

Teanaway Community Forest – Draft Objectives & Strategies for Goal 1

The Teanaway Community Forest Advisory Committee, along with the WDFW and DNR, have gone through an iterative process of developing and reviewing objectives, strategies, and performance measures for the goals provided by the Legislature in RCW 90.38.130. The Advisory Committee and the agencies worked to create high-level objective statements that meet the goal, strategies that describe the tools, and performance measures that show how we will measure success. The process involved brain-storming sessions by the advisory committee followed by multiple reviews of drafts crafted by the agencies. All the objectives, strategies, and performance measures listed below are still considered draft.

Goal 1: Protect and enhance the water supply and protect the watershed
Objectives
<p>Objective 1. Manage the watershed to reduce peak flows and increase late season base flows.</p> <p>Objective 2. A road network that minimizes negative impacts to a functioning watershed and forested ecosystems.</p> <p>Objective 3. A watershed that allows for the natural functioning of its streams, rivers, and floodplains.</p>
Strategies
<p><i>Strategy a. Increase the water storage capacity of the forest.</i></p> <p>i. Restore floodplain connectivity and the ability of surface water to interact with ground water by reconnecting streams to their floodplains.</p> <ul style="list-style-type: none"> • Utilize methods such as large woody debris to capture bedload and raise the stream height, beavers to encourage the impoundment and spreading of surface water, or other approaches as appropriate. • Focus attention on stream reaches that provide the most benefit to federal or state listed fish species, that have the most production potential, and that help achieve other objectives.
<p><i>Strategy b. Enhance the snowpack retention capacity of the forest.</i></p> <p>i. Increase the snow-retention capacity of the forest where it is ecologically appropriate and in accordance with wildlife goals.</p> <ul style="list-style-type: none"> • Utilize thinning techniques, gap creation, or other appropriate methods that allow for more snow reaching the ground. • Focus this approach in areas where tree densities and species composition are in conflict with the site conditions based on productivity, historical fire regime, slope, aspect, and elevation.
<p><i>Strategy c. Reduce impacts of rain on snow events</i></p> <p>i. Reduce impacts of rain-on-snow events by allowing the forest vegetation and forest floor to capture and infiltrate run-off.</p>

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- When planning logging operations, maintain 50% of the forest in stream sub-basins (approximately 1000 acres in size) in the rain-on-snow zone in a well-stocked condition (relative density of 25) and at age 25 years or above.

Strategy d. Reduce runoff from uplands.

- i. Minimize sediment from logging practices.
 - Utilize low-impact logging techniques such as over-the-snow logging, high-leads, low-pressure ground equipment, and dry soil conditions during harvest to reduce soil compaction.
 - Conduct these practices whenever forest harvest occurs. Restore areas where past forest practices have led to problems.
- ii. Conduct forest management operations to reduce the risk of high-severity, stand-replacing fires that would reduce the capacity of the forest to store run-off.
 - Utilize methods such as mechanical thinning, hand thinning, or others as appropriate.
 - Focus this strategy in areas where fuel loads are high, that are in areas that have a higher risk of ignition, and that help achieve other objectives.

Strategy e. Reduce the impact of the road network to water quality, wildlife habitat and watershed function by developing a sustainable road system that takes into account the ecological, sociological, and economical needs of the TCF.

- i. Assess the road network and place existing roads into categories based upon their future purpose:
 - Roads that are needed for near-term forest management, grazing management, recreation (trails), or have an easement by another entity.
 - Roads that do not have a purpose or that provide duplicative access and can be decommissioned.
- ii. Identify spatial locations for roads with an identified future purpose.
- iii. Evaluate roads based on their impacts to water quality, watershed function, and wildlife habitat.
 - Roads to be decommissioned will be prioritized based on this assessment.
 - Roads that have a purpose but have minimal impacts will be maintained.
 - Roads that have a purpose but do have impacts need to go to step iv.
- iv. Determine the appropriate tool for minimizing the impact of the road based upon the impact, the purpose of the road, and available funding.
 - Road improvements (culverts, surface, drainage, etc.)
 - Road relocation
 - Road to trail conversion
 - Road abandonment/ decommission
- v. Determine if additional roads are needed to meet a management need.
 - Build new roads only if they will have minimal impact to water quality, watershed function, and wildlife habitat.
- vi. Monitor results
- vii. Repeat these steps as necessary to meet the objective.

Strategy i. Increase the quantity and quality of fully mature riparian areas

- i. Protect and restore riparian habitat to support a mature riparian buffer with an appropriate diversity and sizes of tree, shrub, and grass species suitable to the stream reach.
 - Ensure that the riparian areas of smaller-order streams are protected, restored, or enhanced during forestry operations. Consider restoration through plantings if appropriate to the site.

