Forest-wide Direction (Components): Revision Collaborative Input: WATERSHED

Plan Components

Watershed Systems

Watershed Ecosystem Integrity

ID Team Recommended Plan Components

Desired Condition:

Watersheds[1] are functioning properly, as defined in the Watershed Condition Framework technical guide (Potyondy, et al., 2010).

Objectives:

1. Within 10 years of Plan approval, complete all essential projects within two (2) watersheds that have approved watershed restoration action plans (WRAPs), such that watershed condition class is improved (i.e., rating level is decreased from a '3' to a '2' or from a '2' to a '1').
2. Within 10 years of Plan approval, complete restoration projects within ten (10) watersheds, such that the attribute score of one Watershed Condition Class attribute is improved (i.e., rating level is decreased from a '3' to a '2' or from a '2' to a '1').
3. Implement at least 500 acres of soil, water, and watershed improvements each year[2]. Improvements include (but are not limited to): road and trail decommissioning; road and trail reconstruction, relocation, or improvement; skid trail and landing decompaction; abandoned mine land reclamation; stream-channel, floodplain, wetland, and riparian area reconstruction; burned area rehabilitation; treatment and/or reforestation of areas impacted by wildfire or insect and disease infestations; and invasive species treatments.
4. Decommission 25 miles of system and non-system roads and trails each year.
5. Hydrologically disconnect[3] 100 miles of system and non-system roads and trails from streams each year.
6. Improve 10 acres of flood plains, wetlands and/or riparian vegetation each year.

Standards:

1. ….

Guidelines:

1. To maintain and/or improve watershed ecosystem integrity, new, permanent road and trail construction;
    a. Should be located outside of RCAs, except at stream crossings; and
    b. Should not be located on lands with high mass wasting or subsurface erosion hazard or landslide prone.
2. To maintain hydrologic integrity of watersheds, all system and non-system, including decommissioned, roads and trails should be hydrologically disconnected from streams. For the Plan, *to hydrologically disconnect a road/trail from a watercourse* means:
    a. The water drainage system on roads and trails should prevent erosion;
    b. Road and trail segments should not discharge water onto landslide prone or high mass wasting hazard lands in quantities that are likely to result in hillslope failure;
    c. The drainage system on roads and trails should disperse water away from the road/trail surface using frequent cross drains, outsloping the travel way, and/or varying the running grade of the surface;

[1] For this plan component, the term *watershed* refers specifically to 6th-level hydrologic unit code (HUC-6) scale watersheds, unless otherwise indicated. The 6th-level HUC is correctly identified as a sub-watershed scale.

[2] Restoration projects in this objective do not include projects that are implemented specifically to mitigate adverse impacts of other Forest management projects (e.g., timber sales).

[3] To determine the extent of the transportation network that is hydrologically connected to streams, it is necessary to conduct a field survey like the Geomorphic Road Assessment and Inventory Package (GRAIP). GRAIP is a process and a set of tools for analyzing the impacts of roads on forested watersheds. GRAIP combines a detailed road inventory with a powerful GIS analysis tool set to predict road sediment production and delivery, mass wasting risk from gullies and landslides, and road hydrologic connectivity (Black, et al., 2012).

d. The drainage system should relieve inside ditch flows prior to delivering water and sediment to stream channels;
e. The drainage system should direct flows to areas where water can infiltrate into forest soils by having vegetated buffers between drainage outfalls for culverts, dips, and waterbars and the entry point to the watercourse;
f. And, the drainage system should have structures at stream crossings to direct stream channel overflows back into the stream channel.

Glossary/References:

These items do not fit as a plan components because they are strategies on how to implement the forest plan and how prioritizing project development by the FLT could be done. These could be included as *Optional content in the plan* (36 CFR 219.7 (e)(2)).

