

Transitional Monitoring Plan

Okanogan-Wenatchee National Forest Transitional Monitoring Plan - 2016

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Okanogan-Wenatchee National Forest Transitional Monitoring Element Table – May 19, 2016

Selected Plan Component	Monitoring Question	Monitoring Indicator	Potential Data Source and Responsible Position
(i) The status of select watershed conditions			
1. Watershed condition function (NWFP ACS, INFISH/PACFISH RMOs)	Which watershed conditions are functioning properly and why? Which watershed conditions are functioning improperly and why?	Trends in functioning condition for the watersheds	National Watershed Condition Framework (WCF) assessment indicators and attributes Forest Hydrologist (Lead) Forest Fisheries Biologist
2. Roads (Okanogan LRMP 4-52; Wenatchee LRMP IV-102; NWFP ACS, B-19, C-32, C-33, PACFISH/INFISH RF-1 to RF-5)	Are management actions reducing road impacts to: <ul style="list-style-type: none"> • Watersheds? • Key and priority watersheds? • Late Successional Reserves (LSRs)? • Grizzly bear core areas? 	Trends in total road density and maintenance levels within 6 th field watersheds and key habitats Road miles upgraded, closed or decommissioned within 6 th field watersheds, including unauthorized roads Road/stream crossings decommissioned or upgraded	Individual project level Travel Analysis Process (TAP) INFRA – roads Watershed Improvement Tracking (WIT) Individual Aquatic Landscape Evaluation analyses and/or project level analyses Annual accomplishment reports Road Manager, Engineering (Lead) Forest Hydrologist Forest Fisheries Biologist
3. BMPs employed to protect water quality (Okanogan LRMP 4-45 to 4-46; Wenatchee LRMP IV-94 to IV-95)	Have BMPs (including those for fish and riparian habitat) been designed and implemented appropriately and are they effective at managing water quality consistent with the Clean Water Act?	Failure to include appropriate BMPs or not meet planned objectives	BMP database and monitoring reports Interdisciplinary EA and project implementation review Forest Hydrologist

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	If needed, what corrective actions and adaptive management measures were implemented? Were they effective?		
(ii) The status of select ecological conditions including key characteristics of terrestrial and aquatic ecosystems			
4. Stream temperatures (Okanogan LRMP 4-30 to 4-31; Wenatchee LRMP IV-85 to IV-86; NWFP ACS, PACFISH/INFISH RMOs)	Are watersheds functioning properly for stream temperature to support desired fish habitat?	Trends in stream temperatures	Stream temperature – monitoring instruments placed in streams and data collected annually <ul style="list-style-type: none"> • Select 303(d) listed streams to track trends in temperature • Additional select streams for project monitoring • Key streams that provide cold water for downstream habitat Upper Methow River, Middle Methow River, Lower Methow River, Chewuch River, Twisp River, Entiat River, Mad River, Little Naches River, Rattlesnake Creek, Tieton River, Cle Elum River, Kachess River, MF Teanaway River, Taneum Creek, Chiwawa River, Mission Creek, Nason Creek, Peshastin Creek, and Wenatchee River Forest Hydrologist (Lead) Forest Fisheries Biologist
5. Stream flows (NWFP ACS)	Are stream flows increasing or decreasing? Are flows within the natural range of variability?	Trends in stream flows on select rivers	Stream flow data for the Wenatchee and Chewuch Rivers Forest Hydrologist

