2019 CFLRP Ecological Indicator Progress Report

OVERVIEW

Introduction

In 2011, the National Forest Foundation convened CFLRP participants to develop a set of national indicators. The resulting five indicators are economic impacts, fire risk and costs, collaboration, leveraged funds, and ecological condition. Data to support these five indicators comes from a number of sources, including the Treatment for Restoration Economic Analysis Toolkit, collaboration surveys conducted by NFF, and the Annual Reports.

Projects first reported on ecological indicators in 2014. Since then, the CFLRP staff in the US Forest Service Washington Office have worked with colleagues and partners to review and update to template to make improvements while maintaining a consistent protocol to 2014. The intent of the 2019 CFLRP Ecological Indicator Progress Report is to better understand your progress in advancing ecological outcomes. It is not intended to capture everything about your monitoring activities.

To aid you in filling out this report, we recommend that you read the new 2019 Guidance Document. We also recommend that you reference your past Annual Reports and your 2014 Ecological Indicator Progress Reports. For additional help, please email CFLRP@fs.fed.us.

We appreciate the time and energy you dedicate to completing this progress report. This information is critical for understanding the ecological outcomes of your work, telling the national story, supporting communication and transparency, and sharing successful approaches and practices across the nation.

Thank you!

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2019 CFLRP Ecological Indicator Progress Report

Project Name: Southern Blues Restoration Coalition | State: Oregon

FIRE REGIME

Narrative - *Note: All boxes in this template will scroll, so you have as much space as you need.*

1. Did you make any changes to your desired condition(s) for fire regime as compared to the 2014 Ecological Indicator Report?
Please briefly describe:

Yes ☑ **No** ☐

In April of 2015, the Southern Blues Restoration Coalition (SBRC) project was approved for an expansion that increased the National Forest lands within the project from 543,963 acres to 877,288 acres. With the expansion we expect to treat approximately 40% of the National Forest lands by year 10 in an effort to reduce future fire intensity and severity that will more closely mimic the natural fire regimes.

2. Did you make any changes to your monitoring methodologies for fire regime as compared to the 2014 Ecological Indicator Report? Please briefly describe:

Yes ☐ **No** ☑

We will continue to use acres treated. We do have some new modeling data from a pilot project (Wildfire Risk Index) that we will also reference to show any wildfire risk reductions. We will also start getting completed local monitoring data published soon that will show how our treatments are effecting fire regimes.

3. Did you use any new or updated baseline data for evaluating your fire regime progress for the purposes of this report?
Please briefly describe:

Yes ☐ **No** ☑

4. Did your projects experience any unanticipated developments that positively or negatively affected expected progress towards your desired conditions for fire regime? (e.g. wildfire in the project area, litigation outcome, change in collaborative participation, etc.)

In the summer of 2015, the Canyon Creek Fire impacted 64,190 acres within the SBRC or 6.2% of the project area. A BAER team assessment at the time found that as much as 45% of the portion of the fire in the SBRC project burned with moderate to high soil severity and 55% burned with low soil severity. The low severity burn areas would have been considered a benefit while the high severity areas would have been considered a negative.

5. What were the most difficult barriers or challenges you experienced in progressing towards your desired conditions for fire regime? If you adapted to address these challenges please provide a brief description of how.

While we have been very successful at getting our planned mechanical treatments done, we still have a large backlog of planned landscape prescribed fire acres ready to go, but not getting done at the pace we had hoped for. The main challenge seems to be very narrow opportunities to complete prescribed fire each season because of several very outspoken local community members dislike of prescribed fire and it's potential effects on tree mortality, fear of escape and smoke primarily. Those public concerns force local line officers and fire managers to be cautious of expanding on burn opportunities.
Both of the local collaborative groups are taking on this challenge and are helping with the education or our local concerned publics. These efforts should help with improving opportunities moving forward.

6. Did you include the effects of treatments on areas adjacent to the active treatment area? Yes ☐ No ☑
If yes, please briefly describe your methodology for including these adjacent acres, and describe any work conducted across land ownership in support of desired conditions for fire regime.

Desired Conditions

*In this report, the term "**desired conditions**" refers to landscape and resource conditions (as defined collaboratively by stakeholders and land managers) that you are seeking to achieve and maintain for your CFLRP landscape over the next 10+ years. Desired conditions are outcome-driven not output-driven, and should link to your project's CFLRP proposal while being measurable. (Note: The term "desired condition" is used somewhat differently in the Forest Service's Land Management Planning Process. In that context, it is not time bound, and often represents long-term social, economic and ecological goals, while the term "objective" is used to represent specific, measurable and time-bound benchmarks to be achieved while working toward desired conditions in a forest plan area.) In this report, the term "**landscape**" refers to the landscape identified in your CFRLP project proposal or in subsequently-approved proposal edits. See cover page for links to guidance.*

7. Project-scale Desired Conditions Target for Fire Regime:

100	% change (relative to the desired condition) occurs across	40	% of the project areas by	09/30/2021
	% change (relative to the desired condition) occurs across		% of the project areas by	

Please include 1-5 *quantifiable* desired condition statements upon which the above target is based:

At this point we are 80% through the 10 year time period of CFLR funding.
Desired conditions is to treat 40% of the landscape to a more resilient condition that will allow for maintenance using wildfire and prescribed fire.

Example: Treatments in the project area result in a 23% reduction in potential flame length.
Example: 75% of all prescribed burn projects meet prescription objectives as quantified in burn plan.

8. Landscape-scale Desired Conditions Target for Fire Regime:

100	% change (relative to the desired condition) occurs across	40	% of the landscape area by	09/30/2021
	% change (relative to the desired condition) occurs across		% of the landscape area by	

Please include 1-5 *quantifiable* desired condition statements upon which the above target is based:

We have projects planned on 100% of the FS lands within the landscape of which we plan to treat 40% to meet the desired conditions
The desired condition for the landscape scale is the same as the project scale.

Examples: Modeled ecological departure indicates that forest vegetation is restored to Vegetation Condition Class 1 with low fire hazard across 51% (105,183 acres) of the CFLR landscape; Fuel models indicate reduced likelihood of supporting a stand replacing fire across 8.5% of the CFLR landscape (73,000 acres); Fire-adapted landscapes transition from shrub-dominant understory fuel model to a grass/forb dominant understory fuel model across 50% of the CFLR landscape.

9. Please select the broader goals that are central to your desired condition(s) for fire regime for the Project-scale (P) and Landscape-scale (L) :

P	L	
☑	☑	Reduced risk/likelihood of uncharacteristic wildfires (high severity, widespread, high mortality, active crown fire/crown fire initiation)
☑	☑	Re-establish natural fire regimes and move landscape to historical range of variability and/or natural range of variability
☑	☑	Restore/maintain fire dependent and tolerant species
☑	☑	Restore/maintain native species
☑	☑	Restore/maintain heterogeneity (species, size classes)
☑	☑	Increase use of prescribed fires
☐	☐	Other. Please describe:

10. Please select the key outcomes you are hoping to achieve on the landscape through attainment of the broader goals you selected above:

- ☑ Increase options/opportunities for managers to control/manage wildfires
- ☑ Protect communities and high valued resources/reduce risk of loss
- ☐ Protection of water quality/supply
- ☑ Public and firefighter safety
- ☑ Reduced fire supression costs and avoided costs
- ☐ Other. Please describe:

11. Given these goals, please state the evaluation metric(s) you are using to monitor progress towards your desired conditions for fire regime for this report. Note: This evaluation metric is something you are measuring or counting to monitor fire regime change. It has a unit of measurement attached to it.

We are using footprint acres treated. All of our planned treatments have the desired goals listed above. We also have preliminary data from a pilot Wildfire Risk Index report by the Rocky Mountain Research Station Fire modeling Institute.

