Northern Blues Forest Collaborative

Zones of Agreement

Adopted:
June 23, 2021

I. NBFC Mission and Vision

Mission:
The Northern Blues Forest Collaborative is a diverse group of stakeholders committed to forging and implementing a shared vision of forest resilience and community vitality across the Northern Blue Mountains. This work seeks, as a priority, to build widespread, mutual understanding and support for the large landscape restoration centered on the Umatilla and Wallowa-Whitman National Forests.

Vision:
We are striving to create a vibrant Northern Blues with a restored and resilient forested landscape, strong job, recreation and business opportunities, and social harmony across the region.

II. Purpose of Zones of Agreement

The collaborative represents a broad group of stakeholders that have the interest, time and commitment to work together to build awareness and understanding, and develop zones of agreement that help inform the USFS in its management of NFS lands. Under NFMA and NEPA, several other avenues exist for interested parties to engage with the USFS. We recognize and respect these avenues for public engagement in the management of national forests.

Management decisions on public lands are complex, and governed by multiple laws. The following are a small, but influential selection:

- The National Forest Management Act (NFMA) directs the Forest Service to assure that its forest plans provide for and sustainably balance multiple uses of the forest including outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness uses. 16 U.S.C. § 1604(e)(1).
- The Nez Perce, The Confederated Tribes of the Umatilla Indian Reservation, and the Confederated Tribes of the Warm Springs Reservation continue to hold treaty rights across portions of both Forests.
- The Endangered Species Act requires both affirmative conservation and avoidance of jeopardy to species and destruction of critical habitat for wildlife.
- The National Environmental Policy Act (NEPA) provides public opportunity for substantive participation in the environmental planning and decision process.

This participation, coupled with the rapid evolution, and uneven understanding of ecosystem science creates considerable social complexity and tension, compounded by different stakeholder value systems. For example, while First Foods, such as salmon or huckleberry, may be most important to some, others may see a regular supply of timber, or opportunities for quiet recreation as the most important. Still others, such as the many municipalities, see their water supply, and the prevention of wildfire in their communities as the most important value. All of this is complicated by the distrust born by the legacy of the treatment of native peoples and the timber wars. With so many interests in the management of public lands, the Forest Service often finds no decisions will satisfy all concerns.

The purpose of this document is to provide the Forest Service written documentation of agreements reached by a variety of stakeholders represented by the Northern Blues Forest Collaborative, based on detailed discussion, field trips, observation of implementation, monitoring of outcomes, and review of science, policy, and relevant local knowledge. As explained in the Operating Principles, these conversations have been founded on integrity and mutual respect. We invite leading scientists and experts to help build collaborative understanding of the best available science and/or traditional ecological knowledge to help predict outcomes and expand our understanding of the considerations involved.

Following are the Zones of Agreement generated from those conversations. Although most stakeholders would manage the forest differently if they had full control, all signatories to this document understand that when we work cooperatively, we are much more likely to find the best outcomes for the entire community.

This is a living document. It is expected that this document will be updated from time to time to account for new science, changing conditions, or changing social agreements.

III. Zones of Agreement

Desired Conditions: Framework & Principles

Our desired condition is a healthy and resilient forested landscape, abundant with clean water and native wildlife, strong job, recreation and business opportunities, and social harmony across the region.

The following principles provide a framework to consider with individual decisions.

Our intent is to promote, maintain and enhance watershed conditions across the Wallowa Whitman and Umatilla National Forests to improve ecological outcomes, enhance local economic conditions, promote community understanding of and support for forest treatments while reducing the risk of wildfire to local communities. We believe that active forest restoration utilizing appropriate management activities such as thinning and prescribed fire, as well as natural processes, such as fire (unplanned ignitions) and succession, is important to restoring the natural integrity of resilient forests while providing local economic benefits. Although we don't expect all restoration work can be paid for with the receipts from the trees harvested, we aim to leverage this synergy to bring value to as many members of the community as we can and re-invest in our national forests.