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<p>6. Stream habitat conditions for desired aquatic habitat for both focal and T&E species (Okanogan LRMP 3-41 to 3-42; Wenatchee LRMP IV-84 to IV-88; PACFISH/INFISH RMOs and RHCA standards; Northwest Forest Plan Riparian Reserve and ACS standards)</p>	<p>Are streams functioning properly with the focus on stream habitat to support desired aquatic habitat, including downstream habitat?</p> <p>Which streams are not functioning properly and why?</p> <p>What habitat condition trends have been identified in monitored streams?</p> <p>Have S&Gs been implemented to protect riparian habitat?</p> <p>Are stream and habitat improvement projects meeting aquatic habitat objectives?</p>	<p>Trends in habitat parameters such as riffle to pool ratios, width to depth ratios, pebble counts, bank condition, large woody debris and other parameters collected during stream surveys</p>	<p>Stream survey data on select forest streams, data stored in NRIS</p> <p>Watershed Condition Framework reporting</p> <p>NEPA project review to determine consistency with S&Gs (RR/ACS, PACFISH/INFISH RHCAs/RMOs etc.)</p> <p>Forest Fisheries Biologist (Lead)</p> <p>Forest Hydrologist</p>
<p>7. Fuels arrangement and management (Okanogan LRMP 4-54; Wenatchee LRMP IV-103; NWFP C-12 to C-13)</p>	<p>Are forest fuel loads exceeding natural levels and therefore placing forest users, improvements and/or resource values at risk?</p> <p>Are forest fuels conditions functioning properly as determined by departure from desired forest fuels conditions?</p> <p>Are prescribed fire treatment areas meeting management objectives?</p>	<p>Acres treated by treatment type by Wildland Urban Interface and Non-Wildland Urban Interface</p> <p>Quantitative/Qualitative narrative to evaluate change on the existing condition landscape and movement towards a desired condition</p> <p>Success of meeting objectives outlined in burn plan in each district's annual prescribed fire program</p>	<p>Individual Landscape Analyses and/or project by project analyses</p> <p>FACTS database - Treatment acreages by treatment type, within WUI and Non-WUI, etc.</p> <p>Project NEPA review</p> <p>Qualitative summary from each District After-Action Reviews</p> <p>District NEPA records</p> <p>Forest Fire Ecologist (Lead)</p> <p>Forest Fuels Program Manager District</p>

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		Acres treated in a year as number of NEPA documents signed vs. number planned in FY	Fuels AFMOs Forest Landscape Ecologist
8. Terrestrial habitat conditions [Okanogan LRMP 4-33; Wenatchee LRMP IV-104; Northwest Forest Plan ACS, LSR and MLSA LOS Standards; Regional Forester Amendment #2 (Eastside Screens) late and old forest systems requirements]	Are projects maintaining and restoring resiliency? Are projects maintaining and restoring late successional and old growth forests (LSOF)? What are the trends for stand structure, patch size and connectivity?	Trends in cover and structure by vegetation type Trends in LSOF habitat –both single and multiple story Type, extent, and amounts of insects and disease damage Trends in HRV departure by 6 th field sub-watersheds as accomplished	Individual Landscape Analyses and/or project by project FACTS database Post vegetation implementation monitoring Models to identify LSOF GIS vegetation and wildfire data Treatment acreages by treatment type, etc. Regional Office Forest Pest Management aerial surveys – review for status and trends, forest level - broadscale Area Landscape Ecologist (Lead) Forest Silviculturist Forest Wildlife Biologist Forest Fire Ecologist Zoned Forest Health Specialist
9. Riparian habitat conditions (Okanogan LRMP 4-30 to 4-31; Wenatchee LRMP IV-84 to IV-88; Northwest Forest Plan Riparian Reserve/ACS and PACFISH/INFISH)	What is the status of riparian allocation areas (Riparian Reserves and RHCAs), including wetlands and floodplains? Are habitats being protected in accordance with LRMP S&Gs at selected sites (Original LRMP standards; PACFISH/ INFISH)	Trends in riparian vegetation cover and species compositions Adherence in planning and implementation to riparian allocation area standards Miles of system road upgraded, closed, decommissioned or relocated in riparian areas	WCF data for riparian vegetation condition Project implementation monitoring of RR/RHCA standards INFRA - roads Travel Management Monitoring Project NEPA review