1. To support instream flows that provide for channel maintenance, water quality, aquatic habitats, riparian vegetation, and recreation, the Forest should obtain State water rights.
2. To maintain and/or improve watershed ecosystem integrity, timber harvesting, fuels treatments, range, and road construction projects should integrate soil, water, fisheries/aquatic, wildlife, and/or watershed improvement activities into the project.
3. To improve watershed condition and integrity, watershed restoration activities (e.g., road/trail decommissioning, road/trail reconstruction), should emphasize treatment of projects that are:
    a. located in RCAs (especially road/trail segments that are parallel to streams and/or are delivering excess sediment to streams),
    b. in watersheds containing threatened fish species,
    c. located on land types that are at higher risk of slope failure,
    d. in watersheds with existing watershed restoration action plans (WRAPs),
    e. in watersheds designated for aquatic restoration, and/or
    f. in watersheds with water quality impairment (as designated by being listed on the State of Idaho's, Clean Water Act Section 303(d)/305(b) biennial report).

Forest-wide Direction (Components): Revision Collaborative Input: WATERSHED

Aquatic System

ID Team Recommended Plan Components

Desired Condition: Stream channels and floodplains are functioning (i.e., transporting and storing natural loads of water, sediment, and woody material) and stable. A stable channel maintains its proper[4] dimension (width-to-depth ratio), pattern (sinuosity), profile (slope/gradient), sediment load, sediment substrate composition, woody material composition[5], and woody material load for a given ecosubsection (as defined in the Forest Vegetation plan components). A stable floodplain is hydrologically connected to the stream channel by either flowing water from the hillside through the floodplain to the channel or by passing flood discharges,

The Forest provides surface water (i.e., instream flows) that supports riparian and aquatic ecosystems and habitats (*as described in the Aquatic Biologic section*); that maintains the stability and effective function of stream channels (*as described above*); and provides for downstream uses. To measure this, the timing, magnitude, duration, and spatial distribution of the range of stream flows are within the natural range of variation[6] (*described in Hydrology Assessment*). The timing, variability, and duration of floodplain inundation are within the natural range of variation (*described in Hydrology Assessment*). The distribution of channels with floodplain connectivity is close to that found in reference watersheds of similar size and geology.

The sediment regime[7] for all stream channels is within the natural range of variation (*described in Hydrology Assessment*). Sediment delivery to streams is of the types, quantities, and rates that support the natural instream sediment transport rates and instream sediment substrate composition.

Streams with adjacent, forested riparian areas have input of large woody debris recruited into the system at an amount and distribution required to maintain physical and biological complexity (See **Table X** in Aquatic Habitat plan component).

Water Quality

The Forest provides surface water for domestic, agriculture, recreation uses, aesthetics, and instream flows. Water quality[8] meets[9] or exceeds State of Idaho water quality standards for designated and existing beneficial uses, where attainable. There are no Clean Water Act Section 303(d) State-listed impaired or threatened water bodies on Forest lands. There are no documented lands/areas that are delivering water, sediment, nutrients, chemical pollutants that would result in water pollution that is significantly and/or permanently above natural or background levels.

---

[4] Values for specific variables follow Rosgen (1996) channel types with local adjustments and ranges based on stream reach-specific analysis of PACFISH/INFISH Biological Opinion (PIBO) Effectiveness Monitoring Program data (**Analysis incomplete as of 15 Feb 2013**).

[5] Woody material 'composition' is described by the spatial and temporal distribution of wood within and adjacent to stream channels; and the size, shape, and volume of material in relation to channel size.

[6] Stream channels, floodplains, water quality, sediment regimes and streamflows can be significantly altered by natural events like floods, landslides, and fires. Although these effects are dramatic and often much greater than changes resulting from management activities, these events are beyond our ability to control. When such events occur, changes to the aquatic system are considered to be within the natural range of variability.

[7] Elements of the sediment regime include the timing, volume, rate and character of sediment input, storage, and transport.