These principles guide the development of specific management recommendations, and facilitate the collaborative efforts already taking place in the community. Management actions on the national forest should:

- Incorporate understanding of the social, cultural, and economic dynamics of the community to help sustain traditional livelihoods that contribute to ongoing and future management of the National Forest system;
- Utilize the best available science, experience and relevant local data, in harmony with traditional ecological knowledge, to guide restoration objectives and activities, while acknowledging uncertainty where it exists. We suggest a "strength of evidence" approach that integrates multiple types of evidence with well documented methods that are applicable to the area of interest. *See Bridge Collaborative Practitioner's Guide, page 24*.
- Maintain appropriate spatial and temporal patterns of species composition, structure, density and seral stages within a resilient range for each forest type across the landscape;
- Restore forest structure and species composition consistent with the historical disturbance regime and natural ecological processes to reduce the likelihood of uncharacteristic impact of disturbance (such as fire, insects, disease, and drought).
- Account for climate change including recent trends toward hotter, drier summers, and predicted continuation of this trend into the foreseeable future. (National Research Council, 2011)
- Implement conservation principles which will result in improved watershed conditions, ensure native vegetation, fish & wildlife diversity, and sustain other ecosystem services.
- Use financial resources efficiently, and avoid restoration strategies likely to entail recurring high maintenance costs;
- Define clear, achievable and measurable management objectives aimed at restoring process and function to aquatic and upland systems;

- Account for expanding communities and development adjacent to Forest Service property within the WUI *See* (Stein, et al., 2013), and mitigate wildfire and other disturbance impacts to those communities, balanced with public values about public lands.
- Use adaptive and flexible management, supported or modified by feedback from collaborative multi-party monitoring.
- Utilize a broad range of active and passive resource management tools including but not limited to: prescribed burning; pre-commercial and commercial logging; revegetation; restoring channel morphology and structure, appropriate use of herbicides and pesticides; riparian and rare plant community protection; as well as permanent and temporary road closures.

Desired Conditions

Generally, across the landscape promote work towards the following conditions:

- Healthy, resilient, heterogeneous forests with old growth commensurate with historic conditions;
- Abundant and healthy special habitats such as aspen, mahogany, cottonwood, and other important wildlife refugia,
- Native plant and wildlife communities of sufficient diversity and vigor to resist non-native species invasion;
- Effective cross-boundary coordination with other land-owners, and ridgetop to ridgetop restoration;
- Prosperous local communities that support traditional livelihoods in forest management and wood products, tribal treaty rights, livestock grazing, as well as recreation.
- Widespread community understanding of the ecology of local forest ecosystems, and support for the management practices that keep such ecosystems healthy such as prescribed fire.
- Consistent monitoring of the effectiveness of our actions, and a robust adaptive management system for incorporating new science and lessons learned from our own successes and failures.

Shared Scientific Understandings

Fire-adapted Ecosystems:

Forests in the Blue Mountain Ecoregion (BME) range from dry ponderosa pine, to dry and moist mixed-conifer (ponderosa pine, grand fir, western larch, and Douglas-fir), to subalpine/cold forests (lodgepole pine, Engelmann spruce, subalpine fir and whitebark pine) (Halofsky, et al., 2014). Wildfire was the overriding process influencing historic forest structure. It created fine- and coarse-scale variability in habitat and species composition (Hessburg, et al., 2007); maintained rare, fire-dependent habitat types (e.g., aspen and whitebark pine); and provided sediment and logs to streams, changing flow regimes and refreshing spawning habitat for important fish species (Gregory, et al., 2003; Luce, et al., 2012).

