

CFLR Ecological Indicator Progress Report

Project Name: Grandfather Restoration (019)

State: North Carolina

Initial Landscape-scale Desired Conditions for the life of the project as defined by the Collaborative (Fill this in)¹

The “landscape” should be the landscape identified in project proposals or subsequently approved proposal edits. See page three of the original guidance for further information.

- Landscape area includes all FS lands within the Grandfather Restoration Project Boundary, 192,000 acres

Desired Conditions Target for **Fire Regime Restoration**: 25% change (relative to the desired condition) occurs across 19% of the landscape area by the end of 2020.

- Desired condition statement (10yr): Fire-adapted landscapes transition from shrub-dominant understory fuel model to a grass/forb dominant understory fuel model.
- 36,795 acres treated with prescribed fire for 2011-2020 identified in proposal, totaling 19% of the landscape (36,795/192,000)

Desired Conditions Target for **Fish and Wildlife Habitat Condition**: 25% change (relative to the desired condition) occurs across 13% of the landscape area by the end of 2020.

- Desired condition statement (10yr): The number and diversity of wildlife species increases with management actions.
- 25,626 acres habitat restored for 2011-2020 identified in proposal, totaling 13% of the landscape (25,626/192,000)

Desired Conditions Target for **Watershed Condition**: 25% change (relative to the desired condition) occurs across 1% of the landscape area by the end of 2020.

- Desired condition statement (10yr): BMPs are implemented and effective in controlling pollution (primarily sediment) during timber sale and road construction and maintenance activities.
- 1,850 acres of silvicultural restoration and timber stand improvement for 2011-2020 identified in proposal, totaling 1% of the landscape (1,850/192,000)

¹ Desired condition targets should be written in the above format. Desired conditions that feed each “desired condition target” may vary widely and may not apply to every project in the landscape. Keep in mind the above “desired conditions targets” and desired conditions are outcomes, not out puts. Each desired condition target should be over the same landscape. For example, if the Fire Regime Restoration desired condition target is over all of the National Forest System lands within the landscape, the other three desired conditions target should be as well. If the Fire Regime Restoration desired condition target is over all ownerships in the landscape, the others should be as well.

Desired Conditions Target for **Landscape Scale Invasive Species Severity**: 1% of the CFLR landscape area was restored by reducing invasive species severity (preventing, controlling, or eradicating targeted invasive species) to meet desired conditions by the end of 2020.

- Desired condition statement (10yr): The number and size of invasive species infestations decrease by 50% within priority landscapes.
- 1,931 acres treated for NNIS for 2011-2020 identified in proposal, totaling 1% of the landscape (1,931/192,000)

Scoring for National Reporting

Landscape-scale scoring

Few (if any) CFLR-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 this level 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.

- Good = Expected progress is being made towards Desired Conditions across 75-100% of the CFLR landscape area.
- Fair = Expected progress is being made towards Desired Conditions across 26-74% of the CFLR landscape area
- Poor = Expected progress is being made towards Desired Conditions across 0-25% of the CFLR landscape area

“Expected progress” will be defined using 5 year benchmarks for FY2010 projects and 3 benchmarks for FY2012 for each DC based on a percentage of the lifetime outcome specified in each Landscape’s proposal.

Current Project-scale Evaluation (Based on the Collaborative’s landscape scale monitoring)

Ecological Indicators	Datasets and/or databases of records used	Good, Fair, Poor and (%) landscape across which progress is being made towards desired conditions	Are you achieving your CFLRP objectives? (Y/N)	If NO, briefly explain...
Fire Regime Restoration	Plot-based Southern Blue Ridge Fire Learning Network vegetation data	Fair – 43%	Yes	N/A
Fish and Wildlife Habitat Condition	Wildlife camera monitoring data	Fair – 53%	Yes	N/A
Watershed Condition	Best Management Practices Monitoring	Fair – 31%	Yes	N/A
Invasive Species	Plot-based Invasive species monitoring reports	Fair – 32%	Yes	N/A

Narrative (optional):

Fire regime: Using data collected from vegetation monitoring plots both pre- and post-burn, results show that evergreen shrub cover was reduced on 88% of plots. To date, we have treated 13,952 acres with prescribed fire, or 7% of the landscape. We estimate that those areas surrounding the treatments have a 40% benefit, based on prevention of wildfire spread. Because burn units are spread across the entire project area, we estimate that the benefits extend to the remaining 93% of the landscape.

$$[(88\% \text{ change}) \times (7\% \text{ of the landscape})] + [(40\% \text{ change}) \times (93\% \text{ of the landscape})] = 43.36\%$$

Fish and Wildlife: Using data collected from wildlife cameras, results show that wildlife numbers and diversity were higher in 100% of the treatment unit when compared to the control. To date, we have treated 12,769 acres for habitat restoration, or 6.7% of the landscape. We estimate that those areas surrounding the treatments have a 50% benefit, based on creation of a mosaic of habitat conditions and the mobility of wildlife species. Because treatment units are spread across the entire project area, we estimate that the benefits extend to the remaining 93.3% of the landscape.

$$[(100\% \text{ change}) \times (6.7\% \text{ of the landscape})] + [(50\% \text{ change}) \times (93.3\% \text{ of the landscape})] = 53.35\%$$