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standards RHCA/RMO standards)	<p>RMOs and RHCA standards; NWFP ACS and Riparian Reserve standards)?</p> <p>Are detrimental effects of roads and motorized recreation in riparian allocation areas being effectively managed?</p>		<p>Forest Hydrologist (Lead) Forest Fisheries Biologist Forest Wildlife Biologist Forest Range/Botany/Invasives PM Soil Scientist</p>
<p>10. Rangeland health (Okanogan LRMP 4-42 to 4-44; Wenatchee LRMP IV-88 to IV-89; NWFP ACS; PACFISH/INFISH RMOs; NWFP/ PACFISH/INFISH S/Gs GM-1 to GM-3)</p>	<p>Are rangeland health, desired plant communities, upland and riparian areas and other resource values being maintained or improved while permitting livestock grazing?</p> <p>Are management actions maintaining or improving vegetation conditions within riparian allocation areas where grazing is permitted?</p> <p>Have utilization standards been exceeded?</p> <p>Do Allotment Management Plans match their corresponding NEPA decision?</p>	<p>Trends in plant community composition</p> <p>Trends in streambank conditions</p> <p>Trends in utilization</p> <p>Adherence in planning and implementation to upland and riparian allocation area standards for grazing</p>	<p>PIBO monitoring</p> <p>Field observations at select sites</p> <p>Riparian vegetation condition and trend transects</p> <p>USFS stream habitat inventory data (Aqs)</p> <p>Production, and/or utilization studies</p> <p>Project NEPA review</p> <p>AMP reviews</p> <p>Forest Range/Botany/Invasives PM (Lead) Forest Fish Biologist Forest Hydrologist</p>
<p>11. Invasive species management (Okanogan LRMP 4-45; Wenatchee LRMP IV-89; R6 PNW ROD standards)</p>	<p>Are invasive plant species being treated and are invasive plant populations being reduced in treated areas?</p> <p>Are management actions contributing to the resilience and health of ecosystems through</p>	<p>Trends in populations in treated sites</p> <p>Trends in percent of known populations treated</p> <p>Acres of native plant communities restored</p>	<p>FACTS, spatially linked to NRIS database</p> <p>Project NEPA review</p> <p>Invasive Plant Program Manager</p>

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	<p>integrated management of invasive species?</p> <p>Are management actions preventing the introduction and spread of invasive species?</p>	<p>Implementation of required prevention standards in projects</p> <p>Trend in the acres of invasive plant species on Forest</p>	
(iii) The status of focal species to assess the ecological conditions required under § 219.9			
<p>12. Focal aquatic species habitat and populations (T/E covered under iv): redband/ rainbow, westslope cutthroat trout and summer Chinook salmon (MIS and Sensitive Species)</p> <p>(Okanogan LRMP 4-31 to 4-33; Wenatchee LRMP IV-81 to IV-82; NWFP ACS; INFISH RMOs)</p>	<p>Are habitat conditions being provided consistent with the conservation plans and/or biological evaluations?</p> <p>Are populations being maintained or increased?</p> <p>Are management actions contributing to the viability of riparian habitat dependent species, including focal aquatic species recovery?</p>	<p>Trends in stream habitat</p> <p>Trends in populations</p> <p>Trends in aquatic species viability evaluation scores for focal species</p> <p>Review of NEPA project BEs for inclusion of S&Gs and assessment of treatment impacts</p>	<p>Stream survey data on select streams</p> <p>WDFW population statistics</p> <p>Federal, state, Tribal, PUD and other agency spawning , movement and populations survey data</p> <p>USFS stream habitat and biota inventory database (AqS)</p> <p>Project NEPA review</p> <p>Forest Fisheries Biologist</p>
<p>13. Late and old structure and species: northern spotted owl, pileated woodpecker, American marten, northern three-toed woodpecker, and survey and manage species</p>	<p>Are management actions contributing to the viability and recovery of wildlife species associated with late successional and old forests?</p> <p>Are Management Requirements (MR) sites (outside of NWFP area), LSRs and MLSAs being maintained as described in the Forest Plans?</p>	<p>Amount and trend, both short (one and two decades) and long term, of landscape old forest structure</p> <p>Acres surveyed for survey and manage species</p> <p>Acres where survey and manage species have been located</p>	<p>Individual Landscape Analyses and/or project by project</p> <p>Survey and manage data collection</p> <p>Regional survey and manage monitoring and annual species reviews</p> <p>NRM TESP/INVP corporate database</p> <p>Corporate GIS Datasets</p> <p>Project NEPA review</p>

