USDA United States Department of Agriculture | Forest Service | Umpqua National Forest
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Dear Interested Citizen,

The Umpqua National Forest's land management monitoring program has been modified to conform to the new monitoring requirements in the 2012 Planning Rule. I think this plan provides a comprehensive, yet affordable monitoring program that fits together well with inventory and monitoring efforts at the province, regional and national levels.

We sent you a draft monitoring plan and letter requesting comments in March and posted these documents on the Forest website at http://www.fs.usda.gov/main/umpqua/landmanagement/planning. We heard back from a couple individuals, but did not get comments on the monitoring activities that are in the plan. The final monitoring plan is enclosed. It contains the same activities as the plan that was circulated in March. While we did not get much feedback during the public review process, I welcome your continued involvement and any thoughts you would like to share in the future.

2012 Planning Rule

As defined by the Planning Rule, monitoring is continuous and provides feedback for the planning cycle by testing relevant assumptions, tracking relevant conditions over time, and measuring management effectiveness (36 CFR 219.12). The Planning Rule includes eight monitoring requirements.

(i) The status of select watershed conditions.

(ii) The status of select ecological conditions including key characteristics of terrestrial and aquatic ecosystems.

(iii) The status of focal species to assess the ecological conditions required under §219.9.

(iv) The status of a select set of the ecological conditions required under §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.

(v) The status of visitor use, visitor satisfaction, and progress toward meeting recreation objectives.

(vi) Measureable changes on the plan area related to climate change and other stressors that may be affecting the plan area.

(vii) Progress toward meeting the desired conditions and objectives in the plan, including for providing multiple use opportunities.

(viii) 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 Umpqua's new Forest Plan monitoring program contains one or more monitoring questions and associated indicators addressing each of the monitoring requirements. The monitoring questions are tied to specific Forest Plan components, which include desired future conditions, plan objectives, and standards and guidelines. They focus on providing the information necessary to evaluate whether Forest Plan components are effective and appropriate, and whether management is being effective in maintaining or achieving progress toward the desired conditions and objectives for the Forest. The monitoring plan in the Forest Plan was used as a starting point for developing the new Forest Plan monitoring program. Indicators are quantitative or qualitative variables that can be measured or described and, when observed periodically, show trends in conditions that are relevant to the associated monitoring questions.

Focal Species

The Forest Plan monitoring program identified focal species along with monitoring questions and associated indicators to track the status of the focal species in order to comply with monitoring requirements. Focal species are a "small subset of species whose status permits inference to the integrity of the larger ecological system to which it belongs and provides meaningful information regarding the effectiveness of the plan in maintaining or restoring the ecological conditions to maintain the diversity of plant and animal communities in the plan area. Focal species would be commonly selected on the basis of their functional role in ecosystems" (36 CFR 219.19).

Management indicator species (MIS) in the Forest Plan, which are discussed on pages III-5 and IV-38, were used as a starting point for identifying focal species. The Forest has eight wildlife and bird species listed as management indicator species. These species are listed in following table.

Table 1. Changes from Management Indicator Species to Interim Focal Species and Rationale

1990 MIS	Interim Focal Species	Rationale
Spotted Owl	Drop as focal-track under (iv) recovery of T&E species	T&E species that is key component of forest management plan.
Pileated Woodpecker	Pileated Woodpecker	Indicator for deadwood levels and mature and late successional forest condition particularly in the Douglas-fir/western hemlock zone.
Pine Marten	Pine Marten	Species of higher elevation (over 4,000 feet elevation) mature and late successional forests; indicator of deadwood levels at higher elevation forests.
Bald Eagle	Drop	Recovered; habitat condition will be tracked with fish focal species and riparian/stream ecological condition monitoring; protect at the project level by evaluation as sensitive species and Biological Evaluations.
Peregrine Falcon	Drop	Recovered and no longer USFWS post-listing monitoring concern; no longer key forest issue; protect at the project level by evaluation as sensitive species and Biological

1990 MIS	Interim Focal Species	Rationale
		Evaluations.
Roosevelt Elk	Roosevelt Elk	Providing elk habitat and hunting opportunities is still an important public issue; also indicator of amount of early seral habitat; elk is more sensitive to road management than deer; have elk model for habitat suitability.
Blacktail Deer	Drop	Rely on elk to track the concern for deer hunting and the amount of early seral habitat; deer is a duplicate of the same issue and concern so it is redundant; no specific deer habitat model so we rely on elk model to represent deer habitat condition.
Cavity Nesters	Drop	Monitoring for other species will track the habitat conditions of these primary cavity excavators. Monitoring for marten will track habitat condition for Lewis woodpecker (fall dispersal), northern-three toed, and black-backed woodpecker; monitoring for pileated woodpecker and northern spotted owl will track the habitat condition of other cavity nesters.
NA	Summer steelhead and spring Chinook	Summer steelhead and spring Chinook are good indicators of aquatic ecosystem health. Oregon Coast Coho Salmon is monitored as guided by its ESA Recovery Plan (in development) and through consultation requirements.