Watershed: Using data collected from timber sales and road construction and maintenance activities, results show that 97% of BMPs were effectively implemented to protect watershed condition. To date, we have treated 148 acres with timber harvest and 825 acres (33 linear miles) of roads, or 0.5% of the landscape. We estimate that those areas surrounding the treatments have a 60% benefit, due to the importance of reducing sedimentation and working in headwaters to improve overall watershed health. Because treatment units are concentrated in several large management-intensive areas on the district, we estimate the benefits extend to 50% of the landscape. Although the land area currently treated is small, we are meeting annual objectives for the project and are on track to achieve our objectives over the 10yr period.

$$[(97\% \text{ change}) \times (0.5\% \text{ of the landscape})] + [(60\% \text{ change}) \times (50\% \text{ of the landscape})] = 30.49\%$$

*Note: WCATT data was not available for the project area, since the priority watershed to be treated under this project has yet to be finalized in the NEPA process.

Invasive Species: Using data collected from invasive species monitoring plots within priority landscapes, results show that overall, treatment effectiveness of invasive species was 66%. To date, we have treated 569 acres for NNIS, or 0.3% of the landscape. We estimate that those areas surrounding the treatments have an 80% benefit, due to reducing or eliminating invasions. Because treatments of NNIS are concentrated in 3 key large watersheds, we estimate the benefits extend to 40% of the landscape. Although the land area currently treated is small, we are meeting annual objectives for the project and are on track to achieve our objectives over the 10yr period.

$$[(66\% \text{ change}) \times (0.3\% \text{ of the landscape})] + [(80\% \text{ change}) \times (40\% \text{ of the landscape})] = 32.2\%$$

Project-scale scoring²

Each management action funded through CFLR 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 following completed management activities by the multi-party monitoring group at each Landscape.

- Good = 75% or more of implemented treatments result in measurable progress towards individual **project-level** objectives.
- Fair = 26% - 74% of implemented treatments result in measurable progress towards individual **project-level** objectives.
- Poor = 25% or less of implemented treatments result in in measurable progress towards individual **project-level** objectives.

Current Project-scale Evaluation (Based on and aggregation of the Collaborative's project level monitoring)

Ecological Indicators	Datasets and/or databases of records used	Project Level Good, Fair, Poor and (%) treatments resulting in measurable progress as defined above	Are you achieving your CFLRP objectives? (Y/N)	If NO, briefly explain...
Fire Regime Restoration	Plot-based Southern Blue Ridge Fire Learning Network vegetation data	Good – 88%	Yes	N/A
Fish and Wildlife Habitat Condition	Wildlife camera monitoring data	Good – 100%	Yes	N/A
Watershed Condition	Best Management Practices Monitoring	Good – 97%	Yes	N/A

² An individual activity might not need to lead to a fully restored acre (for example), 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 "good" rating.

Invasive Species	Plot-based Invasive species monitoring reports	Fair – 66%	Yes	N/A
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Narrative (optional):

Fire regime: Using data collected from vegetation monitoring plots both pre- and post-burn on the Lake James prescribed burn unit, results show that evergreen shrub cover was reduced on 88% of plots. On average, evergreen shrub cover was reduced from 42.8% to 8.2%, reflecting a shift from a shrub-dominated fuel model to a grass/forb dominated fuel model. From this we can infer that 88% of treatments are resulting in measurable progress at the project level. Data was collected by USFS, TNC, Sothern Blue Ridge Fire Learning Network, and Forest Stewards. It was analyzed by Forest Stewards.

Fish and Wildlife: Using data collected from wildlife cameras on the Dobson Knob prescribed burn unit and an adjacent control area, results show that wildlife numbers and diversity were higher in 100% of the burn unit when compared to the control. On average, the burn area saw 79 more wildlife counts during the study period, and 7 more species of wildlife. Data was collected by USFS, NC Wildlife Resources Commission, and TNC. Data was analyzed by the Western NC Alliance.

Watershed: Using data collected from timber sales and road construction and maintenance activities, results show that 97% of BMPs were effectively implemented to protect watershed condition. Monitoring efforts tracked BMP's within the Rose's Creek timber sale and the Miller Mountain stewardship. Data collected included activity descriptions, harvest and road standards and guidelines, implementation and effectiveness rates and visible sediment delivery classifications. Data was collected and analyzed by the USFS. WCATT data was not available for the project area, since the priority watershed to be treated under this project has yet to be finalized in the NEPA process.

Invasive Species: Using data collected from invasive species monitoring plots within treatment areas in Wilson Creek, a priority landscape, results show that overall, treatment effectiveness of invasive species was 66%. Monitoring efforts tracked cover of invasive species pre- and post-treatments. Pre-treatment showed a cover class of 10 (total cover of plot by invasive species) for all plots. Post-treatment showed an average cover class of 3.3. The effectiveness of the Japanese knotweed, multiflora rose, oriental bittersweet, and Chinese yam treatments was poor to fair, whereas the effectiveness of the treatment of the other six target species was fair to good. Adaptive management approaches will allow us to improve the effectiveness of treatments in future years. Data was collected and analyzed by the USFS and Western North Carolina Alliance.