[8] 'Water quality' as is used in this component is a measure of the physical chemical properties of water that compares existing quantities of pollutants (e.g., bacteria) to maximum (by Idaho State Standards) quantities of pollutants allowed while still attaining desired beneficial uses

[9] For restoration projects that disturb stream channels or soils adjacent to stream channels (e.g., culvert repair/replacement or instream aquatic habitat restoration), a short-term departure from State water quality standards (e.g., turbidity) may occur provided such activities have no long-term threat of impairment to water quality or the beneficial uses of water. The term 'short-term' is the time required for water quality to return to pre-project conditions, and this length of time varies by project type and construction period length.

Forest-wide Direction (Components): Revision Collaborative Input: WATERSHED

Objectives:

1. Within 10 years of Plan approval, restore 2 miles of stream and adjacent floodplain that have been modified (i.e., have channel dimensions, patterns, profiles, and/or sediment regimes outside the natural range of variation) by past activities.
2. Starting 2 years after Plan approval, implement 5 projects annually that improve water quality in water bodies that are pollutant impaired.
3. Beginning 2 years after Plan approval, restore one abandoned mine site identified as causing water quality impairment, every two years (one year for planning, one year for implementation).
4. At recreation, administrative, and livestock handling facilities where water quality is impaired by excess delivery of chemical, nutrient, or biological pollutants, repair or relocate these facilities within 2 years of identification of needing repairs.

Standards:

1. During dust abatement applications on roads, chemicals shall not be applied directly to watercourses, water bodies (e.g., ponds, lakes), or wetlands.

Guidelines:

1. All land management activities should incorporate best management practices appropriate[10] to that activity to protect water quality.
2. To maintain stream channel stability, large woody debris should not be cut and/or removed from stream channels.

Transportation System Management:

3. To maintain free-flow of streams, new, replacement, and reconstructed stream crossing sites (culverts, bridges and other stream crossings) should:
    a. Accommodate at least a 100-year recurrence interval flood flow, including associated bedload and debris.
    b. Prevent diversion of stream flow out of the channels if the crossing is plugged or has a flow greater than the crossing was designed.
4. To reduce sediment and water delivery to watercourses, all system and non-system road and trail segments (including skid trails, temporary roads, and decommissioned roads and trails) should be hydrologically disconnected from streams; except at existing stream crossings.
5. To reduce road-related mass wasting and sediment delivery to watercourses, new and relocated road (including skid trails and temporary roads) and trail segments should not be located on lands with high mass wasting or subsurface erosion hazard or landslide prone.
6. To maintain channel stability and to reduce sediment delivery to watercourses where trails cross streams, harden the stream bed, banks, and approaches.
7. To reduce sediment delivery to watercourses, soil and snow should not be side-cast into watercourses.
8. To prevent delivery of chemicals to water bodies during dust abatement applications, treatments should be applied during weather conditions that promote binding of chemicals to road surface material.

Timber/Vegetation (fuels) Management:

9. To reduce stream channel scouring and stream bank erosion due to increased water yield, when evaluated at the subwatershed scale (HUC-6), timber harvesting should not increase average annual[11] peak flows greater

[10] Appropriate BMPs are described in the National Core BMP Technical Guide (USDA, Forest Service, FS-990a, 2012). Management activities currently include: aquatic restoration, chemical use, facilities, wildland fire, minerals, rangeland, recreation, roads, logging, and water use.

than 15 percent[12]; in subwatersheds where there is an Aquatics (fisheries) restoration/maintenance priority, timber harvesting should not increase average annual peak flows greater than 10 percent. The maximum expected change in peak flows should not persist longer than 2 years. The evaluation of peak flows should:

a. Include effects from all events that change overstory canopy composition, including: wildfires, prescribed fires, timber harvests, and natural mortality; and
b. Include events described in (a), regardless of ownership.

