effect.
	Efficiency Analysis		Cost & benefit values updated as better information becomes available. PNV analysis completed	3.0	High/High	Annual	Annual	No targets assigned. Monitor for effects & information updates. Use FORPLAN, MIVEST, etc.
	Impact		Outputs confirmed and Impact Analysis completed after Management Attainment Reporting	1.5	High/High	Annual	Annual	No targets assigned. Monitor for effects & information updates. Use IMPLAN.
	Unit Costs for Planning Activities		Forest Reports	.5	High/High	Annual	Annual	Not more than 20% deviation from estimated costs on a forest wide basis.

## Northern Goshawk Forest Plan Amendment, Monitoring Requirements

ID	Goals & Obj.	Standards & Guidelines	Question	Item to Measure	Acceptable Range	Measurement [sic] Frequency	Report Frequency
m-1	G-10	all under the alternative goal	Are known goshawk territories on national forests remaining occupied?	Goshawk territory occupancy at the forest level.	Less than 20% decline in territory occupancy over a 3 year period.	Annually	Every 3 years
m-2	G-10	s-9 G-21	Are mitigation measures (standards and guidelines) employed during vegetative management project	Goshawk territory occupancy following vegetative	No territory abandonment on projects where mitigation measures are used.	The first full breeding period following activity in all projects where pre-project surveys	Annually

ID	Goals & Obj.	Standards & Guidelines	Question	Item to Measure	Acceptable Range	Measurement [sic] Frequency	Report Frequency
			implementation sufficient to prevent territory abandonment?	management treatments.		determined territory occupancy.	
m-3	G-10	g-7	Is habitat connectivity, as represented by structural and species diversity and dispersion thereof, within and among 5 <sup>th</sup> to 6 <sup>th</sup> order watersheds (or equivalent ecological scale) being maintained?	Spatial dispersion and patch size of mature and old forest groups within a 5 <sup>th</sup> to 6 <sup>th</sup> order watershed. Tree species composition mix within mature and old groups within a landscape.	Approximately 40% of the coniferous and/or 30% of the aspen forested acres within a landscape are in VSS 5 and 6 classes. Seral species characteristic of the cover type are well represented in VSS 5 and 6 classes.	Completion of each landscape assessment	Every 5 years
m-4	G-10	g-9	Is snag habitat (i.e., number and size of snags) being maintained in desired spatial arrangement?	Snag densities and sizes within a 100 acre block treated by mechanical or wildland fire use.	75% or more of the blocks measured meet guideline requirements.	10% or more of the acres treated within a project area, within 2 years following completion of the vegetative treatment.	Every 5 years
m-5	G-10	g-11	Are down woody material and logs being maintained in sufficient amounts, sizes and spatial locations?	Down log and woody debris amounts and sizes within a 10 acre block treated by mechanical or wildland fire use.	75% or more of the blocks measured meet guideline requirements.	5% or more of the acres treated within a project area, within 2 years following completion of the vegetative treatment.	Every 5 years
m-7	G-10	g-28 g-29	Are appropriate adjustments made to grazing practices in identified "at risk" locations where grazing is contributing to the "at risk" condition?	Ungulate grazing practices (i.e. utilization [sic], season of use, grazing system) in identified "at risk" locations.	Grass, forb, and shrub production objectives are within the range identified [sic] in landscape assessments.	Grazing practices reviewed annually on at least 2 allotments where "at-risk" conditions have been identified.	Every 5 years