Examples of fire regime evaluation metrics: basal area in square feet per acre (for tree density), quadratic mean diameter in inches (for tree sizes), litter and duff depths in centimeters (for fire hazard), percent canopy cover (for openness), fuels treatment effectiveness, tons of fuel loads removed (for fire hazard), avoided costs

Data and Methodology

12. Select the type(s) of monitoring you used to assess Project-scale (P) and Landscape-scale (L) progress towards fire regime desired conditions for this report. Select all that apply:

P	L	
☐	☐	**Baseline Data Collection** (i.e. was data collected prior to treatment to be used for later comparison?)
☑	☐	**Accomplishment Reporting** (i.e. was progress tracked using acres and miles reported?)
☑	☑	**Implementation Monitoring** (i.e. were the treatments implemented as prescribed?)
☐	☐	**Effectiveness Monitoring** (i.e. were treatments effective at meeting the stated objectives?)
☐	☐	**Effectiveness Monitoring Pilot Study** (i.e. was a trial run conducted to assess considerations of crafting an effectiveness monitoring plan?)
☐	☐	**Ecological Impacts Monitoring** (i.e. were there any unforeseen ecological consequences that could compromise treatment success?
☐	☐	**Other.** Please describe:

13. Select the methodologies used to assess Project-scale (P) and Landscape-scale (L) progress towards fire regime desired conditions for this report. Select all that apply and provide a brief description for each:

P	L	
☐	☐	Field-based sampling/plots:
☐	☐	Remote sensing:
		☐LiDAR ☐Aerial photography ☐ NAIP ☐ Landsat ☐Other:
☑	☑	Treatments implemented (e.g. acres or miles accomplished):
☐	☐	Modeling (include type and indicators used):
☑	☑	Measuring a reduction in the fire risk index: Using the pilot CFLR Risk Index Report
☐	☐	Observation/expert opinion:
☐	☐	Fuels treatment effectiveness:
☐	☐	GIS analysis:
☐	☐	Other:

14. Where is the data that is being used for monitoring Project-scale (P) and Landscape-scale (L) progress toward fire regime desired conditions being stored? Select the databases categories that apply and provide a description of the specific datasets being used. Include links if available:

P	L	
☐	☐	FSVeg:
☐	☐	Forest Inventory and Analysis (FIA):
☐	☐	Fuels Treatment Effectiveness Report Database:
☐	☐	GNN:
☐	☐	VMap:
☐	☐	Feat-Firemon Integrated Database:
☐	☑	FACTS (please select performance measure):
		☑ FP-FUELS-NON-WUI ☑ FP-FUELS-WUI ☐ FOR-VEG-EST ☐ FOR-VEG-IMP ☐OTHER:
☐	☐	Local database:
☐	☐	Inspection reports/contract record:
☐	☐	Other:

Project-scale scoring

From the beginning, CFLRP intended to shift towards desired conditions at the landscape-scale. As the disturbances and processes of interest occur at a landscape-scale, we need a landscape-scale assessment. It's a challenge to look at the impacts at that scale, given the scale itself as well as time delays (e.g. it takes more time to shift outcomes at landscape-scale than project-scale). While landscape-scale is the focus, project-scale assessments allow projects to bring in their monitoring data and look at treatment outcomes.

Each management action funded through CFLRP will have its own project-level objectives that are designed to contribute to achieving desired conditions at larger scales. Project-scale scoring should reflect how well the results of an individual management activity met the objectives for that project. Individual projects may not meet every desired condition of the CFLRP project. Project-scale scoring is conducted by the multi-party monitoring group following completed management activities.

An individual activity might not need to lead to a fully restored acre, but if it sets the landscape up for the next treatment it may still get a good rating. For example if a successful thinning doesn't restore a fire regime, but it sets up landscape for subsequent burns that might, it could still receive a "Green" rating. There may be many reasons for not scoring a "Green," including ecological and sociological considerations beyond the scope of the CFLRP project as well as recognition of unanticipated barriers or challenges. Note that scoring a "Yellow" or "Red" does not necessarily mean that work was not accomplished.

If you need to summarize scores across different desired condition targets, please refer to Guidance Document for additional instruction.

- **Green** = Expected progress is being made towards desired conditions across 75% or more of our CFLRP project areas.
- **Yellow** = Expected progress is being made towards desired conditions across 26% - 74% of our CFLRP project areas.
- **Red** = Expected progress is being made towards desired conditions across 25% or less of our CFLRP project areas.

Ecological Indicator	Green, Yellow, or Red score and % of the CFLRP project areas resulting in measurable progress as defined above	Are you achieving your CFLRP objectives? Yes or No? If "no", briefly describe why in the box below and use the narrative section as needed.
Fire Regime	Yellow at 46% of target	We are moving towards our objectives

Please briefly describe how you calculated your score.

Project scale is the same as landscape scale.

Scoring for National Reporting

Landscape-scale scoring

Few (if any) CFLRP-funded Landscapes propose to meet every proposed desired condition on every acre or achieve landscape-scale objectives through the mechanical treatment of every acre within their landscape boundary. Rather, multiple projects with multiple objectives (fire risk reduction, wildlife habitat improvement, stream restoration, etc.) should facilitate meeting these broader objectives. Scoring at the landscape-scale reflects the degree to which individual Landscapes are moving towards Desired Conditions at broader spatial extent. Landscape-scale scoring is conducted by the multi -party monitoring group at each Landscape.

"Expected progress" will be defined using 10-year benchmarks for FY 2010 projects and 8-year benchmarks for FY 2012 projects for each desired condition based on a percentage of the lifetime outcome specified for the landscape in each proposal. There may be many reasons for not scoring a "Green," including ecological and sociological considerations beyond the scope of the CFLRP project as well as recognition of unanticipated barriers or challenges. Note that scoring a "Yellow" or "Red" does not necessarily mean that work was not accomplished.

If you need to summarize scores across different desired condition targets, please refer to Guidance Document for additional instruction.

- **Green** = Expected progress is being made towards desired conditions across [66] % of our CFLRP landscape area.
- **Yellow** = Expected progress is being made towards desired conditions across [33] % of our CFLRP landscape area.
- **Red** = Expected progress is being made towards desired conditions across [0] % of our CFLRP landscape area.

Ecological Indicator	Green, Yellow, or Red score and % of the landscape across which progress is being made towards desired conditions	Are you achieving your CFLRP objectives? Yes or No? If "no", briefly describe why in the box below and use the narrative section as needed.
Fire Regime	Yellow at 46% of goal	We are moving towards our objectives. The only reason we are not in the gre

Please briefly describe how you decided on the percentage thresholds used above for the scoring categories and how you calculated your score.

Our original proposal stated we would treat 40% of the total landscape (350,915 acres) by year 10. At that rate, in year 8 we should have 280,732 footprint acres treated towards desired condition by the end of FY 2019. Our current footprint treated is 128,813 acres or 46% of the planned accomplishment. We have been expecting a big increase in acres treated with prescribed fire, but that has not materialized as quickly as hoped.

The draft pilot Wildfire Risk Index project found that our treatments have reduced the risk index within the SBRC by 20.6%. This index considers the risks to High

2019 CFLRP Ecological Indicator Progress Report

Project Name: Southern Blues Restoration Coalition State: Oregon

WATERSHED CONDITION

Narrative - *Note: All boxes in this template will scroll, so you have as much space as you need.*

☐ If watershed condition is not part of your CFLRP proposal and landscape restoration strategy, please let us know by checking this box.

1. Did you make any changes to your desired condition(s) for watershed condition as compared to the 2014 Ecological Indicator Report? Please briefly describe: **Yes** ☑ **No** ☐

In April of 2015, the Southern Blues Restoration Coalition (SBRC) project was approved for an expansion that increased the National Forest lands within the project from 543,963 acres to 877,288 acres. Similar to the Fire Regime goals we expect to treat 40% of the National Forest lands by year 10 in an effort to improve watershed function.

2. Did you make any changes to your monitoring methodologies for watershed condition as compared to the 2014 Ecological Indicator Report? Please briefly describe: **Yes** ☐ **No** ☑

3. Did you use any new or updated baseline data for evaluating your watershed condition progress for the purposes of this report? Please briefly describe: **Yes** ☐ **No** ☑

Utilized data from WIT since 2012 in comparison to goals developed during the CFLRP expansion in 2015 in order to calculate progress towards desired conditions.