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<ul style="list-style-type: none"> • Focus restoration efforts in areas that overlap with priority stream reaches and show the best chances for success. Focus protection efforts on recently restored sites.
<ul style="list-style-type: none"> ii. Protect and restore meadows and wetlands by allowing for water to flow over and through such sites. <ul style="list-style-type: none"> • Redesign, relocate, or remove roads that impact such sites. Reduce soil compaction from grazing or other activities on these sites. Restore sites that have been impacted. iii. Reduce the impact of grazing, timber harvest, and other activities on riparian areas and stream zones. <ul style="list-style-type: none"> • Utilize tools such as range riders, salt blocks, low-moisture blocks, off-site water improvements, fencing, or natural barriers to draw cattle away from riparian areas and sensitive stream banks. Utilize these practices to help restore riparian areas that overlap with priority stream reaches. • Protect recently restored riparian areas until they are resilient enough to withstand grazing or other activities. Monitor these areas to ensure the riparian zone is functioning properly.

PERFORMANCE MEASURES			
Metric	Direction	Linked Strategies	Reporting Period
Water Temperature	Water temperatures need to decrease during late summer flows in all forks of the Teaway to achieve the Teaway TMDL.	Strategy a, b, f	Annual report on progress made until the 303d listing is removed.
Riparian Habitat	Increase in mature riparian area, measured by cover and age of riparian species.	Strategy f	Annual report on progress made.
Sediment	Reduction in amount of sediment from roads.	Strategy e-h	Annual report on progress made
Fish passage barriers	Elimination of fish passage barriers	Strategy e	Annual report on progress made
Stream flows	Generally, shift the hydrograph by decreasing peak flows and increasing base flows.		

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<p>Goal 2a-Forestry: Maintain working lands for forestry and domestic livestock grazing while protecting key watershed functions and aquatic habitat;</p>
<p>Objectives</p>
<p>Objective 1. Actively manage the forest to provide wildlife habitat for a diversity of species and to maintain long-term ecological processes.</p> <p>Objective 2. Sustainably harvest timber to improve wildlife habitat while generating revenue to support the community forest and the local economy.</p> <p>Objective 3. Conduct forest management to reduce catastrophic fire risk and reduce impacts from insects and disease.</p> <p>Objective 4. Advocate for and support neighboring land management and policies that reduce fire risk, uncharacteristic insect and disease outbreaks, and connects wildlife habitat across the landscape.</p> <p>Objective 5. Ensure the road system is efficient, sustainable, and supports forest management activities.</p>
<p>Strategies</p>
<p><i>Strategy a. Utilize ecological site conditions to determine which habitat types may be grown, managed, and sustained over time throughout the TCF.</i></p> <ul style="list-style-type: none"> i. Determine the ecological site conditions throughout the TCF, using soils, site productivity, slope, aspect, disturbance history, and climate. ii. Inventory the forest to understand current conditions of forested landscapes. Inventory data to include tree species, tree sizes, and tree densities. iii. Utilize this data to develop silvicultural prescriptions to move the vegetation toward what the ecological conditions can support.

Strategy b. Apply an active management approach that will provide diverse habitats across the landscape

- i. Increase, manage, and maintain habitat for the northern spotted owl and other mature forest species. Manage for owl habitat on a landscape scale rather than a circle by circle basis while also increasing the total amount of habitat.
 - Determine where owl habitat (nesting, roosting, and foraging habitat) can be grown and sustained using ecological site condition.
 - Increase available owl habitat by moving these areas towards a mature or old forest with a multi-story canopy.
 - Maintain at least 50% of the areas identified as suitable for owl habitat in habitat as defined by Forest Practice Rules.
 - When appropriate to reduce vulnerability to insects, disease, and wildfire, silviculturally treat these stands while maintaining legacy structures (large standing live trees, standing dead trees, and large woody debris).
 - Initially maintain and increase habitat adjacent to occupied and unoccupied owl sites, then expand to other ecologically appropriate sites.
- ii. Maintain open ponderosa pine and Douglas fir forest habitat for the white-headed woodpecker and other open-forest specialists.
 - Determine where open forest types can be grown and sustained using ecological site condition.
 - Use an active management approach to create open stands where site conditions are best suited to support these species and densities. Use silvicultural tools to set sites on a trajectory to achieve the habitat objective.
- iii. Restore upland meadows (shrub and herbaceous dominated) to provide for elk and deer habitat.
 - Determine where upland meadow types can be grown and sustained using ecological site condition.
 - Use silvicultural tools to improve the quality of this habitat type.
- iv. Once the fuel load is reduced and species composition and stocking levels are appropriate for the site, prescribed fire may be used as a maintenance tool when and where appropriate and consistent with TCF objectives.