## Proposed Fishlake National Forest Plan Monitoring Program

### Monitoring Questions and Indicators

Program	Activity	Monitoring Question	Monitoring Indicator
Recreation	Developed Sites; Actual Use	Are developed recreation sites meeting Forest Plan standards for use, and are visitors satisfied?	Developed site use and visitor satisfaction
	Developed Sites; Condition	Are developed recreation sites meeting Forest Plan standards for condition?	Developed site condition
	Dispersed Actual Use	Are dispersed recreation sites meeting Forest Plan standards for use, and are visitors satisfied?	Dispersed site use and visitor satisfaction
	Dispersed campsite condition	Are dispersed recreation sites meeting Forest Plan standards for condition, and are visitors satisfied?	Dispersed site condition
	Trail condition	Are trails meeting Forest Plan standards for use and condition, and are visitors satisfied?	Trail use, and visitor satisfaction; miles of motorized trail managed to standard; miles of non-motorized trail managed to standard
Cultural Resources	Sites located and protected	Are historical and cultural resources being protected both from forest plan implementation activities and from vandalism or neglect?	Number of historical or cultural sites adversely impacted by projects or the public
Fish and Wildlife	Wildlife Habitat Diversity	Is the diversity of wildlife habitat being maintained?	Diversity of forest and rangeland vegetation
	Modification of Ecosystem	Are forest management activities and/or natural events affecting the structure and function of upland and riparian ecosystems?	Structure and function of forest and riparian ecosystems
	Big game habitat condition	Is big game habitat maintained to meet Forest Plan desired conditions?	Big game habitat condition
	Fish (BCT)	Are forest management activities and natural events affecting the ecological conditions indicated by the status of focal species?	BCT population estimates
	Threatened Plant Species	Are TEPC plant habitats being protected from forest plan implementation activities?	Number of TEPC plant locations adversely impacted
	Nongame Species	Are forest management activities and natural events affecting the ecological conditions indicated by the status of focal species?	Habitat across the planning area
	Macro-invertebrate	Are forest management activities and/or natural events affecting aquatic habitats?	Aquatic habitat condition
	T&E and Sensitive Animals	Are TEPC animal habitats being protected from forest plan implementation activities?	TEPC habitat conditions retained across the planning area

<b>Program</b>	<b>Activity</b>	<b>Monitoring Question</b>	<b>Monitoring Indicator</b>
	Habitat Condition Inventory	Is aquatic habitat maintained to meet Forest Plan desired conditions?	Aquatic and riparian condition; in-stream channel condition
	Snag Management	Are snags in condition to meet needs of cavity nesters?	Snag condition
Range	Permitted AUM	Are goods and services being provided in accordance with Forest Plan goals and objectives?	Level of permitted livestock grazing
	Forage Utilization	Are goods and services being provided in accordance with Forest Plan goals and objectives?	Forage utilization
	Range Trend	Do rangeland plant communities have desired species composition and is ground cover adequate?	Range condition and trend
Timber	Assure that timber manipulation will not favor an increase in forest pests (insects, diseases, etc.).	Are forest vegetation conditions stable or moving toward Forest Plan desired conditions?	Extent of insect and disease infestations
Water	Water Quality	Are beneficial uses, identified by the state of Utah, being maintained for all water bodies?	Impairment or degradation of water quality
	Changes in riparian Areas Due to Management	Are forest management activities affecting riparian ecosystems?	Riparian ecosystem condition
	Best Management practices effectiveness and compliance on land disturbing projects	Which forest management activities may affect riparian ecosystems?	BMP compliance and effectiveness
Soils	Accelerated Soil Loss Forestwide	Are forest management activities impairing soil productivity of the land?	Changes in soil properties (physical, chemical, and/or biological) that result in the loss of the inherent ecological capacity or hydrologic function of the soil resource
Facilities	Transportation System Management	Is adequate road access and maintenance being provided?	Miles of classified road open for public use
	Road Maintenance	Are open roads maintained to standard?	Miles of road maintained to standard
Protection	Fuel Treatment	Are fuel treatment projects protecting property, human health and safety, and reducing the potential for unwanted fire effects?	Effectiveness of fuel treatments in reducing unwanted fire effects
	Insect & Disease	Are forest vegetation conditions stable or moving toward Forest Plan desired conditions?	Extent of insect and disease infestations

<b>Program</b>	<b>Activity</b>	<b>Monitoring Question</b>	<b>Monitoring Indicator</b>
Goshawk	Goshawk territory occupancy at the forest level	Are known goshawk territories on NFS lands remaining occupied?	Goshawk territory occupancy
	Goshawk territory occupancy following vegetative management treatments	Are goshawk territories remaining occupied following vegetation management?	Goshawk territory occupancy
	Dispersion & patch size of mature/old forest groups	Is mature and old forest habitat connectivity being adequately maintained?	Percent and distribution of mature and old forest cover
	Snag densities/sizes within a 100 acre treatment block	Is snag habitat being maintained in desired spatial arrangement?	Density and distribution of snags
	Down log & woody debris amounts/sizes within a 10 acre treatment block	Is downed wood being maintained in sufficient amount, size, and location?	Quantity of downed logs and woody debris
	Ungulate grazing practices in identified at-risk locations	Are appropriate adjustments to grazing practices being made where grazing is contributing to at-risk conditions?	Ungulate grazing practices in at-risk locations