4. Did your projects experience any unanticipated developments that positively or negatively affected expected progress towards your desired conditions for watershed condition? (e.g. wildfire in the project area, litigation outcome, change in collaborative participation, etc.)

Time-lines were challenging to meet because it took longer than anticipated for heritage clearance. We also have had challenges getting road closures and decommissioning completed as planned. Both internal and external concerns with the timing of road closures and decommissions have been delaying implementation.

5. What were the most difficult barriers or challenges you experienced in progressing towards your desired conditions for watershed condition? If you adapted to address these challenges please provide a brief description of how.

Getting heritage clearance (SHPO) prior to implementation

6. Are you using the Priority Watershed(s) identified through the Watershed Condition Framework to focus CFLRP watershed restoration work and monitoring for this report? Yes ☑ **No** ☐ **Our CFLRP does not have Priority Watersheds** ☐

If no, please briefly describe why you are not using the Priority Watersheds:

If yes, is there a Watershed Restoration Action Plan (WRAP) developed for the Priority Watershed(s)? Yes ☑ No ☐

7. Our Priority Watershed(s)of focus for this report cover 4.6 % of the CFLRP landscape

8. Please select up to three conditions in each category for why it was chosen as a Priority (these are available in the WCATT entry):

Category 1: Resource Values
- ☐ Wilderness
- ☐ Wild and Scenic River
- ☐ Experimental Watershed
- ☐ Municipal Watershed
- ☐ Outstanding Resource Water
- ☑ Species protection area
- ☐ Class 1 Air Shed
- ☐ Other:

Category 2: Concerns and Threats
- ☑ Water Quality
- ☐ Water Quantity
- ☑ Riparian Structure and Function
- ☑ Species Habitat
- ☐ Wildfire Risk
- ☐ Invasive Species
- ☐ Other:

Category 3: Opportunities
- ☑ Improve Condition
- ☐ Maintain Condition
- ☐ Potential Partnership
- ☐ Non-NFS Land Collaboration
- ☐ Larger Scale Restoration
- ☐ Leverage FS funds
- ☐ Socio-economic
- ☐ Other:

Desired Conditions

*In this report, the term "**desired conditions**" refers to landscape and resource conditions (as defined collaboratively by stakeholders and land managers) that you are seeking to achieve and maintain for your CFLRP landscape over the next 10+ years. Desired conditions are outcome-driven not output-driven, and should link to your project's CFLRP proposal while being measurable. (Note: The term "desired condition" is used somewhat differently in the Forest Service's Land Management Planning Process. In that context, it is not time bound, and often represents long-term social, economic and ecological goals, while the term "objective" is used to represent specific, measurable and time-bound benchmarks to be achieved while working toward desired conditions in a forest plan area.) In this report, the term "**landscape**" refers to the landscape identified in your CFRLP project proposal or in subsequently-approved proposal edits. See cover page for links to guidance.*

9. Project-scale Desired Conditions Target for Watershed Condition:

[ ] % change (relative to the desired condition) occurs across [ ] % of the project areas by [ ]

[ ] % change (relative to the desired condition) occurs across [ ] % of the project areas by [ ]

Please include 1-5 *quantifiable* desired condition statements upon which the above target is based:

Only calculated at landscape scale.

Examples: Over 50% of roads that will be used for activities in project areas have received or are planned for BMPs; Over 170 acres of riparian area are improved and floodplain reconnected, 2 miles of stream are restored, and dam removal results in 13 miles of fish passage.

10. Landscape-scale Desired Conditions Target for Watershed Condition:

[100] % change (relative to the desired condition) occurs across [40] % of the landscape area by [09/30/2021]

[ ] % change (relative to the desired condition) occurs across [ ] % of the landscape area by [ ]

Please include 1-5 *quantifiable* desired condition statements upon which the above target is based:

Within the CFLRP Project Area, there are 44 subwatersheds included in the assessment. National forest ownership within subwatersheds ranged from 7-100 percent. Assessment data came from the national forest so ratings apply only to the national forest lands in the subwatersheds.
-Overall watershed condition within the CFLRP subwatersheds was rated "good" (functioning properly) in 7 watersheds (16%) and

Examples: 50% of the essential projects identified in the watershed WRAP are implemented; Watershed Condition Classification indicates that 14 of the 17 subwatersheds (82% of the CFLRP Landscape Area) are in Condition Class 1 (Properly Functioning); The Watershed Condition Classification for the fire regime and wildfire indicators are improved for 17% of the landscape (30% of the expected treatment area).

11. Please select the indicator(s) below related to watershed condition that you are trying to affect to achieve your quantifiable desired condition(s):

- ☑ Water quality
- ☐ Water quantity
- ☑ Aquatic habitat (fragmentation, woody debris, channel shape and function)
- ☐ Aquatic biota (life-form presence, native species, exotic/invasive species)
- ☑ Improve riparian/wetland vegetation condition
- ☑ Roads and trails (road density, road maintenance, proximity to water, mass wasting)
- ☑ Soils (erosion, productivity, contamination)
- ☐ Fire regime and wildfire (fire condition class, wildfire effects)
- ☐ Forest cover
- ☐ Rangeland vegetation
- ☐ Terrestrial invasive species (extent and rate of spread)
- ☐ Forest health (insects and disease, ozone)
- ☐ Other. Please describe:

12. **Please select the actions you are implementing to work towards your desired condition(s):**

- ☑ Road decommissioning
- ☐ Road maintenance and/or improvement
- ☐ Trail maintenance and/or improvement
- ☑ Mechanical thinning
- ☑ Prescribed fire/controlled burn
- ☑ Culvert replacement
- ☐ Reintroduction of native species
- ☐ Removal of exotic/invasive species
- ☐ Other. Please describe:

13. Please state the evaluation metric(s) you are using to monitor progress towards your desired conditions for watershed condition.
Note: This evaluation metric is something you are measuring or counting to monitor watershed condition. It has a unit of measurement attached to it.

Utilize Soil and Water acres treated from the Watershed Improvement Tracking database in comparison to the goals determined in the April 2015 expansion of the CFLRP area.

Examples of evaluation metrics: Fine sediment volume (mL), fine sediment weight (g), basal area in square feet per acre (for tree density), number of woody debris pieces in a specific size class per stream mile (for fish habitat), stream flow rate (liters/sec), miles of road decommissioned (miles), fish population (number of fish per sweep).

Data and Methodology

14. Select the methodologies used to assess Project-scale (P) and Landscape-scale (L) progress towards watershed condition desired conditions in this report. Select all that apply and provide a brief description for each:

P	L	
☑	☑	National BMP monitoring (protect water quality):
☐	☐	Streambed coring:
☐	☐	Float method (water flow):
☐	☐	Current meter (water flow):
☑	☑	Fish occupancy/use surveys:
☐	☐	Ground-based photo points or photo plots:
☐	☐	Aerial surveys, aerial photography, or remote sensing:
☐	☐	GIS analysis:
☑	☑	Treatments implemented (e.g. acres or miles accomplished) used as proxy for monitoring outcomes:
☐	☐	Modelling used as proxy for monitoring outcomes:
☐	☐	Other:

15. Where is the the data that is being used for monitoring Project-scale (P) and Landscape-scale (L) progress toward watershed condition being stored? Select the database categories that apply and provide a description of the specific datasets being used. Include links if available:

P	L	
☐	☐	GIS database:
☐	☐	County database:
☐	☐	State database:
☐	☐	Tribal database:
☐	☐	Citizen Science database:
☑	☑	Watershed Classification and Assessment Tracking Tool (WCATT):
☑	☑	USFS database of record (e.g. FACTS, WIT, WorkPlan, etc.): *please select performance measure from the table below*
☐	☐	Other:

Performance Measure Shorthand	Description	Database	P	L
BIO-NRG	Green tons from small diameter and low value trees removed from NFS lands and made available for bio-energy production	TIM	☐	☐
FOR-VEG-EST	Acres of forest vegetation established	FACTS	☐	☐
FOR-VEG-IMP	Acres of forestland vegetation improved	FACTS	☐	☐
FP-FUELS-NON-WUI	Acres of hazardous fuels treated outside the wildland/urban interface (WUI) to reduce the risk of catastrophic wildand fire	FACTS	☐	☐
FP-FUELS-WUI	Acres wildland/urban interface (WUI) high-priority hazardous fuels treated to reduce the risk of catastrophic wildland fire	FACTS	☐	☐
HBT-ENH-LAK	Acres of lake habitat restored or enhanced	WIT	☐	☐
HBT-ENH-STRM	Miles of stream habitat restored or enhanced	WIT	☐	☐
HBT-ENH-TERR	Acres of terrestrial habitat restored or enhanced	WIT	☐	☐
INVPLT-NXWD-FED-AC	Highest priority acres treated annually for noxious weeds and invasive plants on NFS lands	FACTS	☐	☐
INVSPE-TERR-FED-AC	Highest priority acres treated for invasive terrestrial & aquatic species on NFS lands	FACTS	☐	☐
RD-DECOM-NON-SYS	Miles of road decommissioned (non-system)	WIT	☐	☐
RD-DECOM-SYS	Miles of road decommissioned (system)	ROADS	☐	☐
RD-HC-IMP	Miles of high clearance system roads improved	ROADS	☐	☐

Performance Measure Shorthand	Description	Database	P	L
RD-HC-MAIN	Miles of high clearance system roads receiving maintenance	ROADS	☐	☐
RD-PC-IMP	Miles of road reconstruction and capital improvement	ROADS	☐	☐
RD-PC-MAIN	Miles of system roads receiving maintenance	ROADS	☐	☐
RG-VEG-IMP	Acres of rangeland vegetation improved	FACTS	☐	☐
S&W-RSRC-IMP	Acres of water or soil resources protected, maintained or improved to achieve desired watershed conditions	WIT	☑	☑
SP-NATIVE-FED-AC	Number of priority acres treated annually for native pests on Federal lands	FAD	☐	☐
STRM-CROS-MITG-STD	Number of stream crossings constructed or reconstructed to provide for aquatic organism passage	WIT	☐	☐
TL-IMP-STD	Miles of system trail improved	TRAILS	☐	☐
TL-MAINT-STD	Miles of system trail maintained	TRAILS	☐	☐
TMBR-SALES-TRT-AC	Acres of forestlands treated using timber sales	FACTS	☐	☐
TMBR-TRT	Acres of forestlands treated to achieve healthier conditions	FACTS	☐	☐
WTRSHD-CLS-IMP-NUM	# of watersheds moved to an improved condition class or sustained in properly functioning condition (Class 1)	WCATT	☐	☐

16. Please describe why the datasets or performance measures you selected in Question 15 above are <u>appropriate for assessing progress</u> towards your watershed desired conditions.

WIT provides the acres of water or soils resources protected annually. Goals were outline in the April 2015 CFLRP boundary expansion for acres to be treated. The acres treated reported into WIT are regionally accepted as accomplished and can be used in comparison to the goals defined during the expansion in order to track progress.

Project-scale scoring

From the beginning, CFLRP intended to shift towards desired conditions at the landscape-scale. As the disturbances and processes of interest occur at a landscape-scale, we need a landscape-scale assessment. It's a challenge to look at the impacts at that scale, given the scale itself as well as time delays (e.g. it takes more time to shift outcomes at landscape-scale than project-scale). While landscape-scale is the focus, project-scale assessments allow projects to bring in their monitoring data and look at treatment outcomes.

Each management action funded through CFLRP will have its own project-level objectives that are designed to contribute to achieving desired conditions at larger scales. Project-scale scoring should reflect how well the results of an individual management activity met the objectives for that project. Individual projects may not meet every desired condition of the CFLRP project. Project-scale scoring is conducted by the multi-party monitoring group following completed management activities.

An individual activity might not need to lead to a fully restored acre, but if it sets the landscape up for the next treatment it may still get a good rating. For example if a successful thinning doesn't restore a fire regime, but it sets up landscape for subsequent burns that might, it could still receive a "Green" rating. There may be many reasons for not scoring a "Green," including ecological and sociological considerations beyond the scope of the CFLRP project as well as recognition of unanticipated barriers or challenges. Note that scoring a "Yellow" or "Red" does not necessarily mean that work was not accomplished.

If you need to summarize scores across different desired condition targets, please refer to Guidance Document for additional instruction.

- **Green** = Expected progress is being made towards desired conditions across 75% or more of our CFLRP project areas.
- **Yellow** = Expected progress is being made towards desired conditions across 26% - 74% of our CFLRP project areas.
- **Red** = Expected progress is being made towards desired conditions across 25% or less of our CFLRP project areas.

Ecological Indicator	Green, Yellow, or Red score and % of the CFLRP project areas resulting in measurable progress as defined above	Are you achieving your CFLRP objectives? Yes or No? If "no", briefly describe why in the box below and use the narrative section as needed.
Watershed Condition		

Please briefly describe how you calculated your score.

Same as landscape scale.

Scoring for National Reporting

Landscape-scale scoring

Few (if any) CFLRP-funded Landscapes propose to meet every proposed desired condition on every acre or achieve landscape-scale objectives through the mechanical treatment of every acre within their landscape boundary. Rather, multiple projects with multiple objectives (fire risk reduction, wildlife habitat improvement, stream restoration, etc.) should facilitate meeting these broader objectives. Scoring at the landscape-scale reflects the degree to which individual Landscapes are moving towards Desired Conditions at broader spatial extent. Landscape-scale scoring is conducted by the multi - party monitoring group at each Landscape.

"Expected progress" will be defined using 10-year benchmarks for FY 2010 projects and 8-year benchmarks for FY 2012 projects for each desired condition based on a percentage of the lifetime outcome specified for the landscape in each proposal. There may be many reasons for not scoring a "Green," including ecological and sociological considerations beyond the scope of the CFLRP project as well as recognition of unanticipated barriers or challenges. Note that scoring a "Yellow" or "Red" does not necessarily mean that work was not accomplished.

If you need to summarize scores across different desired condition targets, please refer to Guidance Document for additional instruction.

- **Green** = Expected progress is being made towards desired conditions across [ ] % of our CFLRP landscape area.
- **Yellow** = Expected progress is being made towards desired conditions across [ ] % of our CFLRP landscape area.
- **Red** = Expected progress is being made towards desired conditions across [ ] % of our CFLRP landscape area.

Ecological Indicator	Green, Yellow, or Red score and % of the landscape across which progress is being made towards desired conditions	Are you achieving your CFLRP objectives? Yes or No? If "no", briefly describe why in the box below and use the narrative section as needed.
Watershed Condition	Yellow at 37% of target	The only reason we are not Green is because we have not properly integrate

Please briefly describe how you decided on the percentage thresholds used above for the scoring categories and how you calculated your score.

Gathered data from the WIT database from 2012-2019 for acres of Soil and Water Enhanced. Summed these values and compared them to 40% of the entire CFLRP area given we are 80% through CFLRP time line.

2019 CFLRP Ecological Indicator Progress Report

Project Name: Southern Blues Restoration Coalition State: Oregon

FISH & WILDLIFE HABITAT

Narrative - *Note: All boxes in this template will scroll, so you have as much space as you need.*

☐ If wildlife habitat is not part of your CFLRP proposal and landscape restoration strategy, please let us know by checking this box.
☐ If fish habitat is not part of your CFLRP proposal and landscape restoration strategy, please let us know by checking this box.

1. Did you make any changes to your desired condition(s) for fish & wildlife habitat as compared to the 2014 Ecological Indicator Report? Please briefly describe: **Yes** ☐ **No** ☑

In April of 2015, the Southern Blues Restoration Coalition (SBRC) project was approved for an expansion that increased the National Forest lands within the project from 543,963 acres to 877,288 acres. With the expansion we expect to treat approximately 265 miles of the National Forest streams and 26% of terrestrial habitat enhanced by year 10 in an effort to improve fish and wildlife habitat.