10. To minimize the amount of sediment that is generated and delivered to watercourses from areas where vegetation management (including timber harvesting and prescribed fire) is conducted, projects should:
    a. Not use tractor skidding within RCAs;
    b. Locate log landing, processing, handling areas outside of RCAs;
    c. Locate yarder settings outside of RCAs;
    d. Locate burn piles outside of RCAs; and
    e. Reuse existing log landings and skid trails left from previous management activities.
11. To reduce stream channel aggradation due to increased sediment delivery to stream channels, when evaluated at the subwatershed scale (HUC-6), timber harvesting and new road construction (both temporary and permanent) projects[13] should not significantly[14] increase sediment loads. Where there is insignificant, but observable sediment delivery to watercourses, sediment delivery should not persist longer than 5 years[15].

<u>Minerals Exploration, Processing, and Extraction</u>:

12. To maintain water quality, and to minimize the amount of sediment that is generated and delivered to watercourses from areas where minerals exploration, processing, and/or extraction is conducted, the project should:
    a. Reuse existing access routes and processing sites left from previous projects;
    b. Allow no more than 15% of surface area within RCAs to have exposed mineral soil following completion of exploration or extraction operations;
    c. And, immediately decommission and restore access routes and processing sites following completion of operations.
13. To maintain water quality and to prevent biological, chemical, or industrial pollutants from being delivered to water bodies, mineral exploration, processing, and extraction projects should install barriers[16] between pollutant hazards (e.g., sumps, processing pits, fuel storage, and latrines) and watercourses.
14. In hardrock and placer mines that have recognized sources of natural pollutants (e.g., acidity, metals, sulfate, cyanide, and/or nitrate), constructed features (e.g., adits and shafts, underground workings, open pits, overburden, development rock and waste rock dumps, tailings impoundments, leach pads, mills, and process water ponds) should not have direct water flow paths to streams, lakes, or wetlands.
15. Where placer mineral exploration, processing, and extraction activities occur within stream channels, the project:
    c. Should not excavate the stream banks; and

---

[11] Average annual maximum peak flows typically have a recurrence interval of 2.33 years (Dunne and Leopold, 1978).

[12] A maximum increase in peak flow of 15% is estimated to result from completely removing all vegetation from 30% of a HUC-6 watershed (Grant, et al., 2008).

[13] In this context, projects do not include road decommissioning or reconstruction/relocation for the purpose of reducing hydrologic connectivity.

[14] 'Significantly', as used here, indicates "statistically significantly different from pre-project conditions".

[15] This time period allows for the 'typical' duration of activities within a timber sale area boundary.

[16] The type of barrier will vary in size, material, and design, depending on the type of pollutant located on site.

d. Should restore all project activity to proper channel dimensions, patterns, and profiles (*as defined in the Desired Condition*), at abandonment of operations or within 1 year of completion of operations, which ever comes first.

Livestock Grazing:

16. To maintain water quality, and to minimize the sediment that is generated and delivered to watercourses from active livestock grazing allotments, the grazing activity should:
    e. Locate new livestock handling and/or management facilities outside of RCAs;
    f. Locate salting efforts outside of RCAs; and
    g. Harden or relocate trailing stream crossings and approaches.

References (potentially useful items that do not make good plan components):

These items are unnecessary or redundant of existing plan components, but are useful to keep track of for potential BMPs (or explanatory text) or project level design criteria that might be developed elsewhere in the plan.