Based on how well the species serve as indicators of ecological integrity and existing Forest Plan components, along with the anticipated time until the completion of Forest Plan revision, the following changes are being made for the transition period.

- Continue to monitor pileated woodpecker, pine marten and elk as interim focal species.
  1. Pileated woodpeckers are indicators of mature and late successional habitat;
  2. Pine marten are indicators of mature and late successional habitat above 3,500 feet; and
  3. Elk are indicators of early seral habitat.

- Remove Spotted Owl, Bald Eagle, and Peregrine Falcon given they are monitored under Endangered Species Act (ESA). The Spotted Owl is monitored as part of the Northwest Forest Plan and Northern Spotted Owl Recovery Plan.

- Remove cavity nesters given that other monitoring will track habitat conditions for primary cavity excavators.

- Add summer steelhead and spring Chinook to be monitored as interim focal species as they are good indicators of aquatic ecosystem health. Monitor Oregon Coast Coho Salmon as guided by its ESA Recovery Plan (in development) and through consultation requirements.

The interim focal species for the Forest will be re-evaluated during the Forest Plan revision process and will likely change through that process based on the corresponding changes to

Forest Plan components (e.g., standards and guidelines).

Administrative Changes
In order to implement the new Forest Plan monitoring program, the Forest is making the following changes. The new Forest Plan monitoring program (attached) replaces the existing monitoring program described on Forest Plan pages V-1 to V-58.

The changes to the monitoring program were made using an administrative change under the 2012 Planning Rule (36 CFR 219). An administrative change (36 CFR 219.13(c)) is any change to a plan that is not a plan amendment or plan revision. Administrative changes include corrections of clerical errors to any part of the plan, conformance of the plan to new statutory or regulatory requirements, or changes to other content in the plan, including the monitoring program (§ 219.7(f)(iii)).

Forest Plan Monitoring Program
The Forest will prepare its first monitoring report under this new program in fiscal year 2018. The biennial monitoring evaluation report will use the indicators to answer the monitoring questions and evaluate the trends. The report will document whether a change to the Forest Plan or change to the monitoring program is warranted based on new information or whether there is no need for change at that time as required by the Planning Rule (36 CFR 219.5).

If you have any questions concerning the monitoring program, please contact Jane Beaulieu at jbeaulieu@fs.fed.us or 541-957-3466.

Sincerely,

/s/ ALICE CARLTON
Forest Supervisor

Umpqua National Forest 2012 Planning Rule Monitoring Program

April 2016

Forest Plan Component	Monitoring Question	Indicator(s)	Potential Data Source
(i) The status of select watershed conditions.			
Umpqua LMRP: Goal: To maintain or enhance water quantity, quality, and timing of streamflow for the beneficial uses of human and aquatic life on National Forest System lands and downstream (p. IV-59) NWFP ROD: ACS Objectives Standards and Guidelines: WR-1 to WR-3 (p. C-37)	Are Standards and Guidelines maintaining or improving watershed conditions?	Watershed Condition Framework (WCF) analysis of key indicators at the 5th and 6th field watershed scales.	Watershed Condition Framework (WCF) analysis results
Umpqua LRMP: Standards and Guidelines: Watershed Cumulative Effects (pp. IV-63 to IV-66), Soil #13, 16 (pp. IV-71-72) NWFP ROD: ACS Objectives Standards and Guidelines: TM-1 (p. C-31), RF-1 to RF-7 (pp. C-32 to C-33, RA-1 to RA-4 (p. C-37)	Have Best Management Practices (BMPs) been implemented and are they effective at managing water quality consistent with the Clean Water Act?	Temperature and turbidity	Stream temperature data, NorWest database, turbidity monitoring, USFS National BMP Monitoring protocols and results, travel analysis/roads management

