Restoration Principles

1. Restore functioning ecosystems by enhancing ecological processes
2. Apply adaptive management approach
3. Use appropriate scale of integrated analysis to prioritize and design restoration activities
4. Monitor restoration outcomes
5. Reestablish fire as a natural process on the landscape
6. Consider social constraints and seek public support for reintroducing fire on the landscape
7. Engage community and interested parties in the restoration process
8. Improve terrestrial and aquatic habitats and connectivity
9. Emphasize ecosystem goods and services and sustainable land management
10. Integrate restoration with socio-economic well-being
11. Enhance the education and recreation activities to build support for restoration
12. Protect and improve overall watershed health, including stream health, soil quality, and function, and riparian function
13. Establish and maintain a safe road and trail system that is ecologically sustainable

Restoration Projects in Complex Forest Types

(Appendix C)

Ecological restoration in mixed conifer/mixed severity fire regimes may be more complicated than in low to mid-elevation ponderosa pine, Douglas-fir, and western larch forests. At the same time, given the need for restoration, the ecological reality of human-caused, landscape-scale impacts, and the anticipated impacts arising from changes in climate, these complexities should not be avoided.

Mixed Conifer/Mixed Severity Fire Regime stands (MC/MSF) pose specific challenges and opportunities for restoration work. Some are scientific: there is more variability and room for ecological interpretation in these stands. Others are social: The diverse interests that are represented by the MFRC worked hard to develop functional "zones of agreement", which helped overcome historic disagreement and distrust. Building on that progress is fundamental to further positive outcomes on the ground. For these reasons, initial work in MC/MSF should be based on guidelines that withstand scientific scrutiny, further enhance trust, and are designed to achieve results that can be monitored and validated over time. The following Appendix for MC/MSF expands upon Principles 1 and 5 and will be implemented, reviewed, evaluated and re-approved by consensus after five years of utilization.

Suggestions for Assessment of Mixed Severity/Mixed Conifer Fire Regime Projects:

- A history of fire suppression or the absence of fire, by itself may not justify restoration, given that mixed severity stands naturally vary from low to high severity. Specific conditions highlight the need for restoration. The need should be documented and described.

- Restoration objectives should be described in terms of desired stand structure, species composition, species diversity, as well as ecological processes that promote resilience to ecosystem components.

- Utilize best available science, including modeling of impacts under alternative scenarios, where feasible. Assess existing stand and landscape conditions to determine restoration needs, and what treatments are appropriate to meet goals and objectives.

- Seek initial opportunities in lower elevation MC/MSF areas where agreement on restoration work has already been developed within roaded landscapes close to communities. Consider that the introduction of mechanical treatments in previously unmanaged areas may be controversial.

- Give particular consideration to unique and special areas. Identify Old Growth, Inventoried Roadless Areas (IRA) and other special areas (e.g. aspen, riparian) that have unique characteristics worthy of protection and/or special treatment. Consider that a zone of agreement does not presently exist for mechanical treatment in unaltered IRAs.

- Consider the diversity of stand structure, composition and patchiness at a landscape level and its contribution to forest ecosystem resilience, including fish and wildlife habitat, in determining the restoration goals in a specific project area.

- Consider historical conditions as well as predicted changes to composition and structure due to climate change. Restoration treatments may alter future conditions so that fires burn with more natural intensities and patterns. The composition, structure, and spatial patterns of some portions of the landscape may be modified to accommodate predicted increases in fire severity. The return to diverse size classes across the landscape is also expected to reduce the incidence of native insect and disease out-breaks in the future.

- Projects should consider the resiliency and longevity of old growth. To accomplish these goals, mechanical treatments may be required.

- Ensure that project objectives and design enable and include monitoring – before and after treatment.

- Recognizing public concerns about the use and re-introduction of fire, projects should be designed with a strong public education/involvement and outreach component.