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Selected Plan Component	Monitoring Question	Monitoring Indicator	Potential Data Source and Responsible Position
(Okanogan LRMP 4-34; Wenatchee LRMP IV-80 to IV-81; NWFP S/Gs for LSRs, MLSAs and survey and manage; Regional Forester Amendment #2)	Is LSOF being maintained within the historic range of variability in the area managed under Regional Forester Amendment #2 (Eastside Screens)?	Review of NEPA projects for MR sites, LSRs and MLSAs. Review of completed Landscape Analysis and project level NEPA for trends in LSOF habitat –both single and multiple story	Forest Wildlife Biologist (Lead) Forest Fire Ecologist Forest Landscape Ecologist Forest Botanist
14. Bighorn sheep (Okanogan LRMP 4-78 to 4-80; Wenatchee LRMP IV-82)	Are management actions reducing the potential for disease transmission from domestic livestock to bighorn sheep?	Potential for disease transmission from domestic to bighorn sheep: <ul style="list-style-type: none"> Distance and habitat connectivity between domestic grazing allotments and sheep herds 	AMPs & BMP Compliance Routing maps for domestic sheep Risk of Contact analysis Forest Wildlife Biologist (Lead) Forest Range/Botany/Invasive PM
15. Primary cavity excavator habitat (Snag habitat - focal species and MIS) MIS = 10 species Focal species: pileated woodpecker, white-headed woodpecker, black-backed woodpecker, Lewis’s woodpecker, (Okanogan LRMP 4-34 to 4-35; Wenatchee LRMP IV-82; NWFP and Regional Forester	What are the current trends in snag densities and sizes on the forest? Are snags represented well in all important plant groups? How has wildfire affected snag density across the landscape? Are management actions, including post-disturbance salvage, accounting for the viability of snag dependent species?	Snag habitat, abundance and distribution – 6 th field watershed by habitat type (DecAid) for the following plant groups: <ul style="list-style-type: none"> PP Doug fir Mixed conifer Lodgepole Snag analysis completed and standards met in project NEPA documents Burned habitat – acres and locations	DecAid analysis Focal species viability models used to track changes in habitat and risk factors FIA plots Project NEPA review Forest Wildlife Biologist

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Amendment #2 snag requirements)			
16. Deer and elk winter range habitat (Okanogan LRMP 4-67, 4-82,83, 4-107; Wenatchee EW-1 standards IV-113 to IV-120 and EW-3 standards IV-129 to IV-134)	What factors could be contributing to disturbances and diminished habitat effectiveness? What are the trends in deer and elk populations?	Winter range analyses completed and standards met in project NEPA documents Qualitative discussion of disturbances and habitat effectiveness WDFW herd counts	Project NEPA review Road densities from Plan Component #2 listed above WDFW yearly population monitoring Forest Wildlife Biologist
17. Bats and habitat – Little brown myotis (buildings, caves, mines, abandoned wooden bridges); Townsend’s big-eared bat (caves) (Northwest Forest Plan C-43 to C-45; Cave Management Act)	Is cave habitat being protected? Cave habitat for bats include: <ul style="list-style-type: none"> • Summer maternity • Winter hibernacula • Protection of habitat Alternative habitat - Abandoned buildings / bridges Are mitigations in place to prevent white nose syndrome? What are human impacts to cave habitat where access is granted and allowable? Are seasonal closures implemented effectively?	Implementation of mitigation measures for white nose syndrome and surveys for presence of infections Conditions of important habitat components Recreation use at specific caves Monitoring effectiveness for protection of habitat, in preventing access, preserving surrounding habitat, and assessing damage if access allowed. Snag densities	Project NEPA review Snag densities in Plan Component #15 listed above Cave management plan(s) Forest Wildlife Biologist
18. Pollinators	What are the trends in pollinator habitats?	Acres of pollinator beneficial seed use in restoration projects Grazing standards met	Riparian habitats in Plan Component #9 listed above Range health in Plan Component #10 listed above

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		OHV use in riparian and meadows	Sensitive Plants in Plan Component #19 listed below Recreational Opportunities in Plan Component #26 listed below Forest Wildlife Biologist (Lead) Forest Range/Botany/Invasives PM
19. Sensitive Plants (Okanogan LRMP 4-36; Wenatchee LRMP IV-78)	Are management activities contributing to the viability, maintenance or enhancement of sensitive plant populations and habitat?	Condition and trend of native plant species on Forest Condition and trend of invasive plant species on Forest	Terrestrial Condition Assessment NRM TESP/INVP Corporate Database Forest Botanist
(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			
20. Aquatic T&E and MIS species: bull trout, UCR/MCR steelhead; UCR Chinook salmon (Okanogan LRMP 4-31 to 4-32; Wenatchee LRMP IV-80 to IV-82; NWFP ACS; PACFISH/INFISH RMOs)	Are habitat conditions being provided consistent to maintain viable populations of threatened, endangered, candidate, SOCC and MIS fish?	Trends in stream habitat Trends in populations Trends in bull trout redd counts Results from NEPA project BAs and BOs for treatment impacts	Stream survey data Washington State Department of Fish and Wildlife (WDFW) surveys Bull trout spawning surveys Project NEPA review Forest Fisheries Biologist