Strategy c. Increase the quality and quantity of habitat across the landscape by active silvicultural practices and harvest activities. .

- i. Long term silvicultural prescriptions should be developed, modeled for accuracy, and utilized to guide decisions on harvest operations
- ii. Create silvicultural prescriptions that leave legacy habitat structures such as snags, downed woody debris, and large live trees that increase the quality of the habitat.
- iii. Develop harvest schedules based primarily on habitat objectives and secondarily on an even flow of timber.

Strategy d. Enhance the snowpack retention capacity of the forest.

- i. Increase the snow-retention capacity of the forest where it is ecologically appropriate and in accordance with wildlife goals.
 - Utilize thinning techniques, gap creation, or other appropriate methods that allow for more snow reaching the ground.
 - Focus snowpack retention on the areas consistent with other objectives for wildlife, fire, and insects and disease.

Strategy e. Reduce the rate of runoff from rain on snow events

- i. Reduce impacts of rain-on-snow events by allowing the forest vegetation and forest floor to slow-down and infiltrate run-off.
 - When planning logging operations, maintain 50% of the forest in stream sub-basins (approximately 1000 acres ins size) in a well-stocked condition (relative density of 25) and at age 25 years or above.

- Target this approach to forest operations in the rain-on-snow zone.

Strategy f. Reduce the impact of the road network to water quality, wildlife habitat and watershed function by developing a sustainable road system that takes into account the ecological, sociological, and economical needs of the TCF.

- i. Please see the Road Objective in Goal 1 for strategies.

Strategy g. Manage the forest to reduce the risk of fire and expected severity around valued areas in the TCF, such as homes, improvements, sensitive wildlife areas, and owl circles.

- i. Assess the risk and severity of fire across the TCF landscape.
 - Implement fuels reduction projects to reduce the risk or severity of fire.

Strategy h. Participate in forest collaboratives that address forest health and habitat issues across ownership boundaries.

- i. Work with the Tapash Collaborative or other organizations to identify and implement projects that reduce uncharacteristically severe fire and insect outbreaks.
- ii. Work with neighboring land owners and agencies to improve landscape-scale wildlife connectivity.
 - Identify locations and actions that can be taken on TCF to improve habitat connectivity with neighboring land owners. Advocate for neighboring land management that can improve habitat connectivity. Identify further analyses that need to be done.
- iii. Work with neighbors to increase habitat between owl sites on the TCF and adjacent property ownerships.
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Teanaway Community Forest – Draft Objectives & Strategies for Goal 2-Grazing

The Teanaway Community Forest Advisory Committee, along with the WDFW and DNR, have gone through an iterative process of developing and reviewing objectives, strategies, and performance measures for the goals provided by the Legislature in RCW 90.38.130. The Advisory Committee and the agencies worked to create high-level objective statements that meet the goal, strategies that describe the tools, and performance measures that show how we will measure success. The process involved brain-storming sessions by the advisory committee followed by multiple reviews of drafts crafted by the agencies. All the objectives, strategies, and performance measures listed below are still considered draft.

Goal 2b-Grazing: Maintain working lands for forestry and domestic livestock grazing while protecting key watershed functions and aquatic habitat;
Objectives
Objective 1. Manage domestic livestock grazing to minimize the impact to fish and wildlife habitat. Objective 2. Accommodate sustainable grazing and ensure measures are in place to protect watershed health.
Strategies
<i>Strategy a. Adjust the timing (when livestock are present), duration (length of stay), intensity, frequency (how often they return), and location of grazing so that it is consistent with meadow and riparian restoration.</i> <ul style="list-style-type: none">i. Control domestic livestock grazing patterns and pressure with herd numbers, hardened crossings, off-site water, salt and low-moisture molasses blocks, range riders, grouping of herds, natural barriers, and fencing to improve upland livestock distribution and direct livestock away from riparian and stream zones.ii. Use these practices to manage livestock access in areas where habitat restoration is occurring or has recently occurred and protection remains needed, and to minimize the potential for impact to riparian areas, stream banks, and salmonid spawning habitat. <i>Strategy b. Restrict access to pastures or streams that are being restored.</i> <ul style="list-style-type: none">i. Move cattle away from these stream corridors. <i>Strategy c. Develop and implement a monitoring program that facilitates adaptive management toward this goal.</i> <ul style="list-style-type: none">i. Utilize an interdisciplinary team to develop and implement the monitoring program.