2. Did you make any changes to your monitoring methodologies for fish & wildlife habitat as compared to the 2014 Ecological Indicator Report? Please briefly describe: **Yes** ☐ **No** ☑

3. Did you use any new or updated baseline data for evaluating your fish & wildlife habitat progress for the purposes of this report? Please briefly describe: **Yes** ☑ **No** ☐

Utilized data from WIT from 2012-2019 in comparison to goals developed during the CFLRP expansion in 2015 in order to calculate progress towards desired conditions.

4. Did your projects experience any unanticipated developments that positively or negatively affected expected progress towards your desired conditions for fish and wildlife habitat? (e.g. wildfire in the project area, litigation outcome, change in collaborative participation, etc.)

None

5. What were the most difficult barriers or challenges you experienced in progressing towards your desired conditions for fish and wildlife habitat? If you adapted to address these challenges please provide a brief description of how.

Lack of funding for sampling efforts.

6. Did you include the effects of treatments on areas adjacent to the active treatment area? Yes ☐ No ☑

If yes, please briefly describe your methodology for including these adjacent acres, and describe any work conducted across land ownership in support of fish & wildlife habitat.

Desired Conditions

*In this report, the term "**desired conditions**" refers to landscape and resource conditions (as defined collaboratively by stakeholders and land managers) that you are seeking to achieve and maintain for your CFLRP landscape over the next 10+ years. Desired conditions are outcome-driven not output-driven, and should link to your project's CFLRP proposal while being measurable. (Note: The term "desired condition" is used somewhat differently in the Forest Service's Land Management Planning Process. In that context, it is not time bound, and often represents long-term social, economic and ecological goals, while the term "objective" is used to represent specific, measurable and time-bound benchmarks to be achieved while working toward desired conditions in a forest plan area.) In this report, the term "**landscape**" refers to the landscape identified in your CFRLP project proposal or in subsequently-approved proposal edits. See cover page for links to guidance.*

7. Project-scale Desired Conditions Target for Fish & Wildlife Habitat:

[ ] % change (relative to the desired condition) occurs across [ ] % of the project areas by [ ]

[ ] % change (relative to the desired condition) occurs across [ ] % of the project areas by [ ] *(OPTIONAL. Use if separate, additional target is needed for aquatic habitat)*

Please include 1-5 *quantifiable* desired condition statements upon which the above target is based:

Same as landscape scale

Example: 50 miles of inaccessible salmon spawning habitat is made accessible by removing one dam.
Example: Stands have a basal area of 50-80 square feet/acre, which is ideal for red-cockaded woodpecker.
Example: Stands between 5,000-8,000 ft elevation are dominated by ponderosa pine, with 5-10 trees per group, and openings 0.25- 1 acre.

8. Landscape-scale Desired Conditions Target for Fish & Wildlife Habitat:

[100] % change (relative to the desired condition) occurs across [26] % of the landscape area by [09/30/2021]

[ ] % change (relative to the desired condition) occurs across [ ] % of the landscape area by [ ] *(OPTIONAL. Use if separate, additional target is needed for aquatic habitat)*

Please include 1-5 *quantifiable* desired condition statements upon which the above target is based:

The above percentages are for wildlife only.
Fish Habitat
-265 miles of stream restored or enhanced- This metric is not suited for the percentages listed above as a number of stream miles within the

Example: Slash pine is replaced by longleaf pine ecosystem across 5,000 acres of our CFLRP landscape.
Example: Coniferous forests across the CFLRP landscape have an average canopy cover at or above 50%.
Example: All identified inventoried aquatic organism passages at road/stream crossings that were found to be a barrier (10) are accessible for identified aquatic species at all life stages.

Habitat

9. Please select the categories of the broader goals related to fish & wildlife habitat that you are trying to achieve through your quantifiable desired condition(s):

- ☑ Open forest habitat (e.g. wider tree spacing, less mid-story vegetation)
- ☑ Grass/forb/shrub abundance and/or diversity (e.g. native or desired)
- ☑ Wildlife security (e.g. reduced disturbance and/or mortality to fish or wildlife)
- ☑ Rare or sensitive ecosystem protection and/or restoration (e.g. longleaf, bluestem, riparian, meadow, aspen or wetland habitat)
- ☑ Horizontal Complexity (e.g. "mosaic"/diversity of habitat types, patch sizes, and/or patterns)
- ☐ Vertical complexity (e.g. number of canopy layers)
- ☑ Forest structures (e.g. snags, downed wood, den trees)
- ☐ Mast-producing plant abundance and/or diversity (e.g. acorns, nuts, fruits, or berries eaten by wildlife)
- ☑ Sustainable flow of habitat age-classes through time (e.g. planning the proportion of early-, mid-, and late-seral stands)
- ☑ Habitat connectivity/availability (e.g. increased access to or availability of desired habitat)
- ☑ Aquatic habitat connectivity (e.g. culverts are passable to all aquatic organisms, no dams, stream diversions)
- ☑ Aquatic habitat complexity (e.g. downed wood, pools, riffles, etc)
- ☐ Aquatic sedimentation levels (e.g. suspended sediment or fine sediment in spawning gravels)
- ☐ Other. Please describe:

10. Please state the evaluation metric(s) you are using to monitor progress towards your desired conditions for fish & wildlife habitat for this report. Note: This evaluation metric is something you are measuring or counting to monitor habitat change. It has a unit of measurement attached to it.

Number of miles of stream restored combined with acres of terrestrial habitat improved recorded in the Watershed Improvement Tracking database compared to goals outlined in April of 2015 with CFLRP area expansion.

Examples of habitat evaluation metrcs: basal area in square feet per acre (for tree density), number of trees per acre (for tree density), quadratic mean diameter in inches (for tree sizes), litter and duff depths in centimeters (for fire hazard), percent canopy cover (for openness), percent ground cover (for forage), seedling survival per acre per year (for reforestation), number of woody debris pieces in a specific size class per stream mile (for fish habitat), grass dry weight clippings used to calculate grass pounds per acre (for forage abundance)

Populations

11. Please select the categories of broader goals related to fish & wildlife populations that you are trying to achieve through your quantifiable desired condition(s). Then list the specific species of interest related to each category you select.

- ☑ Maintain abundance/density: Mid-Columbia River Steelhead
- ☐ Increase abundance/density:
- ☐ Decrease abundance/density:
- ☐ Maintain native species diversity:
- ☐ Increase native species diversity:
- ☐ Translocation/reintroduction:
- ☐ Optimal sustained yield of game species:
- ☑ Ecosystem function/food webs: Mid-Columbia River Steelhead
- ☑ Spatial extent of population: Mid-Columbia River Steelhead
- ☐ Other. Please describe:

12. If relevant for your CFLRP project, please state the evaluation metric(s) you are using to monitor progress towards your desired conditions for fish & wildlife populations. Note: This evaluation metric is something you are measuring or counting to monitor population change. It has a unit of measurement attached to it.

Fish Presence/Absence surveys conducted according to the Region 6 Level 2 Stream Inventory Protocol

Examples of population evaluation metrics: number of wildlife encounter events per unit area via point counts or remote cameras (for wildlife usage), number of pellet groups along transects used to calculate animal density per unit area (for mammal usage), presence/absence of a plant community-associated wildlife species in the project area, presence of aquatic species as indicated by eDNA

☐ Please check this box if you are not evaluating fish & wildlife populations.

Data and Methodology

13. Select the type(s) of monitoring you used to assess Project-scale (P) and Landscape-scale (L) progress towards fish & wildlife habitat desired conditions for this report. Select all that apply.