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<p>21. Northern spotted owl – threatened species (Okanogan LRMP 4-33 to 36; Wenatchee LRMP IV-80; NWFP)</p>	<p>What is the trend in Nesting, Roosting, and Foraging (NRF) and dispersal habitat as a result of projects?</p> <p>How has fire changed spotted owl habitat?</p> <p>What are population trends?</p>	<p>Amount and distribution of NRF and dispersal habitat and trends over time</p> <p>Acres of suitable NRF and dispersal habitat lost to projects and fire</p> <p>Forest, project, and emergency determinations</p> <p>Nesting pairs and production</p>	<p>Review of NEPA project BAs and BOs for treatment impacts</p> <p>GIS data layer</p> <p>Emergency consultations</p> <p>Demographic study and NSO surveys</p> <p>Forest Wildlife Biologist</p>
<p>22. Gray wolf – endangered species (Okanogan LRMP 4-36; Wenatchee LRMP IV-80)</p>	<p>Are management actions contributing to the recovery of the gray wolf?</p> <p>Are special habitats and prey species being protected?</p>	<p>Forest and project level, and emergency determinations</p>	<p>Project level BAs and BOs</p> <p>Deer and Elk Plan Component #16 listed above</p> <p>Forest Wildlife Biologist</p>
<p>23. Grizzly bear – threatened species (Okanogan LRMP 4-36; Wenatchee LRMP IV-80; Interagency Grizzly Bear Guidelines)</p>	<p>Are management actions contributing to the recovery of the grizzly bear, including core?</p>	<p>Open road density by BMU</p> <p>No net loss of core area</p> <p>Forest and project level, and emergency determinations</p>	<p>INFRA - roads</p> <p>Project level NEPA documents, BAs and BOs</p> <p>Field verify implementation of Interagency Grizzly Bear Guidelines</p> <p>Forest Wildlife Biologist</p>
<p>24. Canada lynx – threatened species (Okanogan LRMP 4-36; Wenatchee LRMP IV-80)</p>	<p>Are management actions contributing to the recovery of the Canada lynx?</p> <p>How has fire changed Canada lynx habitat?</p>	<p>Forest and project level, and emergency determinations</p>	<p>BA/BO reviews</p> <p>Forest Wildlife Biologist</p>

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<p>25. T/E Plants: showy stickseed and Wenatchee Mountains checkermallow – endangered species (Okanogan LRMP 4-36; Wenatchee LRMP IV-78)</p>	<p>Are management actions contributing to the recovery of showy stickseed and Wenatchee Mountains checkermallow?</p>	<p>Condition and trend of populations and habitat Acres surveyed for populations Number of new populations established</p>	<p>Annual T/E plant monitoring data Forest Range/Botany/Invasives PM</p>
<p>(v) The status of visitor use, visitor satisfaction, and progress toward meeting recreation objectives</p>			
<p>26. Recreational opportunities (Okanogan LRMP 4-38 to 4-39; Wenatchee LRMP IV-65, IV-66, IV-68, IV-69)</p>	<p>What is the trend in visitor use and satisfaction? Are the current recreation settings and opportunities trending toward desired recreation settings and opportunities to provide high visitor satisfaction? Can current and future public demands be met in sustainable ways? Are recreation sites, areas, facilities, and trails being adequately maintained to serve the public and protect resources? Is recreational use resulting in acceptable impacts?</p>	<p>Satisfaction levels from USDA Forest Service national visitor use monitoring survey results Forest-wide. Trend in satisfaction levels from NVUM Satisfaction levels gathered through local recreational studies and specific on-site data collection The range of sustainable recreation opportunities maintained Trends in acres/miles of trails with unacceptable ORV impacts Hazard trees are identified and mitigated in developed campsites Number of reported conflicts between user groups</p>	<p>NVUM reporting BMP recreational site monitoring on select sites Sample field observations from ORVs effects on resources Sample field contacts with non-motorized users in areas open to ORVs INFRA trails Hazard tree rating forms and individual campground assessment Forest Recreation Program Manager (Lead) Zoned Forest Pathologist</p>
<p>(vi) Measurable changes on the plan area related to climate change and other stressors that may be affecting the plan area.</p>			