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Forest Plan Component	Monitoring Question	Indicator(s)	Potential Data Source
NWFP ROD Standards and Guidelines: RM-3 (p. C-34) Umpqua LRMP: Objectives: #4 (p. IV-12) Standards and Guidelines: #4 (p. IV-12), #1 (p. IV-27) North Umpqua River Mgt. Plan: pp. 11-22, 39-50	Are Standards and Guidelines maintaining the outstanding remarkable values (ORVs) of designated, study, and potential Wild and Scenic Rivers and designated State scenic waterways?	Fish population, stream habitat, visitor satisfaction	Fish population surveys, Natural Resource Information Systems (NRIS) stream inventory habitat data, lake data, NVUM surveys, visitor counts, photo logs, POSS/NRRS data. Are we following existing Wild and Scenic River Management Plans?
Umpqua LRMP: Standards and Guidelines: Watershed Cumulative Effects (pp. IV-63 to IV-65) NWFP ACS Objective: Maintain and restore in-stream flows. The timing, magnitude, duration and spatial distribution of peak, high and low flows must be protected.	Are management practices causing changes in stream flows?	Hydrologic Recovery Percentage (HRP) calculation	Calculate HRP to determine the effects of vegetation treatment on peak flows by planning sub-drainage

Forest Plan Component	Monitoring Question	Indicator(s)	Potential Data Source
(ii) The status of select ecological conditions including key characteristics of terrestrial and aquatic ecosystems.			
NWFP ROD Standards and Guidelines: WR-1, FW-4, p. C-19, ACSO	Are Standards and Guidelines maintaining or decreasing the spread of aquatic invasive species?	Abundance trends in non-native fish species (tui chub, smallmouth bass, brown bullhead, et al.) as well as aquatic invasive species (New Zealand mud snail, Zebra and Quagga mussel, Whirling disease, and non-native plants), aquatic and riparian, in selected subwatersheds.	NRIS stream inventory, lake inventory, smolt trap data, Soda Springs Dam fish passage inventory, Aquatic and Riparian Effectiveness Monitoring Program (AREMP) data
Umpqua LRMP: Goal: Land management activities shall be planned and conducted to maintain and enhance soil productivity and soil stability. Standards and Guidelines: Soil #1-5, 11-12 (pp. IV-67 to IV-71)	Are Standards and Guidelines effective in meeting Forest goals for soil conditions, erosion, and nutrient cycling?	% of soils in disturbed condition	Monitoring of management activities such as timber harvest, road management, and recreation including site visits and transects.

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Forest Plan Component	Monitoring Question	Indicator(s)	Potential Data Source
Umpqua LRMP: Standards and Guidelines: Water #1-8, 11, 13-14, 21, Watershed Cumulative Effects (pp. IV-60 to IV-65) NWFP ROD: ACS Objectives Standards and Guidelines: TM-1 (p. C-31), RF-1 to RF-7 (pp. C-32 to C-33), RM-1 to RM-2 (p. C-34), FM-1 to FM-5 (pp. C-35 to C-36), RA-1 to RA-4 (p. C-37), FW-1 (p. C-37)	Are Standards and Guidelines maintaining or improving aquatic habitat (instream, lake, and riparian areas)?	1. core and integrated targets 2. habitat data (assessment of current condition) 3. management related impacts to aquatic systems	1. Watershed Improvement Tracking (WIT) accomplishment data 2. NRIS stream inventory; lake surveys, landslides/debris torrents 3. recreation, timber harvest, road management, etc.
NWFP Standards and Guidelines: Survey and Manage Species	Are projects contributing to the persistence of Survey and Manage species?	Number of survey and manage sites identified and protected during project planning.	Monitoring accomplished during planning phase using GIS and field visits to selected units. Annual Species Review Process completed by the Regional Office.
Standards and Guidelines: Forest Plan Amendments #4 (Umpqua Integrated Weed Management Project, 2003) and the Region 6 Preventing and Managing Invasive Plants ROD Standards and Guidelines (2005)	Are priority invasive plants being managed in accordance with the Umpqua Integrated Weed Management Plan? Are prevention measures being implemented?	Acres of surveyed lands with new and active invasive species infestations; acres treated.	Information tracked in NRIS. Accomplished through the monitoring requirements associated with the Regional Invasive Plant Environmental Impact Statement (EIS) (2005) and Site-Specific Forest Invasive Plant EA (2003).