Dry ponderosa pine and dry mixed-conifer forests (44% of UMF and WWF forestland) historically experienced frequent, low severity fires burning large areas every 12-25 years (Heyerdahl, et al., 2001; Johnston, et al., 2016; Johnston, 2017), resulting in low density stands of large, fire-resistant trees and open-canopy habitat. Moist mixed-conifer (35% of forested area) and subalpine/cold forests (21%) likely experienced complex disturbance dynamics and mixed-severity fires varying over space and time, leading to

a heterogeneous landscape of uneven-aged, even-aged, and multi-cohort stands (Stine, et al., 2014; Hessburg, et al., 2000).

Historical photographs have documented widespread changes in the spatial complexity of forests across the BME over the last 80+ years (Hessburg, et al., 2000; Hessburg, et al., 2015). Livestock grazing, overstory timber harvest, and fire suppression simplified forest structures and increased densities of shade-tolerant species (Hagmann, et al., 2014; Hagmann, et al., 2013). Over the last 30 years dry and moist mixed-conifer forests in the Blue Mountains have experienced a deficit of low- and moderate-severity, and an excess of high-severity, fire (Haugo, et al., 2019) resulting in significant departure from historic stand conditions (Haugo, et al., 2015; DeMeo, et al., 2018). Fire regimes are significantly departed in 97% of watersheds on the WWF and in 75% of the UMF's watersheds (Potyondy & Geier, 2011), and much of the forested land in the Northern Blues is currently classified as having high or very high wildfire hazard potential (Dillon, et al., 2015). Every global circulation climate model indicates that annual temperatures will increase in the Blue Mountain Ecoregion in the future, with vast implications for both wildfire and insect outbreaks (Halofsky & Peterson, 2017). Models predict a 6-fold increase in area burned with as little as a 1° C mean annual temperature increase (Littell, 2011; Halofsky & Peterson, 2017) and the BME is expected to experience some of the largest increases in wildfire likelihood in the Pacific Northwest, particularly in moist mixed-conifer forest types (Davis, et al., 2017).

Natural Range of Variability

We rely heavily on the concepts of the *Historical, Natural* and *Future Range of Variability* to describe what we are trying to achieve. The Historical Range of Variability is typically understood as the conditions that existed in the centuries just prior to European settlement. This is a widely agreed upon, and useful, benchmark because evidence shows that those conditions persisted for quite a long time, produced the abundant conditions that settlers enjoyed, produced the abundant First Foods that local tribes enjoyed, and supported a full suite of native wildlife. As climate changes, we believe it is becoming increasingly important to prepare for the Future Range of Variability.

Historic conditions are important to understand. They reflect long-term evolutionary change influenced by fire – including lightning starts, and cultural burning. With settlement and development of the region, land use and management, and decades of fire suppression, altered these conditions. Forest cover has expanded. Stand density within the forest increased. And shade tolerant species characterized by ladder fuels are far more prevalent. All of this has increased the horizontal and vertical continuity of fuels. Every year we suppress fire, the wildfire problem grows worse. There is widespread consensus that historic conditions would be more resilient to the frequent fires that we now know will be with us for the foreseeable future.

Additionally, trends and science both indicate we should expect a hotter, drier future. This means that the Historic Range of Variability may no longer be an appropriate benchmark. We use the term Future Range of Variability informed by both past and present to describe the ecosystem we think will likely thrive most reliably in future conditions.

For a robust discussion of this topic see:

Keane RE, Hessburg PF, Landres PB, Swanson FJ. The use of historical range and variability (HRV) in landscape management. Forest Ecology and Management 258 (2009) 1025–1037.

Other proposed "Shared Scientific Understandings about our local ecology" that we intend to address in more specificity in the future

- The impact of forest structure, density and composition on the ability of local forest ecosystems to withstand insects, drought and fire
- The impact of forest species composition, density and spatial patterning on hydrology, especially with regard to late season low/base flows, snow water and snow water equivalent.
- The impact of conifer encroachment on aspen, riparian, and wet meadows systems.
- The expectation that the climate will be getting hotter and drier: best science regarding how to continue to keep our forests resilient
- Carbon implications of restoration: sequestration & storage, risk of loss of stored carbon to wildfire.
- Snags as important "infrastructure" for wildlife habitat
- Local allometric equations: the relationship between tree size & other characteristics. Size/age relationships are not "well-supported" across all species & biophysical settings in our region. In other words, the data that supports the best available science for determining things like tree-age without having to core trees was not gathered on our forests. While we think it's likely close, we think we can do better. This is important because it causes problems for analysis & implementation.