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<p>27. Climate change</p>	<p>What are the plan area vulnerabilities?</p> <p>What are the trends and effects of stressors that are impacting the plan area?</p> <p>What is the trend in the timing and amount of stream flows and temperature?</p> <p>What is the trend in snowpack?</p> <p>Are management actions helping to increase ecological resiliency to climate change by restoring landscape and patch size resiliency, maintaining or restoring biological diversity, rapidly responding to and treating invasive species, and utilizing landscape disturbances as management opportunities?</p>	<p>Extent, duration and severity of disturbance regimes such as insects, diseases and wildfires</p> <p>Timing and amounts of stream flows and stream temperatures</p> <p>Trends in vegetation location, composition and structures</p> <p>Trends in snowpack depth, water content and snowmelt timing</p> <p>Qualitative discussion of restoration efforts to increase landscape and patch size resiliency, and biological diversity</p> <p>Acres of newly discovered invasive plants treated (EDRR)</p> <p>Number of post-disturbance projects that have taken climate change into account</p>	<p>Adaptations to Climate Change: Colville and Okanogan-Wenatchee National Forests - GTR</p> <p>Climate Change Scorecard</p> <p>Watershed and terrestrial condition monitoring including stream temperature monitoring</p> <p>DOE/USGS Gauge stations for flow regimes on selected streams</p> <p>RAWS data station – precipitation & fuel moistures</p> <p>SNOTEL sites</p> <p>Individual Landscape Analyses and/or project by project</p> <p>Forest Silviculturist (Lead) Zoned Forest Health Specialist Forest Fisheries Biologist Forest Hydrologist Forest Invasive Plant Manager Area Ecology Landscape Ecologist</p>
<p>28. Insects and disease (Okanogan LRMP 4-1; Wenatchee LRMP IV-92; NWFP C-13, C-14, C-24, C-27)</p>	<p>What are the trends in outbreaks and infestations?</p> <p>Are trends related to causal events or conditions and what are those?</p> <p>Are areas identified in the Risk Mapping showing evidence of</p>	<p>Acres of stands affected by the various disturbance agents (insects and disease) over time</p> <p>Trends in insects and disease within fire burned areas</p> <p>Acres of outbreak in mapped high risk areas</p>	<p>Regional Office Forest Pest Management aerial surveys – review for status and trends, forest level - broadscale</p> <p>District level surveillance for localized outbreaks and infestations</p> <p>Individual studies on select projects</p>

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	<p>outbreaks and infestations and what are they?</p> <p>How are legacy stands being protected after disturbance?</p>	<p>Acres of legacy stands where intervention is undertaken</p>	<p>WA state Risk Mapping of insect and disease areas for Farm Bill</p> <p>FACTs for pheromone treatments</p> <p>Zoned Forest Health Specialist</p>
<p>(vii) Progress toward meeting the desired conditions and objectives in the plan, including for providing multiple use opportunities</p>			
<p>29. Social and economic outputs</p> <p>(Okanogan LRMP 4-11, 4-27, 4-22, 4-38; Wenatchee LRMP IV-IV-25 to IV-27: NWFP PSQ)</p>	<p>What contribution is the annual timber target making to social and economic community stability? What is the trend in volume sold?</p> <p>What special forest products are being provided and how many permits have been issued?</p> <p>What contribution is the range program making to social and economic stability?</p> <p>What contribution is recreation making to social and economic community stability?</p>	<p>Levels of production and trends of multiple uses including:</p> <ul style="list-style-type: none"> • timber • special forest products • grazing AUMs and • recreational visits <p>and their connected economic benefits</p>	<p>Annual accomplishment reports, periodic census data for social and economic reporting.</p> <p>TIMS reporting</p> <p>Forest Silviculturist (Lead)</p> <p>Forest Range Program Manager</p> <p>Forest Recreation Program Manager</p>
<p>30. Transportation system (roads)</p> <p>(Okanogan LRMP 4-50; Wenatchee LRMP IV-102; Travel Management Rule)</p>	<p>Are roads being planned, operated and maintained in a safe and economical manner?</p> <p>Do roads provide efficient access for the movement of people and materials involved in the use and protection of NFS lands?</p>	<p>Trend in miles of open roads per by 6th field watershed</p> <p>Trend in miles of system road constructed per year</p> <p>Trend in miles of system road closed per year (ML1)</p> <p>Trend in miles of system roads decommissioned per year</p>	<p>INFRA and GIS database for roads info</p> <p>Annual accomplishment report using INFRA for miles of road constructed, closed, decommissioned for the year, and unauthorized roads decommissioned</p> <p>Project NEPA review</p> <p>Forest Road Manager</p>