Forest Plan Component	Monitoring Question	Indicator(s)	Potential Data Source
(iii) The status of focal species to assess the ecological conditions required under §219.9.			
Habitat is managed for marten.	What is the trend for mature and late successional habitat above 4,000 feet elevation needed for marten persistence on the Umpqua?	Acres of montane mixed conifer (MMC/LP) forest by late successional forest index categories on the Forest tracked over time. Changes in snag and dead log levels in MMC/LP relative to historic condition by 5th field watershed on the Forest tracked over time.	Derived from Gradient Nearest Neighbor (GNN) data Derived from GNN data
Habitat is managed for pileated woodpecker.	What is the trend for mature and late successional habitat needed for pileated woodpecker persistence on the Umpqua?	Acres of lowland conifer/hardwood (WLCH) forest by late successional forest index categories on the Forest tracked over time. Changes in snag and dead log levels relative to historic condition by 5th field watershed on the Forest tracked over time. Occupancy rate of pileated woodpeckers in pileated woodpecker management areas tracked over time.	Derived from GNN data Derived from GNN data Forest survey data

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Forest Plan Component	Monitoring Question	Indicator(s)	Potential Data Source
Habitat is managed in cooperation with Oregon Department of Fish and Wildlife (ODFW) to provide for deer and elk hunting opportunities.	What is the trend in elk habitat condition and elk hunting levels and success?	Changes in elk harvest, success rates, and ODFW elk populations estimates by State Game Management Unit. Changes in estimated elk forage quality and habitat suitability by Big Game Emphasis Area tracked over time Acres of early seral habitat relative to historic condition by 5th field watershed on the Forest tracked over time	ODFW data Westside elk model run with GNN data GNN-need Ecologist/silviculture input to decide best query approach
Umpqua LRMP: Goal: To protect, maintain and, where appropriate, enhance the productivity of fish habitat to provide for populations of resident and anadromous fish for scientific, recreational and commercial uses, both on and off the Forest. Standards and Guidelines: #1-12 and management activities pp. IV-34 and 35.	Are Standards and Guidelines maintaining or improving focal fish species populations?	Subpopulation number and distribution of Summer steelhead and spring Chinook in selected subwatersheds	Subpopulation data (screw trap inventories and snorkel surveys of South Umpqua River spring Chinook; and summer steelhead adult counts from FishWatch program). Regional fish distribution maps (new data or changes in distribution). Regional fish barrier database (showing habitat accessible due to barrier removal).

Forest Plan Component	Monitoring Question	Indicator(s)	Potential Data Source
(iv) The status of a select set of the ecological conditions required under §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.			
Umpqua LRMP: Goal: To provide for present and future habitat needs to contribute to the recovery of all threatened or endangered species in accordance with approved recovery plans. Monitor threatened or endangered species. Standards and Guidelines: TES #6 (p. IV-37) NWFP Standards and Guidelines: pp. C-11, C-17, E-10	Are Standards and Guidelines maintaining or improving T&E fish subpopulations?	Subpopulation number and distribution of Coho salmon in selected subwatersheds.	Subpopulation surveys (redd surveys, adult surveys, screw trap, electrofishing, snorkeling, etc.). Regional fish distribution maps (new data or changes in distribution). Regional fish barrier database (showing habitat accessible due to barrier removal).
Umpqua LRMP: Standards and Guidelines: Water #1-4, 11, Watershed Cumulative Effects (pp. IV-60 to IV-65) NWFP Standards and Guidelines: Riparian Reserves & Aquatic Conservation Strategy	Are Standards and Guidelines effective in maintaining or enhancing aquatic habitat complexity?	Trends in instream and riparian habitat conditions. Trends in aquatic macroinvertebrate abundance, diversity and distribution.	Tracked by stream inventory program (data documented in NRIS AqS database) and fish distribution maps. Water temperature monitoring (data documented in NRIS and NorWest databases) and project specific analyses. Aquatic macroinvertebrate surveys (Forest files).

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Forest Plan Component	Monitoring Question	Indicator(s)	Potential Data Source
NWFP Standards and Guidelines: Late Successional Reserves	What is the trend for mature and late successional habitat needed for Northern spotted owl persistence?	Acres of dispersal habitat, suitable habitat, and by old growth site index categories on the Forest tracked over time.	Northern spotted owl five year review habitat model.
NWFP Standards and Guidelines: Late Successional Reserves	What is the trend for the Northern spotted owl population?	Estimated number of territorial owls and annual rate of population change.	Demography of the Northern spotted owl from the 20 year monitoring report and future reports tracked over time. Also refer to data from local demography study areas (Tyee and Klamath.
Umpqua LRMP: Standards and Guidelines #6 and #7 (p. IV-37)	What are the trends for botanical Sensitive Species? Are any species we are monitoring in decline? If so, have management actions been taken to restore their habitats?	Changes in numbers of individuals monitored in selected populations over time.	Project specific analysis and Threatened, Endangered, and Sensitive (TES) Plant long-term monitoring data