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- ii. Monitoring should detect short-term impacts and long-term changes to riparian and upland habitats, streambank stability, and vegetation composition, and it should be repeatable and responsive to management needs, and use best available science.

Strategy d. Implement range infrastructure projects to ensure no degradation to water quality, fish, and wildlife habitat.

- i. Work with partners and lessees to fund, design, and implement range infrastructure projects.
- ii. Locate, design, and implement stream crossings and stream access points in appropriate places to protect fish habitat and spawning areas.
- iii. Work with the lease holder or other interested parties to remove excess or unneeded fencing.

Strategy e. Minimize conflict between domestic livestock and terrestrial wildlife.

- i. Work with partners and lessees to fund, design, and implement practices to minimize depredation of livestock herds.

Strategy f. Ensure a sustainable grazing program.

- i. Consider the benefits of multi-species grazing where appropriate.
- ii. Ensure that contingencies exist for drought and fire.
- iii. Incorporate appropriate elements of strategies a-e, including monitoring data summaries, into the lease, making responsibilities explicit, in order to facilitate adaptive management.

PERFORMANCE MEASURES			
Metric	Criteria	Linked Strategies	Survey Period
Meadows and Riparian areas.	No less than 4" stubble height on sod-forming or non-jointed grasses. Bunchgrass/jointed grasses forage use will not exceed 50%. Shrub/woody species forage use not to exceed 50%.	Strategies a	Annual
Streambank alteration	Does not go above 20% of studied segments.	Strategies a and d	Annual
Stream Crossings and water access points	Crossings do not impact spawning areas; crossings are hardened, located at geomorphologically/hydrologically stable sites, and are utilized by cattle.	Strategy a and d	Annual survey on utilization of stream crossings and protection of redds.
Costs and income	Track costs and income associated with grazing		

Adaptive Management Process: If in-season or end-of-season monitoring shows the criteria on meadows, riparian areas, or streambank alteration was exceeded, then approaches laid out in Strategies will be implemented. If consistent exceedance of the criteria is observed, then an interdisciplinary team will assess the situation and make recommendations on how to meet the performance measure.

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Teanaway Community Forest – Draft Objectives and Strategies for Goal 3-Recreation

The Teanaway Community Forest Advisory Committee, along with the WDFW and DNR, have gone through an iterative process of developing and reviewing objectives, strategies, and performance measures for the goals provided by the Legislature in RCW 90.38.130. The Advisory Committee and the agencies worked to create high-level objective statements that meet the goal, strategies that describe the tools, and performance measures that show how we will measure success. The process involved brain-storming sessions by the advisory committee followed by multiple reviews of drafts crafted by the agencies. All the objectives, strategies, and performance measures listed below are still considered draft.

<p>Goal 3 - Recreation: Maintain and where possible expand recreational opportunities consistent with watershed protection, for activities such as hiking, fishing, hunting, camping, birding and snowmobiling;</p>	
<p>Vision: Provide opportunities for recreational use of Teanaway Community Forest, where uses are developed with advisory committee and stakeholder involvement, managed to be compatible with each other, respectful of private land owners, and compatible with the other goals in this plan.</p>	
<p>Objective 1 <u>Planning</u> – Develop a Recreation Plan for the forest.</p>	<p><i>Strategy a. Develop a site-specific Recreation Plan for the forest that directs recreation and infrastructure development. Include stake-holder and advisory committee input in this process.</i></p> <p>i. Recreation criteria to be added here...</p>
<p>Objective 2 <u>Trails</u> - Provide and maintain a network of safe, enjoyable, and sustainable recreational trails.</p>	<p><i>Strategy a. Provide designated non-motorized trails for equestrian, hikers, and mountain bikers</i></p> <p>ii. Accommodate multiple skill levels with shorter, gentler trails for inexperienced users and longer, rougher trails for more experienced users. Connect non-motorized TCF trails with USFS trails and the regional trail system. Maintain separate use trails, where appropriate, for safety of users and/or enhanced user experience.</p> <p>iii. All trails should emphasize scenic destinations. Utilize loops where appropriate. for cross-county mountain bike riders, equestrians, and hikers.</p> <p><i>Strategy b. Evaluate the existing informal trail network and upgrade, relocate, or decommission trail segments as appropriate to minimize the trail network’s impacts to water, wildlife, and working lands.</i></p> <p>i. Implement projects to restore damaged areas (ie, undesignated trails) and provide educational signage and enforcement as appropriate based on the recreation plan.</p>