1. To reduce sediment and water delivery to watercourses from skid trails and temporary road segments, timber/vegetation projects should:
    a. Reuse existing road templates left from previous management activities (to reduce construction of new roads);
    b. Locate skid trails outside of established RCAs;
    c. install an aggregate surface on the temporary road for at least 50 feet on both sides of the stream channel edge;
    d. use sediment control BMPs (e.g., straw bales, rock check dams, slash filter windrow mats, mulch, and/or silt fence) in ditch lines along haul route or in areas where ground is disturbed and sediment has the potential for delivery to streams (i.e. direct overland or channelized flow into a stream); and,
    e. Decommission skid trails and temporary roads within 1 year of completion of vegetation management activities.
2. To reduce excess sediment and water delivery to watercourses from decommissioned and stored[17] road and trail segments, decommissioning or storage construction activities should:
    a. Outslope (5% to 12%) and/or water-bar the road prism to direct drainage away from the road prism;
    b. Remove drainage system components that deliver flows directly to stream channels, or have vegetated buffers between drainage outfalls and the entry point to the stream channel; and
    c. Stabilize areas prone to erosion and/or cut and fill failure.
3. To maintain and/or improve channel stability at stream crossings, stream crossings on roads and trails that are decommissioned or stored should:
    a. Replace or remove the culverts or drainage structures that do not meet size or capacity requirements (as described above);
    b. construct armored overflow channels if culverts are retained;
    c. Stabilize areas prone to erosion and/or cut and fill failure;
    d. Excavate to natural stream grade, if removing a culvert; and
    e. Excavate side slopes to natural gradient or 1:1, whichever is less, if removing a culvert.
4. To improve water quality where livestock-damaged features (e.g., stream crossings, watering holes) are delivering pollutants to streams, ponds, lakes, or wetlands, the allotment management plan should include

[17] A stored road is defined as a road segment that has been administratively closed to vehicle use for a period of time greater than 1 year, but is being retained for future use.

measures to restore the site and implement adaptive management measures to prevent future and/or further damage.

Forest-wide Direction (Components): Revision Collaborative Input: WATERSHED

Aquatic System (Physical): Groundwater and Groundwater Dependent Ecosystems
ID Team Recommended Plan Components

Desired Condition:

Groundwater:

Groundwater quality meets Idaho State water quality standards and fully supports designated and existing beneficial uses, where attainable. The Forest has no documented lands/areas that are delivering water, sediment, nutrients, and/or chemical pollutants that would result in groundwater pollution that is significantly and/or permanently above natural or background levels. The timing, variability, and water table elevation in groundwater aquifers is within the natural range of variability, and is not measurably altered by management activities.

Groundwater Dependent Ecosystems (GDEs):

The Forest supports a wide variety of GDEs, including peatlands, bogs, fens, wetlands, seeps, springs, riparian areas, groundwater-fed streams and lakes, and groundwater aquifers. The persistence, size, seasonal (and annual) timing, and water table elevation in GDEs is within the natural range of variability.

Objectives:

1. Within 2 years of plan approval, annually identify, describe, and map five (5) GDEs, including: their locations, ecological values, and degrees of dependence on groundwater.
2. Within 10 years of plan approval, restore one (1) GDE that was damaged or degraded by previous management activities (i.e., abandoned mines, dredging).

Standards:

1. …

Guidelines:

1. Peatlands and fens should be buffered by 600 feet[18] from management activities that disturb soil, vegetation, and/or water chemistry, unless site-specific information, such as topography, drainage features, and rare plant associations, supports smaller or larger buffers.
2. To maintain quality and quantity of water flows to, within, or between GDEs, groundwater developments (e.g., recreation and administrative sites, drinking water wells, waste water facilities) should not:
    a. be developed in RCAs where groundwater is connected to a river, creek or other GDE;
    b. measurably lower river flows, lake levels, or flows to wetlands or springs (e.g., change springs from perennial to intermittent, or eliminate springs altogether); and/or
    c. discharge pollutants directly to groundwater.
3. For minerals exploration, processing, and/or extraction projects that have known sources of natural pollutants (e.g., acidity, metals, sulfate, cyanide, and/or nitrate), constructed features (e.g., adits and shafts, underground workings, open pits, overburden, development rock and waste rock dumps, tailings impoundments, leach pads, mills, and process water ponds) should not have direct water flow paths to GDEs.
4. To maintain quality and quantity of water flows to, within, or between GDEs, livestock water from spring developments should have points of diversion protected (e.g., excluded with fences or barriers) from livestock trampling.