Forest Plan Component	Monitoring Question	Indicator(s)	Potential Data Source
(v) The status of visitor use, visitor satisfaction, and progress toward meeting recreation objectives.			
Umpqua LRMP: Forest Objective: The Forest will continue to provide a share of diverse recreation opportunities in conjunction with other public and private providers. Recreation planning and operations will be coordinated with other Federal, State, local and private recreational managers. The Umpqua National Forest will remain the primary supplier of dispersed and primitive recreation settings relative to other local recreation providers. (p. IV-11)	Are people having a high level of satisfaction during their visit to Umpqua National Forest?	Percent visitor satisfaction for (1) developed sites, (2) general forest areas, and (3) designated wilderness.	National Visitor Use Monitoring Data

Forest Plan Component	Monitoring Question	Indicator(s)	Potential Data Source
(vi) Measurable changes on the plan area related to climate change and other stressors that may be affecting the plan area.			
Umpqua LRMP: Goal: To maintain or enhance water quantity, quality, and timing of streamflow, for the beneficial uses of human and aquatic life on National Forest System lands and downstream. (p. IV-59) Goal: To protect, maintain and where appropriate enhance the productivity of fish habitat to provide for populations of resident and anadromous fish for scientific, recreational and commercial uses both on and off the Forest. (p. IV-33)	How is climate change impacting aquatic habitat conditions and fish distribution?	Trend, increase or decrease, in the upper extent of habitat for fish or changes in the distribution of species.	NRIS stream inventory habitat data, lake water quality and fishery data, aquatic macroinvertebrate surveys, Regional fish distribution database, fish subpopulation surveys (redd surveys, screw trap data, adult spawning surveys, electrofishing, snorkeling, etc.), aquatic invasive species distribution. Stream temperature data, NorWest data, stream gauge data.
Umpqua LRMP Standard and Guideline: p. IV-50	Are incidence of insect and disease trending upward?	Acres affected by type and insect and disease	Annual aerial flight

Forest Plan Component	Monitoring Question	Indicator(s)	Potential Data Source
(vii) Progress toward meeting the desired conditions and objectives in the plan, including for providing multiple use opportunities.			
Umpqua LRMP: Goal: The goal is to provide for efficient production of wood fiber to satisfy National needs and benefit local economies consistent with multiple resource objectives. (p. IV-42)	How do the timber output estimates in the Forest Plan compare with actual production?	How does the volume of sold timber compare to the probable sale quantity (PSQ)?	Timber Information Manager (TIM) database and Forest Plan predicted outputs.
Umpqua LRMP: Desired Future Condition: Recognize and respond to the socio-economic effects of management strategies. (p. IV-6)	What are the economic consequences of deviating from the estimated Forest Plan timber outputs?	What is the economic impact if the PSQ is not met or exceeded in terms of revenue to the Forest Service and private sector jobs?	Timber Sale Accounting records (TSA); TIM, IMPLAN (a model that estimates economic impacts).
Umpqua LRMP: Desired Future Condition: Provide for plant and animal community diversity and ecological health as the foundation to sustain the long-term productivity of the forest. (p. IV-6)	How ecologically sustainable is the level of timber harvest on the forest?	What is the amount awarded timber each year compared to the amount of growth and mortality across the forest. How many acres of timber are harvested each year as a percentage of the total land base?	TIM database, Forest Inventory and Analysis (FIA) data, stand exam data, Forest Service ACtivity Tracking System (FACTS) database, and the Forest Plan.

Forest Plan Component	Monitoring Question	Indicator(s)	Potential Data Source
(viii) 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)).			
Umpqua LRMP: Goal: Land management activities shall be planned and conducted to maintain and enhance soil productivity and soil stability. Standards and Guidelines: Soil #1-5, #11-12 (pp. IV-67 to IV-71)	Are management activities being implemented so that they do not substantially and permanently impair the productive capacity of the land?	Extent of detrimental soil disturbance in an activity unit.	Annual National BMP monitoring protocol and periodic soil quality sampling.

References

U.S. Department of Agriculture. Forest Service. U.S. Department Interior. Bureau of Land Management. Oregon State Parks and Recreation. 1992. North Umpqua River Management Plan

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U.S. Department of Agriculture. Forest Service and U.S. Department Interior. Bureau of Land Management. 1994b. Record of Decision on management of habitat for late-successional and old-growth forest related species within the range of the northern spotted owl (Northwest Forest Plan). Portland, Oregon.