P	L	
☑	☑	**Baseline Data Collection** (i.e. was data collected prior to treatment to be used for later comparison?)
☑	☑	**Accomplishment Reporting** (i.e. was progress tracked using acres and miles reported?)
☐	☐	**Implementation Monitoring** (i.e. were the treatments implemented as prescribed?)
☐	☐	**Effectiveness Monitoring Pilot Study** (i.e. was a trial run conducted to assess considerations of crafting an effectiveness monitoring plan?)
☐	☐	**Effectiveness Monitoring** (i.e. were treatments effective at meeting the stated objectives?)
☐	☐	**Ecological Impacts Monitoring** (i.e. were there any unforeseen ecological consequences that could compromise treatment success?)
☐	☐	**Other.** Please describe:

14. Select the methodologies used to assess Project-scale (P) and Landscape-scale (L) progress towards fish & wildlife habitat desired conditions for this report. Select all that apply and provide a brief description for each:

P	L	
☐	☐	Common Stand Exams (USFS procedures):
☐	☐	Understory vegetation plots or transects:
☑	☑	Fish or Wildlife occupancy/use surveys:
☑	☑	Stream surveys:
☐	☐	Remote motion-capture cameras:
☐	☐	Ground-based photo points or photo plots:
☐	☐	Aerial surveys, aerial photography, or remote sensing:
☑	☑	Treatments implemented (e.g. acres or miles accomplished):
☐	☐	Modeling (include type and whether ground-truthed):
☐	☐	GIS analysis:
☐	☐	Other:

15. Where is the the data that is being used for monitoring Project-scale (P) and Landscape-scale (L) progress toward fish & wildlife habitat desired conditions being stored? Select the database categories that apply and provide a description of the specific datasets being used. Include links if available:

P	L	
☐	☐	GIS database:
☐	☐	County database:
☐	☐	State database:
☐	☐	Tribal database:
☐	☐	Citizen Science database:
☐	☐	FSVeg:
☐	☑	NRIS: NRM Aqs Database
☐	☐	Other USFS database of record: *please select performance measure from the table below*
☐	☐	Other:

Performance Measure Shorthand	Description	Database	P	L
BIO-NRG	Green tons from small diameter and low value trees removed from NFS lands and made available for bio-energy production	TIM	☐	☐
FOR-VEG-EST	Acres of forest vegetation established	FACTS	☐	☐
FOR-VEG-IMP	Acres of forestland vegetation improved	FACTS	☐	☐
FP-FUELS-NON-WUI	Acres of hazardous fuels treated outside the wildland/urban interface (WUI) to reduce the risk of catastrophic wildand fire	FACTS	☐	☐
FP-FUELS-WUI	Acres wildland/urban interface (WUI) high-priority hazardous fuels treated to reduce the risk of catastrophic wildland fire	FACTS	☐	☐
HBT-ENH-LAK	Acres of lake habitat restored or enhanced	WIT	☐	☐
HBT-ENH-STRM	Miles of stream habitat restored or enhanced	WIT	☑	☑
HBT-ENH-TERR	Acres of terrestrial habitat restored or enhanced	WIT	☑	☑
INVPLT-NXWD-FED-AC	Highest priority acres treated annually for noxious weeds and invasive plants on NFS lands	FACTS	☐	☐
INVSPE-TERR-FED-AC	Highest priority acres treated for invasive terrestrial & aquatic species on NFS lands	FACTS	☐	☐
RD-DECOM-NON-SYS	Miles of road decommissioned (non-system)	WIT	☐	☐
RD-DECOM-SYS	Miles of road decommissioned (system)	ROADS	☐	☐
RD-HC-IMP	Miles of high clearance system roads improved	ROADS	☐	☐

Performance Measure Shorthand	Description	Database	P	L
RD-HC-MAIN	Miles of high clearance system roads receiving maintenance	ROADS	☐	☐
RD-PC-IMP	Miles of road reconstruction and capital improvement	ROADS	☐	☐
RD-PC-MAIN	Miles of system roads receiving maintenance	ROADS	☐	☐
RG-VEG-IMP	Acres of rangeland vegetation improved	FACTS	☐	☐
S&W-RSRC-IMP	Acres of water or soil resources protected, maintained or improved to achieve desired watershed conditions	WIT	☐	☐
SP-NATIVE-FED-AC	Number of priority acres treated annually for native pests on Federal lands	FAD	☐	☐
STRM-CROS-MITG-STD	Number of stream crossings constructed or reconstructed to provide for aquatic organism passage	WIT	☐	☐
TL-IMP-STD	Miles of system trail improved	TRAILS	☐	☐
TL-MAINT-STD	Miles of system trail maintained	TRAILS	☐	☐
TMBR-SALES-TRT-AC	Acres of forestlands treated using timber sales	FACTS	☐	☐
TMBR-TRT	Acres of forestlands treated to achieve healthier conditions	FACTS	☐	☐
Other:			☐	☐
Other:			☐	☐

16. Please describe why the datasets or performance measures you selected in Question 15 above are <u>appropriate for assessing progress</u> towards your fish & wildlife habitat desired condition(s).

WIT provides the acres of terrestrial habitat restored or enhanced and miles of stream restored or enhanced annually. Goals were outline in the April 2015 CFLRP boundary expansion for acres and miles to be treated. The acres and miles treated reported into WIT are regionally accepted as accomplished and can be used in comparison to the goals defined during the expansion in order to track progress.

Project-scale scoring

From the beginning, CFLRP intended to shift towards desired conditions at the landscape-scale. As the disturbances and processes of interest occur at a landscape-scale, we need a landscape-scale assessment. It's a challenge to look at the impacts at that scale, given the scale itself as well as time delays (e.g. it takes more time to shift outcomes at landscape-scale than project-scale). While landscape-scale is the focus, project-scale assessments allow projects to bring in their monitoring data and look at treatment outcomes.

Each management action funded through CFLRP will have its own project-level objectives that are designed to contribute to achieving desired conditions at larger scales. Project-scale scoring should reflect how well the results of an individual management activity met the objectives for that project. Individual projects may not meet every desired condition of the CFLRP project. Project-scale scoring is conducted by the multi-party monitoring group following completed management activities.

An individual activity might not need to lead to a fully restored acre, but if it sets the landscape up for the next treatment it may still get a good rating. For example if a successful thinning doesn't restore a fire regime, but it sets up landscape for subsequent burns that might, it could still receive a "Green" rating. There may be many reasons for not scoring a "Green," including ecological and sociological considerations beyond the scope of the CFLRP project as well as recognition of unanticipated barriers or challenges. Note that scoring a "Yellow" or "Red" does not necessarily mean that work was not accomplished.

If you need to summarize scores across different desired condition targets, please refer to Guidance Document for additional instruction.

- **Green** = Expected progress is being made towards desired conditions across 75% or more of our CFLRP project areas.
- **Yellow** = Expected progress is being made towards desired conditions across 26% - 74% of our CFLRP project areas.
- **Red** = Expected progress is being made towards desired conditions across 25% or less of our CFLRP project areas.

Ecological Indicator	Green, Yellow, or Red score and % of the CFLRP project areas resulting in measurable progress as defined above	Are you achieving your CFLRP objectives? Yes or No? If "no", briefly describe why in the box below and use the narrative section as needed.
Fish and Wildlife Habitat		

Please briefly describe how you calculated your score.

Same as landscape

Scoring for National Reporting

Landscape-scale scoring

Few (if any) CFLRP-funded Landscapes propose to meet every proposed desired condition on every acre or achieve landscape-scale objectives through the mechanical treatment of every acre within their landscape boundary. Rather, multiple projects with multiple objectives (fire risk reduction, wildlife habitat improvement, stream restoration, etc.) should facilitate meeting these broader objectives. Scoring at the landscape-scale reflects the degree to which individual Landscapes are moving towards Desired Conditions at broader spatial extent. Landscape-scale scoring is conducted by the multi -party monitoring group at each Landscape.

"Expected progress" will be defined using 10-year benchmarks for FY 2010 projects and 8-year benchmarks for FY 2012 projects for each desired condition based on a percentage of the lifetime outcome specified for the landscape in each proposal. There may be many reasons for not scoring a "Green," including ecological and sociological considerations beyond the scope of the CFLRP project as well as recognition of unanticipated barriers or challenges. Note that scoring a "Yellow" or "Red" does not necessarily mean that work was not accomplished.

If you need to summarize scores across different desired condition targets, please refer to Guidance Document for additional instruction.

- **Green** = Expected progress is being made towards desired conditions across [66] % of our CFLRP landscape area.
- **Yellow** = Expected progress is being made towards desired conditions across [33] % of our CFLRP landscape area.
- **Red** = Expected progress is being made towards desired conditions across [0] % of our CFLRP landscape area.