[18] This distance is recommended in a report titled "Conservation Strategy for Idaho Panhandle Peatlands", Idaho Conservation Data Center, Idaho Department of Fish and Game, 2004.

Forest-wide Direction (Components): Revision Collaborative Input: WATERSHED

Aquatic System (Physical): Municipal Watersheds
ID Team and Collaborative Recommended Plan Components

Desired Condition: Lands that contribute municipal watersheds[19] and source water protection[20] areas provide clean surface water meeting or exceeding State water quality standards and meeting the supply needs of users. Municipal watersheds are not Clean Water Act Section 303(d) State-listed as impaired or threatened for any pollutant. Vegetation is similar in structure, function, and composition as stated in the Forestwide Desired Condition, scaled to the size of each municipal watershed. Vegetation is vigorous and resistant to insect attacks. Fuel loadings and stand structure are at levels and arrangements that would not support a large stand-replacing fire event. The transportation system has minimal interaction with steams. Recreation facilities are designed and maintained such that water quality is not impaired. There are no documented lands/areas that are delivering water, sediment, nutrients, chemical pollutants that would result in water pollution that is significantly and/or permanently above natural or background levels.

Objectives:

1. Within 3 years after Plan approval, develop transportation and recreation facility plans, including a permanent road and trail system, for the management of the municipal watersheds, recreation, and fire suppression, while protecting water quality.
2. Within 3 years after the development of the transportation plan and/or construction of the new system, decommission roads and trails that are not needed for the permanent system.
3. Within 5 years, remove or reduce the volume of hazardous fire fuels such that the risk of high severity fire is low.

Standards:

1. New construction or reconstruction of public toilets or waste disposal facilities shall be located at least 500[21] feet from points of diversion and intake facilities for public or municipal water supplies.

Guidelines:

1. To allow for long term benefits to a source water areas (designated as special, public, or municipal water supply watersheds), activities may have limited short-term adverse effects when long term benefits are identified.
2. To maintain water quality within safe drinking limits for bacterial contamination, exclude livestock grazing within RCAs and livestock watering within streams, each for a minimum distance of 500 feet upstream from points of diversion for public or municipal water supplies.

Suitability of Uses:

This section applies to Municipal Watersheds, as designated by the Idaho Department of Water Resources. While there are currently no formal, written agreements between the Forest and municipalities, there are currently three areas that are identified by the Forest: Wall Creek (serving the Clearwater Water Association), Big and Little Elk Creek (serving the Elk City, Idaho area), and Elk Creek (serving the town of Elk River, Idaho).

Watershed	Timber Production	Timber Harvest	Motorized Recreation	Recreation Facilities	Grazing	Mining	Prescribed Fire
Wall Creek	Not Suitable	Suitable	Suitable	Suitable	Suitable	Suitable	Suitable

[19] The definition does not include communities served by a well or a confined groundwater aquifer unaffected by Forest Service activities.

[20] Source water areas include watershed areas not specifically designated as Municipal Watersheds that provide untreated water from streams, rivers, or lakes that is used to supply public drinking water.

[21] This distance is to be consistent with the Idaho State Water Quality regulations for public drinking water systems IDAPA 58.01.08, Section 504, Part 07(b)(vi). This regulation does not require an exclusion zone, but requires that the drinking water facility plan include: "*Location of all known existing and potential sources of pollution within five hundred (500) feet of water sources or underground treated storage facilities*".