Best Management Practices Common to all timber & fuels management

- **Landscape Scale Vision**: BMPs are designed to be applied in a landscape scale context. Clearly identify values at risk, and locate treatments in the context of the full landscape to mitigate and protect these values at risk. EG: Along the WUI the reduction in fire risk may be highest value. Whereas deeper in the forest, dense forest for pileated woodpecker and other closed canopy species might be a higher management priority.
- **Legacy Tree Retention**: Strive to retain & protect remnant old trees of all species (any tree that appears to have been established prior to 1860 based on morphological characteristics using best available science). In the event that the FS encounters a site-specific situation where there appears to be a reason to remove legacy trees, the collaborative wants to know what the FS is proposing and why, and to be able to weigh in on the decision.
- **Large Structure**: Prioritize retention and/or cultivation of the conditions in which large structure of site-appropriate species can thrive. When there are insufficient site-appropriate species, large structure of other species may need to be maintained for habitat in the interim. For example, in some cases this would mean removing large young grand fir up to 30" to favor trees of the site-specific appropriate species that are less than 21". We look forward to understanding how this is carried out in particular instances in planning documents.
- **Wildlife Habitat Tradeoffs**: **Not every acre can do everything**. Returning the landscape to HRV is expected to benefit wildlife species that thrived on the landscape historically,but will likely reduce habitat for species that benefit from the present uncharacteristically dense conditions. Additionally, there are other threats to wildlife besides forest conditions such as roads/traffic, invasive species, and climate change etc. In the landscape scale context, threats, and tradeoffs should be considered when analyzing wildlife viability expectations, and determining which kinds of wildlife habitat will be enhanced. EG: in the WUI reduction of fire risk may be the highest priority, whereas deeper in the forest retaining dense stands for species that need that should be emphasized.

- **Species Composition**: Move stands toward a species composition mix within the historic range of variation for a specific biophysical environment, recognizing that species composition was not static within stands across the landscape historically. Targets for stands should be considered in the context of what is currently abundant or deficient on the landscape. Future conditions will also modify the range of potential viable species on many sites, and an adaptive management approach will be needed to determine the best response to changing conditions.
- **Spatial Patterning at stand and landscape levels**: Retain patchy clumps of trees consistent with current understandings of historic spatial patterning within stands. Create irregularly shaped openings during harvest consistent with expected landscape patterns. Openings and leave patches should enhance naturally existing landscape features and patterns, for example, openings might enhance existing meadow habitat.
- **Snags & down wood**: Retain all snags and appropriate levels of down wood/logs based on forest type unless they are deemed hazard trees or negatively impact fire risk reduction goals. As possible, locate landings and skid trails to avoid removal of snags.
- **Thinning (Commercial/Non-Commercial)**: Use variable density thinning techniques to establish a variety of microhabitats, break up fuel continuity, and to promote heterogeneity and forest resiliency. Don't thin to uniform spacing, ages, or species.
- **Corridors & Wildlife Habitat**: Pro-actively consider wildlife habitat landscape permeability and corridors at all scales and share the information with the collaborative.
- **Wildlife Trees**: Irregularly shaped trees, such as those affected by porcupines, mistletoe, or having lost their tops to wind can be valuable wildlife trees, and should be maintained on the landscape to provide for wildlife habitat needs provided they are not identified as a safety hazard.
- **Riparian Habitat Conservation Areas:** Abide by principles in PACFISH and INFISH, with particular attention to RMOs, which direct that treatments in riparian areas should be for the benefit of the ecological health of the area.
    - **ESA v. non-ESA waters**: Take extra care in waters with Endangered or Sensitive Species, or that could impact Endangered or Sensitive Species. Use Blue Mountain Project Design Criteria as a guide for waters with ESA listed species, or propose site-specific treatments that are fully vetted with the regulation agencies and described and analyzed in the NEPA.
    - **Non-Forested Areas**: especially wet meadows and beaver habitat, are some of our best opportunities for improving water quality & fish habitat. Restore wet meadows and beaver suitable habitat as a high priority.
    - **Manage for Fire Resiliency:**
        - **Uplands in the RHCA buffer zone (outside of Riparian Management Areas (RMAs))**: Where land is technically within an RHCA, but ecologically more upland than riparian, thin those upland portions for the same resilience to disturbance that the surrounding areas would experience in accord with PACFISH and INFISH.
    - **Manage for cool water:**
        - **Shade trees**: When thinning an RHCA, be especially careful to leave small dense stands of shade trees where they are the best opportunity to keep water cool. For example, in some cases, a stand of trees on the south side of a waterway normally considered overly-dense should be left if they are providing shade, and hardwoods