Ecological Indicator	Green, Yellow, or Red score and % of the landscape across which progress is being made towards desired conditions	Are you achieving your CFLRP objectives? Yes or No? If "no", briefly describe why in the box below and use the narrative section as needed.
Fish and Wildlife Habitat	Green - 103% for Wildlife, 128% for Fish	Yes

Please briefly describe how you decided on the percentage thresholds used above for the scoring categories and how you calculated your score.

Pulled data from the WIT database from 2012-2019 for acres of Terrestrial Habitat Enhanced and stream mile restored. Summed these values and compared them to 80% of the targets set forth by the 2015 CFLRP expansion given we are 80% through CFLRP time line.

2019 CFLRP Ecological Indicator Progress Report

Project Name: Southern Blues Restoration Coalition | State: Oregon

INVASIVE SPECIES

Narrative - *Note: All boxes in this template will scroll, so you have as much space as you need*

☐ If invasive species is not part of your CFLRP proposal and landscape restoration strategy, please let us know by checking this box.

1. Did you make any changes to your desired condition(s) for invasive species as compared to the 2014 Ecological Indicator Report? Please briefly describe: **Yes** ☑ **No** ☐

Desired conditions for invasive species in the 2014 report identified having "no net increase in invasive plant infested acreage". This is still a desired condition, but this assumed that all infestations were documented at the beginning of CFLRP implementation, that no additional infestations would occur, and that no additional surveys would be conducted – these were invalid assumptions and made it difficult to determine if we are meeting this desired conditions in this way. Since 2014, we have mapped more than 4,000 infestations covering approximately 12,500 total acres. Because of this, we have changed the methodology that we use to monitor whether or not we are achieving

2. Did you make any changes to your monitoring methodologies for invasive species as compared to the 2014 Ecological Indicator Report? Please briefly describe: **Yes** ☐ **No** ☐

We do not use the same monitoring methodology for desired condition in the same way we did in 2014. As stated above, the 2014 methodology falsely assumed that all infestations were documented at the time of CFLRP implementation and that no additional infestations would occur. Since 2014, we have mapped more than 4,000 infestations of priority noxious weeds, covering approximately 12,500 total acres infested in the CFLRP project area. The USFS NRM database isn't conducive to accurate long term infestation tracking, so it's very unlikely that 12,500 acres of infestation currently exist within the CFLRP boundary. A better measure to track treatment performance over time, in addition to treatment

3. Did you use any new or updated baseline data for evaluating your invasive species progress for the purposes of this report? Please briefly describe: **Yes** ☐ **No** ☐

Use of the herbicide use factor (explained above) provides a more accurate picture of how invasive infestations are better controlled over time, even though the infestation boundary or number of infestations may not change. This metric also accounts for the facts that (1) weed seedbanks can last for a dozen years or more, and even an treatment efficacy of 95% or higher allows for some plants and seeds to escape control, and thus remain on-site to rapidly re-invade over time without follow up treatment; and (2) some herbicides take a season to fully show efficacy. For example, aminopyralid effectiveness may not be apparent until the year following treatment, after the herbicide has been translocated to the

4. Did your projects experience any unanticipated developments that positively or negatively affected expected progress towards your desired conditions for invasive species? (e.g. wildfire in the project area, litigation outcome, change in collaborative participation, etc.)

Yes, although not entirely unanticipated, we completed our Invasive Plant Treatment Final EIS, resolved objections, and signed the ROD in 2015. This positively and significantly affected our progress toward meeting desired conditions by enabling the Forest to utilize the full suite of integrated past management techniques, including herbicide, biological controls, cultural, mechanical, and manual techniques. Prior to this, the Forest was enjoined from using herbicide and biological agents for over 20 years. This made effective management of invasive plant infestations an expensive and cumbersome activity, with limited success toward meeting our desired conditions. Since 2015 we have been able to utilize herbicide as our primary and most effective means of eradicating and controlling noxious weed infestations.

5. What were the most difficult barriers or challenges you experienced in progressing towards your desired conditions for invasive species? If you adapted to address these challenges please provide a brief description of how.

As described above, the most difficult barrier has been overcome by completing our Invasive Plant Treatment EIS and ROD, which authorized the use of herbicides within the CFLRP landscape and throughout the rest of the Forest.

Desired Conditions

*In this report, the term "**desired conditions**" refers to landscape and resource conditions (as defined collaboratively by stakeholders and land managers) that you are seeking to achieve and maintain for your CFLRP landscape over the next 10+ years. Desired conditions are outcome-driven not output-driven, and should link to your project's CFLRP proposal while being measurable. (Note: The term "desired condition" is used somewhat differently in the Forest Service's Land Management Planning Process. In that context, it is not time bound, and often represents long-term social, economic and ecological goals, while the term "objective" is used to represent specific, measurable and time-bound benchmarks to be achieved while working toward desired conditions in a forest plan area.) In this report, the term "**landscape**" refers to the landscape identified in your CFRLP project proposal or in subsequently-approved proposal edits. See cover page for links to guidance.*

6. Project-scale Desired Conditions Target for Invasive Species

75	% change (relative to the desired condition) occurs across	10	% of the project areas by	12/31/2024
	% change (relative to the desired condition) occurs across		% of the project areas by	

Please include 1-5 *quantifiable* desired condition statements upon which the above target is based:

1. Over the next 5 years, at a subset of project sites with known weed infestations (over about 10% by area of the known infestation areas), noxious weed cover or area of infestation is decreased by 75%.

Example: Cogongrass is reduced to less than 25% cover.
Example: Using the prevention protocols on all projects, no new invasive species infestations are established.

7. Landscape-scale Desired Conditions Target for Invasive Species:

≤ 0	% change (relative to the desired condition) occurs across	95	% of the landscape area by	12/31/2029
	% change (relative to the desired condition) occurs across		% of the landscape area by	

Please include 1-5 *quantifiable* desired condition statements upon which the above target is based:

1. Maintain the herbicide use factor for target noxious weeds, calculated in 2019 (28.1 lbs active ingredient across 5,603 treatment acres = 0.005), at 0.01 or lower through 2024, indicating that most of the large, dense noxious weed infestations have been documented and treated so that herbicide use per acre over time does not increase.

Example: The increase in coverage of Leafy Spurge and Rush Skeletonweed is prevented on 500 acres of sensitive botanical habitat within our CFLRP landscape.
Example: All known populations of Yellow Star Thistle are contained along 100 miles of FS roads and trails within our CFLRP landscape.
Example: The presence of feral swine is surveyed and mapped on 500 acres within our CFLRP landscape.

8. Please select the categories of the broader goals related to invasive species that you are trying to achieve through your quantifiable desired condition(s):

- ☑ Inventory and Mapping
- ☐ Risk Assessment
- ☑ Prevention
- ☑ Maintenance at current levels
- ☐ Containment below thresholds
- ☑ Reduction
- ☑ Eradication
- ☐ Increased resilience. Recognizing *invasive species are not constrained to disturbed areas*, please describe your definition of resilience in an invasive species context:
- ☐ Other. Please describe:

9. For each invasive species you have addressed within your CFRLP landscape, please list the action(s)[1] you have taken to work towards your invasive species desired conditions, the acres and/or miles you have accomplished, and the efficacy of each action*:*
(All of the following data is reported in FACTS.)

Target Invasive Species	Action Taken	Land Ownership	Acres	Efficacy (%)
18+ target noxious weeds	herbicide application and other treatments	USFS/State/Coun	6,431	71
18+ target noxious weeds	biological control release	USFS	45	NA
18+ target noxious weeds	mechanical removal	USFS	200	50
18+ target noxious weeds	inventory and mapping	USFS/State/Coun	12,500	NA

[1] Actions taken to address an invasive species might include inventory & mapping, hand removal, mechanical removal, release of a biological control agent (an organism that kills the target species), ground-based herbicide application, aerial herbicide application, tarping, grazing, preventative weed wash stations, trapping invasive animals, etc.

10. Please briefly describe the specific negative impacts each of your target invasive species causes that you are trying to avoid.
These impacts can be environmental, economic, cultural, or human/animal health-related.