Forest-wide Direction (Components): Revision Collaborative Input: WATERSHED

Big/Little Elk Creek	Not Suitable	Suitable	Suitable	Suitable	Suitable	Suitable	Suitable
Elk Creek	Not Suitable	Suitable	Suitable	Suitable	Suitable	Suitable	Suitable

Forest-wide Direction (Components): Revision Collaborative Input: WATERSHED

Watershed System Drivers
ID Team Recommended Plan Components
(incomplete)

Desired Condition: *Landscape disturbance frequency, severity and area extent create a range of watershed conditions. Types of natural landscape disturbances are erosion, fire, floods, insects and disease. Land use activities mimic these disturbance patterns and processes.*

1.1.1. Wildfire
1.1.2. Invasive Species
1.1.3. Insects/Disease
1.1.4. Climate Change

> "*Climate change has brought new wrinkles to (forest health) risk management. Climate does not act alone. It is a mega-stressor that drives other stressors such as fire, pests, and floods, and interacts with many non-climatic stressors such as land use conversion, invasives introduction and spread, energy development, human recreation, and others. It also couples stressors into more complex and formidable forces on the landscape, creates more complicated pathways for exposure, and stretches the extreme conditions*." D. Cleaves (USFS, Climate Change Advisor to the Forest Service Chief)

1.1.5. Management Activities

Objectives:

1. …..
2. ….

Standards:

1. …..
2. ….

Guidelines:

1. …..
2. …..

Suitability of Uses: not applicable

Forest-wide Direction (Components): Revision Collaborative Input:

Watershed Systems

Watershed Ecosystem Integrity

	03/09/2013 Component Input for Watershed Ecosystem Integrity Only; **Aquatic System** **Aquatic System (Physical): Groundwater and Groundwater Dependent Ecosystems** **Aquatic System (Physical): Municipal Watersheds and** **Aquatic System Drivers** **Not Yet Complete**		**FS Response**
	Desired Future Condition: Commonality	**Commonality**	
	Objectives: Commonality		
	Add: Airstrip language to where ever "road and trail" is used #4: clarify roads/trails for decomm—25 mile?	✓ X 2 ✓ X 3	
	Standards: Commonality		
	Guidelines: Commonality		
	Suitability: Commonality		
	Working Group Input		
	Desired Future Condition	**Working Group**	
	DFC.Oro1&Boi.a	Orofino 1 w/Boise Satellite	
	DFC.Oro2&MPLL.a Okay	Orofino 2 & MPLL	
	DFC.Gvil1&2.a Good	Grangeville 1 & 2	
	DFC.KKL.a	Kamiah/Kooskia w/ Missoula Satellite	
	Objectives		

	03/09/2013 Component Input for Watershed Ecosystem Integrity Only; **Aquatic System** **Aquatic System (Physical): Groundwater and Groundwater Dependent Ecosystems** **Aquatic System (Physical): Municipal Watersheds and** **Aquatic System Drivers** **Not Yet Complete**		**FS Response**
	OBJ.Oro1&Boi.a ADD: Inventory and evaluate all roads within each 6th field huc. OBJ.Oro1&Boi.b DELETE: "hydro logically disconnect" and ADD: Improve and maintain drainage or decommission at least 100 miles of system and non-system roads and trails (DELETE "from streams") each year. OBJ.Oro1&Boi.c ADD: Within 10 years evaluate and prioritize maintenance of airstrips.	Orofino 1 w/Boise Satellite	
	OBJ.Oro2&MPLL.a #4. Decommission, reconstruct or relocate 25 miles of system and non-system roads and trails each year that contribute to the degradation of the wateshed	Orofino 2 & MPLL	
	OBJ.Gvll1&2.a 4. Add clarifier of how r/t would be selected for decomm. See B. Higgins Notes. Integrated (std or gdl?) planning OBJ.Gvll1&2.b Per above (notes): move to std; integrated planning before roads are decommissioned ("integrated" review).. shouldn't decommission if needed within 20 years…concern with access to sawtimber…roads need to be proved to be damaging watershed condition… define the need better OBJ.Gvll1&2.c 4. Decommission 25 miles of system; separate out non-system road OBJ.Gvll1&2.d 4. Separate OBJ for system/non-system OBJ.Gvll1&2.e 1. Define watershed. What HUC (4, 5 or 6?) OBJ.Gvll1&2.f 2. NC OBJ.Gvll1&2.g 3. Add airstrips to areas being reconstructed OBJ.Gvll1&2.h 3. Consider adding airstrips NOTE: upcoming use of electric	Grangeville 1 & 2	