	<ul style="list-style-type: none"> ii. Focus attention on trails with negative impacts to water quality, that are difficult to maintain, have highly erodible soils, have safety concerns, have steep slopes, and go through sensitive wildlife habitat. <p><i>Strategy c. Maintain and/or develop winter trail opportunities for snowmobiles, cross-country skiing, and snowshoeing.</i></p> <ul style="list-style-type: none"> i. Maintain the existing level of snowmobile opportunities. Where appropriate for the protection of water and wildlife, develop new routes for groomed and marked, and ungroomed marked snowmobile trails, using loops when practical. Facilitate connections to the regional snowmobile trail system. ii. Develop non-motorized ungroomed marked trails and provide access points to allow connections to the regional snowshoe and cross-country ski trail system. <p><i>Strategy d. Motorcycle Use</i></p> <ul style="list-style-type: none"> i. Approaches to accommodate motorcycle use are still being discussed by the Advisory Committee. No decisions have been made. <p><i>Strategy e. Develop guidelines and principles for users of the Teaway trail system</i></p> <ul style="list-style-type: none"> i.
<p>Objective 3 Facilities - Provide and maintain a network of designated recreation facilities, including campgrounds, day-use areas such as trailheads, picnic areas, river access and interpretive sites.</p>	<p><i>Strategy a. Develop new, renovate existing, and maintain facility locations</i></p> <ul style="list-style-type: none"> i. Provide user accessibility in accordance with the American with Disabilities Act (ADA). ii. Develop new and renovate existing trailheads with interpretive signs and parking to accommodate recreational access for all recreational users. iii. Establish and maintain trailhead parking to accommodate winter use. iv. Upgrade existing campgrounds to DNR standards for health and safety, improve sanitation and signage. Campgrounds should maintain a rustic experience. <ul style="list-style-type: none"> - Restore riparian buffers by shifting campsites away from the river; - Develop designated campsites with basic amenities; - Provide water access opportunities. <p><i>Strategy b. Allow for backcountry walk-in/pack-in camping zones away from river corridors, developed campgrounds, county and open roads, and trailheads.</i></p> <ul style="list-style-type: none"> i. No dispersed camping along county and open roads. ii. Promote wildlife-friendly practices within camping zones utilizing “leave no trace” principles.

	<p><i>Strategy c. Provide for managed river access and day-use areas along the forks of the Teaway River, including interpretive and environmental education signage.</i></p> <ul style="list-style-type: none"> i. Determine level of use and capacity and plan accordingly. ii. Identify and plan for recreation within a high-use river zone. Minimize the impact that river access has to the fish and wildlife habitat and riparian areas by utilizing setbacks and site designs. <p><i>Strategy d. Manage organized events in accordance with DNR recreation rules.</i></p> <ul style="list-style-type: none"> i. Work with recreation groups and TCF Advisory committee, while coordinating with adjacent land managers, to determine how events are managed including considerations such as safety, capacity, staffing needs, sanitation, access, and where it does not conflict with other goals or uses of the TCF. <p><i>Strategy e. Provide interpretive opportunities with education opportunities and easy access for day use.</i></p>
<p>Objective 4 Dispersed Recreation - Provide, manage, and maintain existing dispersed recreation opportunities including but not limited to collecting firewood, mushroom picking, geocaching, orienteering, nature viewing, hunting, and fishing.</p>	<p><i>Strategy a. Manage dispersed recreation in the TCF in accordance with DNR and WDFW recreation rules.</i></p> <ul style="list-style-type: none"> i. Allow for parking for walk-in hunting and fishing in appropriate locations. Improve these access points to accommodate fishing and hunting parking as site conditions warrant. ii. Firewood gathering by permit only within designated collection areas. No shooting except for hunting-related shooting.
<p>Objective 5 Partnerships - Maintain existing partnerships and encourage new volunteer participation between public agencies, user groups, and citizen volunteers to enhance the connection to the community forest.</p>	<p><i>Strategy a. Partner with volunteer groups and non-profit organizations, community groups, and recreation clubs in the maintenance, education, and restoration activities of the TCF.</i></p> <p><i>Strategy b. Develop partnerships with local communities and adjacent public land managers to provide linkages and common messaging for the network of regional trails.</i></p> <p><i>Strategy c. Support partnerships that connect local schools and youth groups with recreation opportunities and environmental education on TCF lands.</i></p> <ul style="list-style-type: none"> i. Increase outreach to new potential volunteer populations using technology and media such as social media, blogs, e-newsletters, website, email, and participatory GIS.