All of our 18+ target noxious invasive weeds outcompete native annual plant communities and alter the ecology of our forest, in particular knapweeds, thistles, toadflaxes, and sulfur cinquefoil. They can make it difficult and costly to restore disturbed areas. Most of these weeds are unpalatable and can reduce livestock forage. Wildlife will also avoid areas with large infestations of noxious weeds. Many of our target noxious weeds can reduce recreational experiences--for example, houndstongue seeds can be produced so densely and stick to clothing and animals so

Data and Methodology

11. Select the methodologies used to assess Project-scale (P) and Landscape-scale (L) progress towards invasive species desired conditions for this report. Select all that apply and provide a brief description of each:

P	L	
☐	☐	Aerial surveys/inventories/mapping:
☑	☑	Ground surveys/inventories/mapping: using TESP/IS mobile applications and paper data forms
☐	☐	Environmental sampling (wood, soil, water, infected tissue, etc.):
☑	☑	Observations of individuals: employees submit sightings to invasives staff who confirm species and location
☐	☐	Observations of damage:
☐	☐	Observation of tracks, scat, nests, etc.:
☐	☐	Trap samples:
☐	☐	eDNA:
☐	☐	Other:

12. Where is the the data that is being used for monitoring Project-scale (P) and Landscape-scale (L) progress toward invasive species desired conditions being stored? Select the databases categories that apply and provide a description of the specific datasets being used. Include links if available:

P	L	
☐	☐	GIS database:
☐	☐	County database:
☐	☐	State database:
☐	☐	Tribal database:
☑	☑	Citizen Science database: biocontrol location data (not releases) are recorded using ibiocontrol app
☐	☐	Forest Inventory and Analysis (FIA) database:
☑	☑	USFS database of record (FACTS - *select performance measures*):

☑ INVPLT-NXWD-FED-AC Highest priority acres treated for noxious weeds and invasive pests ☑ INVSPE-TERR-FED-AC Highest priority acres treated for invasive terrestrial & aquatic species

☐ ☐ Other:

Project-scale scoring

From the beginning, CFLRP intended to shift towards desired conditions at the landscape-scale. As the disturbances and processes of interest occur at a landscape-scale, we need a landscape-scale assessment. It's a challenge to look at the impacts at that scale, given the scale itself as well as time delays (e.g. it takes more time to shift outcomes at landscape-scale than project-scale). While landscape-scale is the focus, project-scale assessments allow projects to bring in their monitoring data and look at treatment outcomes.

Each management action funded through CFLRP will have its own project-level objectives that are designed to contribute to achieving desired conditions at larger scales. Project-scale scoring should reflect how well the results of an individual management activity met the objectives for that project. Individual projects may not meet every desired condition of the CFLRP project. Project-scale scoring is conducted by the multi-party monitoring group following completed management activities.

An individual activity might not need to lead to a fully restored acre, but if it sets the landscape up for the next treatment it may still get a good rating. For example if a successful thinning doesn't restore a fire regime, but it sets up landscape for subsequent burns that might, it could still receive a "Green" rating. There may be many reasons for not scoring a "Green," including ecological and sociological considerations beyond the scope of the CFLRP project as well as recognition of unanticipated barriers or challenges. Note that scoring a "Yellow" or "Red" does not necessarily mean that work was not accomplished.

If you need to summarize scores across different desired condition targets, please refer to Guidance Document for additional instruction.

- **Green** = Expected progress is being made towards desired conditions across 75% or more of our CFLRP project areas.
- **Yellow** = Expected progress is being made towards desired conditions across 26% - 74% of our CFLRP project areas.
- **Red** = Expected progress is being made towards desired conditions across 25% or less of our CFLRP project areas.

Ecological Indicator	Green, Yellow, or Red score and % of the CFLRP project areas resulting in measurable progress as defined above	Are you achieving your CFLRP objectives? Yes or No? If "no", briefly describe why in the box below and use the narrative section as needed.
Invasive Species	Green, 100%	Yes

Please briefly describe how you calculated your score.

Based on acres treated in 2019 alone (3,517 acres) times efficiency (71%), we achieved 2,497 acres of weed control in 2019, which exceeds the desired condition target of 1,250 acres across the life of the CFLRP. This value is applicable at both the project and landscape level. Additionally, through the use of our "herbicide use factor", we have demonstrated that we have a 75% reduction in the amount of herbicide we are using per infested acre - indirectly showing that we not only

Scoring for National Reporting

Landscape-scale scoring

Few (if any) CFLRP-funded Landscapes propose to meet every proposed desired condition on every acre or achieve landscape-scale objectives through the mechanical treatment of every acre within their landscape boundary. Rather, multiple projects with multiple objectives (fire risk reduction, wildlife habitat improvement, stream restoration, etc.) should facilitate meeting these broader objectives. Scoring at the landscape-scale reflects the degree to which individual Landscapes are moving towards Desired Conditions at broader spatial extent. Landscape-scale scoring is conducted by the multi -party monitoring group at each Landscape.

"Expected progress" will be defined using 10-year benchmarks for FY 2010 projects and 8-year benchmarks for FY 2012 projects for each desired condition based on a percentage of the lifetime outcome specified for the landscape in each proposal. There may be many reasons for not scoring a "Green," including ecological and sociological considerations beyond the scope of the CFLRP project as well as recognition of unanticipated barriers or challenges. Note that scoring a "Yellow" or "Red" does not necessarily mean that work was not accomplished.

If you need to summarize scores across different desired condition targets, please refer to Guidance Document for additional instruction.

- **Green** = Expected progress is being made towards desired conditions across [66] % of our CFLRP landscape area.
- **Yellow** = Expected progress is being made towards desired conditions across [33] % of our CFLRP landscape area.
- **Red** = Expected progress is being made towards desired conditions across [0] % of our CFLRP landscape area.

Ecological Indicator	Green, Yellow, or Red score and % of the landscape across which progress is being made towards desired conditions	Are you achieving your CFLRP objectives? Yes or No? If "no", briefly describe why in the box below and use the narrative section as needed.
Invasive Species	Green, 100%	Yes

Please briefly describe how you decided on the percentage thresholds used above for the scoring categories and how you calculated your score.

see above under project-level scoring

Monitoring References and Resources

1. Briefly describe any key lessons learned about integration across these 4 ecological sub-indicators.
For example, if you planned fuels reduction treatments (Fire Regime) strategically around a Priority Watershed (Watershed Condition).

We recognize that most of the treatments that improve Fire Regime Condition also improve Watershed Condition and Wildlife Habitat.

2. Briefly describe the roles of the parties involved in setting the desired conditions, and collecting, assessing, and sharing the data used in this report:

Both collaborative groups were very involved,in identifying the desired conditions for all of the ecological indicators. They continue to help us adapt, using current science and monitoring, to develop and modify our treatments to meet those desired conditions.

3. Please acknowledge the people who assisted with completing this 2019 CFLRP Ecological Indicator Report:

Ryan Monzulla (Forest Stream Survey and Monitoring Coord), Jessi Brunson (Forest Invasive Weed Specialist), Dr. Joe Rausch (Forest Botanist, Ecologist), Amy Unthank (NR Staff Officer), Sarah Bush (Forest Fuels Specialist) James Johnston (BMFP/OSU)

4. Please provide links to your past CFLRP monitoring reports developed by the USFS, partners, etc.:

http://www.bluemountainsforestpartners.org/work/multiparty-monitoring/

Examples: Uncompahgre CFLRP Monitoring of Forest Spatial Patterns; Four Forest Restoration Initiative Bird Survey Report 2015

5. Please provide links to your CFLRP monitoring plans and any approved revisions (or include as an attachment):

http://www.bluemountainsforestpartners.org/work/multiparty-monitoring/

Examples: Colorado Front Range Multi-Party Monitoring Plan; Dinkey Landscape Ecological Monitoring Plan

6. Please provide links to technical reports or other literature utilized in determining and assessing the desired conditions used in this report:

http://www.bluemountainsforestpartners.org/work/multiparty-monitoring/

Examples: Historical Forest Attributes of the Western Blue Mountains of Oregon; Restoring Ponderosa Pine Forests of the Colorado Front Range