	03/09/2013 Component Input for Watershed Ecosystem Integrity Only; **Aquatic System** **Aquatic System (Physical): Groundwater and Groundwater Dependent Ecosystems** **Aquatic System (Physical): Municipal Watersheds and** **Aquatic System Drivers** **Not Yet Complete**		**FS Response**
	vehicles and potential increase in "damage" and need for improvements OBJ.Gvll1&2.i5 NC OBJ.Gvll1&2.j6 Define "improve"		
	OBJ.KKL.a 3. "500 acres" (is this enough?) OBJ.KKL.b 3. ADD: Prioritize areas that are contributing the most sediment OBJ.KKL.c 4. ADD: Need to be decommissioning for a purpose. Some of the group would like a smaller number of miles. OBJ.KKL.d Add # 7. "at least" to all qualifiers OBJ.KKL.e Add # 8. a road improvement objective…this is found in the body of 3	Kamiah/Kooskia w/ Missoula Satellite	
	Standards		
		Orofino 1 w/Boise Satellite	
		Orofino 2 & Potlatch, Moscow, Lapwai, Lewiston	
		Grangeville 1 & 2	
		Kamiah/Kooskia w/ Missoula Satellite	
	Guidelines		
	GDL.Oro1&Boi.a 1. ADD: "airstrip" before the word construction GDL.Oro1&Boi.b 2. ADD "airstrip" after "road and trail"	Orofino 1 w/Boise Satellite	

Forest-wide Direction (Components): Revision Collaborative Input:

Watershed Systems

Watershed Ecosystem Integrity

	03/09/2013 Component Input for Watershed Ecosystem Integrity Only; **Aquatic System** **Aquatic System (Physical): Groundwater and Groundwater Dependent Ecosystems** **Aquatic System (Physical): Municipal Watersheds and** **Aquatic System Drivers** **Not Yet Complete**		**FS Response**
	GDL.Oro2&MPLL.a #1 b How do we determine the appropriate location of new road/trail construction? GDL.Oro2&MPLL.b #2 to maintain integregrity of watersheds …. To the extent possible GDL.Oro2&MPLL.c Remove roads and trails from a.b.and c.	Orofino 2 & MPLL	
	GDL.Gvll1&2.a Need more time	Grangeville 1	
	GDL.KKL.a 2. (change "should" to "must" and make a Standard…concern that this new language would cut off some access)	Kamiah/Kooskia w/ Missoula Satellite	
	Suitability		
		Orofino 1 w/Boise Satellite	
		Orofino 2 & Potlatch, Moscow, Lapwai, Lewiston	
		Grangeville 1&2	
		Kamiah/Kooskia w/ Missoula Satellite	
	COMMENTS Glossary/References: ADD: Focus efforts on maintenance level 1 roads for decommissioning.	Orofino 1 & Boise	

Forest-wide Direction (Components): Revision Collaborative Input:

Watershed Systems

Watershed Ecosystem Integrity

	03/09/2013 Component Input for Watershed Ecosystem Integrity Only; **Aquatic System** **Aquatic System (Physical): Groundwater and Groundwater Dependent Ecosystems** **Aquatic System (Physical): Municipal Watersheds and** **Aquatic System Drivers** **Not Yet Complete**		**FS Response**
	Watershed Discussion Notes: --add airstrips to raods/trails --can add any linear feature --split roads from trails (BCH) --WCF is an accumulation of relevant factors --consistant evaluation of watershed condition --presently doesn't include non-system roads and trails in assessment --link to R-Y-G map—can see how each watershed was rated by variable --are framework (specific measures) guidelines in FP guildelines? (tired to deal with problems to watershed—sediment delivery is problem not road density) --define open road---mapped and on system --shade target: riparian—indirectly in impaired waters; can't change model—can deal with shade as separate component		