Teaway Community Forest – Draft Objectives and Strategies for Goal 3-Recreation

<p>Objective 6 Education and Enforcement - Promote an active education and enforcement presence in the TCF utilizing DNR and WDFW recreation rules and our partners.</p>	<p><i>Strategy a. Employ an integrated enforcement strategy</i></p> <ul style="list-style-type: none"> i. Utilize education, engineering, and enforcement in recreation management development, and implementation. ii. Establish a routine presence through agency enforcement officers, DNR recreation staff, and a robust volunteer program. iii. Coordinate activities with Kittitas County, USFS and local law enforcement personnel. <p><i>Strategy b. Provide consistent signage educating the public about uses, regulations, fire danger, “leave no trace” principles, private land owners, and safe wildlife encounters.</i></p> <ul style="list-style-type: none"> i. Expand signage at trailheads and day-use areas, including information and interpretation about the TCF creation and goals. ii. Signs may include site-specific environmental or historical information <p><i>Strategy c. Work with local emergency responders and jurisdictions to develop an emergency access plan for lands in the TCF creating trailhead and campground specific emergency response plans.</i></p>
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Performance Measures

Metric	Indicator	Linked Strategies	Reporting Period
Recreation user behavior	User contacts indicate a safe and enjoyable experience. User education on rules and regulations results in minimal infractions.	Objective 6	Annual report on contacts, citations issued, and safety concerns.
Trail sustainability	Trails show minimal erosion and impact to streams, riparian areas, and meadows.	Objective 2, Strategy b	Annual report on trail projects.
Recreation Plan	Completed and Implemented	Objective 1, Strategy a	Annual report on progress made. Aim for completion by December 31 st 2017. Implementation to immediately follow as funding allows.

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Existing Facilities	Improve to meet DNR site service standards for health and safety.	Objective 3, Strategy a	Annual report on progress made. Aim to have all existing facilities upgraded by December 31 st 2020.
Additional Facilities	Recreation demand is met through additional trailheads and parking areas	Objective 3, Strategies a, b, c, and e	Annual report on progress made.

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Goal 4a: Conserve and restore vital habitat for fish, including steelhead, spring chinook, and bull trout...
Objectives
<p>Objective 1. Restore and connect aquatic habitat that supports thriving salmon, bull trout, and steelhead.</p> <p>Objective 2. Increase stream base flows from August to October; decrease spring time peak flows; allow low intensity floods to occur and inundate floodplains regularly.</p> <p>Objective 3. Support a functioning stream system by limiting sediment delivery from upland areas, existing infrastructure, and unnatural stream bank erosion.</p> <p>Objective 4. Connect stream channels to their floodplains in order to restore a properly functioning flow regime and habitat conditions.</p> <p>Objective 5. Ensure riparian conditions provide a full range of native riparian functions.</p> <p>Objective 6. Work to provide streams with a well-distributed network of deep, shaded pools.</p> <p>Objective 7. Protect spawning grounds from disturbance.</p>
Strategies

Strategy a. Improve fish production and habitat

- i. Focus efforts to restore aquatic habitat on those stream reaches that support or sustain state or federally listed fish species, that will have the most impact on reducing stream temperatures, increasing fish passage, improving fish habitat, and that help achieve other objectives. Refer to these as priority stream reaches.

Strategy b. Limit activities that increase fine sediment inputs to spawning grounds for bull trout, spring Chinook, and steelhead.

- i. Enforce seasonal cattle restrictions that reduce impacts to spawning grounds (both fall and spring spawners). Educate recreational users about spawning grounds and how to reduce their impact to these sensitive sites, and enforce seasonal restrictions to protect spawning habitat.

Strategy c. Improve riparian habitat for resident and anadromous fish

- i. Minimize the impact of grazing, timber harvest, recreation and other activities on riparian areas and stream zones.
 - Utilize range riders, salt blocks, off-site water improvements, low-moisture blocks, fencing, or natural barriers to draw cattle away from riparian areas and sensitive stream banks. Utilize these practices to help restore riparian areas that overlap with priority stream reaches.
 - Protect recently restored riparian areas until they are resilient enough to withstand grazing or other activities. Monitor these areas to ensure the riparian zone is functioning properly.
- ii. Protect and restore riparian habitat to support a mature riparian buffer with an appropriate diversity and sizes of tree, shrub, and grass species suitable to the stream reach.
 - Ensure that the riparian areas of smaller-order streams are protected during forestry operations. Consider restoration through plantings if appropriate to the site.
 - Focus restoration efforts in areas that have higher amounts of solar radiation due to increased width to depth ratios and a lack of riparian shading and show the best chances for success. Focus protection efforts on recently restored sites.