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Selected Plan Component	Monitoring Question	Monitoring Indicator	Potential Data Source and Responsible Position
	<p>Are roads contributing to the social and economic sustainability?</p> <p>How many miles of system roads have been constructed?</p> <p>How many miles of system road have been closed?</p> <p>How many miles of system road have been decommissioned?</p> <p>How many miles of unauthorized road have been decommissioned?</p>	<p>Trend in miles of unauthorized roads decommissioned</p> <p>Trend in miles of roads maintained per year</p>	
<p>31. Cultural resources (Okanogan LRMP 4-37; Wenatchee LRMP IV-66, IV-67)</p>	<p>Are cultural resources that are listed, eligible or potentially eligible for the National Register of Historic Places being preserved and protected as stated in the Forest Plan and in compliance with federal laws and regulations?</p> <p>Are properties listed or eligible for the National Register of Historic Places being managed, including the preservation, rehabilitation, and stabilization of such properties?</p> <p>Are all reasonably locatable heritage resources being discovered during project area reconnaissance?</p>	<p>Number of new sites or isolates documented</p> <p>Percent of projects where no effect or no adverse effect determination was made due to avoidance or mitigation (i.e. project design changes to avoid adverse effect)</p> <p>Number of Section 106 consultations</p> <p>Number of listed, eligible or potentially eligible sites monitored</p> <p>Number of listed or eligible heritage resources treated</p>	<p>Site Records & Section 106 report databases</p> <p>Priority Heritage Asset database</p> <p>Heritage Program Managed to Standard database</p> <p>INFRA</p> <p>Project NEPA checklist</p> <p>Forest Heritage Program Manager</p>

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Selected Plan Component	Monitoring Question	Monitoring Indicator	Potential Data Source and Responsible Position
		Number of listed or eligible heritage resources in need of treatment	
<p>32. Wilderness character</p> <p>(Okanogan LRMP 4-86 to 4-97; Wenatchee LRMP IV-69 to IV-77)</p>	<p>Is wilderness character being preserved and protected?</p> <p>Are wilderness standards being met?</p> <p>Are the physical, biological, managerial and social settings of each Wilderness Opportunity as defined in the Wilderness Opportunity Spectrum consistent with amount and type of use?</p> <p>Wildernesses –</p> <ul style="list-style-type: none"> • Pasayten • Lake Chelan-Sawtooth • Glacier Peak • Alpine Lakes • Goat Rocks • Henry M. Jackson • Norse Peak • William O. Douglas 	Status/scores of Wilderness Stewardship Elements	<p>Wilderness Performance Elements as recorded in INFRA</p> <p>Field surveys</p> <p>Wilderness campsite monitoring in the Pasayten and Lake Chelan-Sawtooth</p> <p>Project NEPA review</p> <p>Forest Recreation Program Manager</p>
<p>33. Wild, scenic, or recreation rivers or streams recommended for inclusion in the Wild and Scenic Rivers system</p>	<p>Are resource management activities along recommended river corridors being conducted in a manner to provide protection at the appropriate level of classification?</p>	<p>Trends in outstanding remarkable values along river or stream segments</p> <p>Consistency of projects within ¼ mile of a W/S/R recommended</p>	<p>Reviews of project planning documents and ongoing actions along recommended river or stream segments</p> <p>Field monitoring for implementation and effectiveness of mitigation to protect eligible rivers</p>

Transitional Monitoring Plan

Selected Plan Component	Monitoring Question	Monitoring Indicator	Potential Data Source and Responsible Position
(Okanogan LRMP 4-39 to 4-41; Wenatchee LRMP IV-233 to IV-245)	Those recommended rivers are: <ul style="list-style-type: none"> • Methow • Chewuch • Twisp • Lost • Pasayten • Wolf • Canyon • Ruby • Granite • American • Cle Elum • Waptus • Icicle • Napeequa • White • Chiwawa • Wenatchee • Entiat 	rivers and streams with Forest Plan standards	Forest Recreation Program Manager
(viii) The effects of each management system to determine that they do not substantially and permanently impair the productivity of the land.			
34. Long-term soil productivity (Okanogan LRMP 4-46; Wenatchee LRMP IV-97)	Are management activities being implemented so that they do not substantially and permanently impair the productive capacity of the land?	Acres of detrimental soil disturbance within activity areas	Management activity soil monitoring Forest Soil Program Manager