are not likely to be able to recover because of ungulate browse, rocky banks, recreational access, or other reasons.

- **Promote Broad-leafed riparian species such as aspen, willow & cottonwood:**
  - **Fencing & Ungulates**: Thinning in RHCAs can increase ungulate access and prevent hardwood recovery. Where this appears to be the case, fence or cage hardwood areas for at least 15 years to allow hardwoods to grow beyond browse height before allowing the return of ungulates. This might require concurrent development of upland water. If financial or other considerations make complete fencing unrealistic, identify and prioritize fencing the highest value locations. Highest value fence locations might include wet meadows exposed to high solar radiation that would be mitigated by abundant hardwoods, and ample opportunity for hardwood recovery and wildlife benefit. In some cases, jack-strawing, or other methods of significantly reducing ungulate pressure, can be a good alternative.
  - When thinning upland areas outside RHCAs, consider thinning and development of upland water availability to improve ungulate dispersion away from riparian areas.
- **Roads & Trails**: Keep roads, trails, landings and skid trails out of RHCAs as much as practically possible, including temporary roads. Design/repair road infrastructure to reduce erosion.
- **Monitoring**: Reviewing the effects of past actions, and incorporating that information into future projects (adaptive management) is one of the most effective ways of building trust. Be systematic in monitoring, and share results.

- **Economics:** The Forest Service should make every effort to package the forest products and stewardship activities in a way that is attractive to contracted work providers (service contractors, purchasers, permittees, subcontractors, vendors), while ensuring high priority expensive treatments are completed.
  - Reinvest the revenue received from the forest products to partially finance the non-revenue generating projects identified in the project.
  - Integrate collaborative input on prioritization of the non-revenue generating projects.
  - Consider those greater long-term project resource benefits resulting from lesser short-term project impacts.

NOTE: In the future we intend to complete individual Zones of Agreement that address specific ecosystem types such as “dry forest” “moist mixed conifer” “aspen” “wet meadows” and more. As of this writing in spring 2021, some of those agreements exist in site-specific recommendations, but have not yet been carried forward to more generalized agreements.

IV. Responding to Significant New Evidence

We welcome new evidence and the deepening our understanding of forest ecosystems and the cultural values at play in them. These Zones of Agreement are expected to be a living document that grow in nuance and clarity as our understanding of the natural and social context improves.

V. Signatures

By signing this document, I agree to abide by the values and procedures agreed to by the Northern Blues Forest Collaborative as set forth in the Operating Protocols to the best of my ability.

X _____ _____
Signature Date

_____ _____
Printed Name Organization

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Signature Date

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Additional Signatures

By signing this document, I agree to abide by the values and procedures agreed to by the Northern Blues Forest Collaborative as set forth in the Operating Protocols to the best of my ability.

X _____ _____
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