Strategy d. Improve late season flows / Improve water quality for fish/ Improve pool quality

- i. Maintain in-streams flows by managing the water rights for high quality fish habitat and reduced stream temperatures.
- ii. Restore floodplain connectivity and the ability of surface water to interact with ground water by reconnecting streams to their floodplains. Increase the number of deep pools.
 - Utilize large woody debris to capture sediment and raise the stream height, beavers to encourage the impoundment and spreading of surface water, or other methods as appropriate.
 - Focus attention on stream reaches that provide the most benefit to federal or state listed fish species, that have the most production potential, and that help achieve other objectives.

Strategy e. Reduce runoff from uplands

- i. Minimize sediment from logging practices.

- Utilize low-impact logging techniques such as over-the-snow logging, high-leads, low-pressure ground equipment, and dry soil conditions during harvest to reduce soil compaction.
- Conduct these practices whenever forest harvest occurs. Restore areas where past forest practices have led to problems.

Strategy f. Reduce the impact of the road network to water quality, wildlife habitat and watershed function by developing a sustainable road system that takes into account the ecological, sociological, and economical needs of the TCF.

- Assess the road network and place existing roads into categories based upon their future purpose:
 - Roads that are needed for near-term forest management, grazing management, recreation (trails), or have an easement by another entity.
 - Roads that do not have a purpose or that provide duplicative access and can be decommissioned.
- Identify spatial locations for roads with an identified future purpose.
- Evaluate roads based on their impacts to water quality, watershed function, and wildlife habitat.
 - Roads to be decommissioned will be prioritized based on this assessment.
 - Roads that have a purpose but have minimal impacts will be maintained.
 - Roads that have a purpose but do have impacts need to go to step iv.
- Determine the appropriate tool for minimizing the impact of the road based upon the impact, the purpose of the road, and available funding.
 - Road improvements (culverts, surface, drainage, etc.)
 - Road relocation
 - Road to trail conversion
 - Road abandonment/ decommission
- Determine if additional roads are needed to meet a management need.
 - Build new roads only if they will have minimal impact to water quality, watershed function, and wildlife habitat.
- Monitor results
- Repeat these steps as necessary to meet the objective.

Strategy g. Improve watershed-wide habitat connectivity

- Utilize existing resources to Identify the role of the TCF in statewide aquatic habitat connectivity
- Identify critical areas to maintain or restore linkages that support state-wide aquatic habitat connectivity within and adjacent to the TCF.
- Work to improve watershed-wide wildlife connectivity within the TCF.
 - Identify locations and actions that can be taken on TCF to improve habitat connectivity with neighboring land owners.
- Work with neighboring land owners and agencies to improve watershed-wide aquatic habitat connectivity.
 - Advocate for neighboring land management that can improve habitat connectivity. Identify further analyses that need to be done.
 - Focus attention on efforts to improve connectivity for bull trout, spring Chinook, and steelhead.

PERFORMANCE MEASURES			
Metric	Direction	Linked Strategies	Reporting Period
Water Temperature	Water temperatures need to decrease during late summer flows in all forks of the Teanaway to achieve the Teanaway TMDL.	Strategy b, c	Bi-annual report on progress made until the 303d listing is removed.
Riparian Habitat	Increase in mature riparian area, measured by cover and age of riparian species.	Strategy b	Annual report on progress made.
Annual fish population estimates	Increase in bull trout, spring Chinook, and steelhead	All strategies	Annual report on progress made
Sedimentation	Reduction in amount of sediment from point sources in selected streams.	Strategy b and d	Bi-annual report on progress made.

Goal 4b: Conserve and restore vital habitat for ... wildlife, including deer, elk, large predators, and spotted owls;
Objectives
<p>Objective 1. Conserve, restore, and connect habitat so that native wildlife populations thrive.</p> <p>Objective 2. Provide a diversity of forest habitat types to support multiple species including spotted owls, ungulates and large predators.</p> <p>Objective 3. Provide a diversity of wetland and riparian habitat types to support multiple species.</p> <p>Objective 4. Protect concentration areas and sensitive sites for wildlife.</p>
Strategies
<p><i>Strategy a. Create and maintain varied and diverse upland habitat structure</i></p> <ul style="list-style-type: none"> i. Increase, manage, and maintain habitat for the northern spotted owl and other mature forest specialists. <ul style="list-style-type: none"> • Use an active management approach to create contiguous blocks of spotted owl habitat that include structural elements such as a multi-storied canopy, snags, and down-woody debris where the site conditions are appropriate. Use silvicultural tools to set sites on a trajectory to achieve the habitat objective. Target areas for the development of habitat where it can be grown and sustained, while recognizing that some areas may shift in and out of habitat. • Develop priorities based on a forest inventory, site conditions, historic owl circles, and other data as appropriate. Monitor progress on this strategy. ii. Maintain open ponderosa pine and Douglas fir forest habitat for the white-headed woodpecker and other open-forest specialists. <ul style="list-style-type: none"> • Use an active management approach to create open stands where site conditions are best suited to support these species and densities. Use silvicultural tools to set sites on a trajectory to achieve the habitat objective. • Coordinate with strategies to reduce fire risk when considering priorities. iii. Restore upland meadows (shrub and herbaceous dominated) to provide for elk and deer habitat. <ul style="list-style-type: none"> • Use approaches such as forest management, grazing, floodplain restoration, and invasive weed management to maintain these areas as upland meadows. <p><i>Strategy b. Restore and protect wetland and riparian habitats</i></p> <ul style="list-style-type: none"> i. Restore floodplain connectivity and the ability of surface water to interact with ground water by reconnecting streams to their floodplains.

- Utilize large woody debris to capture sediment and raise the stream height, beavers to encourage the impoundment and spreading of surface water, or other methods as appropriate.
- Focus attention on stream reaches that have an incised channel, that provide the most benefit to federal or state listed fish species, that have the most production potential, and that help achieve other objectives.
- ii. Minimize the impact of grazing, timber harvest, and other activities on riparian areas and stream zones.
 - Utilize fencing, natural barriers, range riders, or off-site water improvements to draw cattle away from riparian areas and sensitive stream banks. Protect recently restored riparian areas until they are resilient enough to withstand grazing or other activities, identify other areas that are sensitive to disturbance from these activities.
 - Focus exclusionary practices on recently restored riparian areas. Monitor these areas to ensure the riparian zone is functioning properly.
- iii. Protect and restore riparian habitat to support a mature riparian buffer with an appropriate diversity and sizes of tree, shrub, and grass species suitable to the stream reach.
 - Ensure that the riparian areas of smaller-order streams are protected during forestry operations. Consider restoration through plantings if appropriate to the site.
 - Focus restoration efforts in areas that have higher amounts of solar radiation due to increased width to depth ratios and a lack of riparian shading and show the best chances for success. Focus protection efforts on recently restored sites.

Strategy c. Protect and provide for seasonal concentration areas for wildlife and sensitive sites.

- i. Minimize the impact of recreation, grazing, and forest management on wildlife concentration areas and sensitive sites. Define and refer to these priority areas and sensitive sites.
 - Limit the development of roads, trails, and winter recreation activities in sensitive sites. Consider seasonal road closures if appropriate to protect wildlife. Limit grazing in sensitive areas during early spring in order to avoid wildlife-cattle conflicts. Limit fencing in migration routes, or consider fencing designs more suitable for wildlife travel. Reduce human disturbances in spotted owl zones during the spring and early summer.
- ii. Develop and implement a road management decision-making process
 - Evaluate and assess roads to be maintained, improved, abandoned, decommissioned or constructed based on criteria that describe the roads' stated management need within the road system (such as forestry, grazing, or recreation), its impact to wildlife habitat, and the economics of the action.
 - Apply this assessment across the forest road system and re-evaluate the road system needs on a regular basis.

Strategy d. Improve landscape-scale wildlife habitat connectivity.

- i. Utilize existing resources to identify the role of the TCF in statewide wildlife habitat connectivity
- ii. Identify critical areas to maintain or restore corridors that support state-wide wildlife habitat connectivity within and adjacent to the TCF.
- iii. Work to improve landscape-scale wildlife connectivity within the TCF.
 - Identify locations and actions that can be taken on TCF to improve habitat connectivity with neighboring land owners.
- iv. Work with neighboring land owners and agencies to improve landscape-scale wildlife connectivity.

- Advocate for neighboring land management that can improve habitat connectivity. Identify further analyses that need to be done.
- Focus attention on efforts to improve connectivity for northern spotted owl, mule deer and elk.

PERFORMANCE MEASURES			
Metric	Direction	Linked Strategies	Reporting Period
NSO habitat	Increase in quantity of multi-storied canopy forest.	Strategy a, d	5-year progress report.
Progress towards desired future conditions for upland, riparian, and wetland habitats.	Based on baseline vs. desired future conditions.	Strategy a, b	