

## Upper Middle Fork Watershed Analysis Update (February, 2008)

### Fire and Fuels

#### **1996 WA: Characterization Update (see Step 1, page 15 of 1996 WA)**

This section of the 1996 Upper Middle Fork Watershed Analysis provides a concise and accurate representation of historic wildfire occurrence that has occurred naturally on this landscape. Since 1996, changes in terminology are more notable than actual changes in scientific understanding of fire processes. Most notably, Fire Regime Condition Class (FRCC) has become a commonly accepted modeling tool for understanding forest/ecosystem health as it relates to natural disturbance processes like wildfire. In these terms, the vast majority of this watershed may be described as Fire Regime 3, or having a mixed-severity fire history with fire occurrence ranging from 25-200 years, depending on the location. Approximately 10% of the watershed may be described as Fire Regime 5, or having a stand replacement fire history with fire occurrence occurring every 200-400 years. Current Condition Class in the watershed exist in the following, approximate proportions: Condition Class 1=60%; Condition Class 2=25%; Condition Class 3=15%.

The 2002 WA Update does not attempt to address characterization of fire/fuels within the same format as the 1996 WA.

#### **1996 WA: Issues and Key Questions (see Step 2, p.25 of 1996 document)**

No fire/fuels updates to the 1996 WA are recommended.

No fire/fuels updates to the 2002 WA Update are recommended.

#### **1996 WA: Reference, Current, Trend Conditions (see Steps 3&4, page 26 of 1996 WA)**

Key Question 2 of 1996 WA is pertinent to fire/fuels concerns.

KQ2: *Where and to what extent have management practices Influenced fire processes?*

#### **1996 WA: Density, Condition, Location and Use of Roads (see Issue 1 of 1996 WA)**

No fire/fuels updates to 1996 WA are recommended.

#### **1996 WA: Vegetation Condition and Patterns (see Issue 2, p.56 of 1998 document)**

See Key Question 2 (above)

In addressing Key Question 2, this section of the 1996 Upper Middle Fork Watershed Analysis provides an accurate assessment of the influence of management practices in shaping fire processes. As noted in Step 1 of this update, Fire Regime Condition Class (FRCC) is currently the most common way of describing forest health relative to fire processes. Using FRCC terminology, it would be accurate to say that that forest landscape within this watershed is in the process of moving away from the range of natural variability for vegetation characteristics, fuel composition, fire frequency, fire severity, and associated disturbances. This type of change is the also the definition of worsening Condition Class. As noted in the 1998 Watershed Analysis, this change has largely been brought about by many decades of wildfire suppression/exclusion.

**1996 WA: Synthesis (see Step 5, p.98 of 1998 document)**

No fire/fuels updates to 1996 WA are recommended.

**1996 WA: Recommendations (see Issue 2, p.104 of 1998 document)**

**Issue 2: Vegetation Condition and Pattern—Fire Process**

The following is a summary of the 1996 recommendations, with comments/updates in italics where appropriate.

**Fire Process**

-Restore historical ecological processes by:

a) prescribing controlled burning to restore and retain fire-maintained non-forested special habitats and their zone of influence in historical conditions.

*2008 Update/Response: recommendation is valid and restoration in these areas is currently being implemented in the watershed.*

b) prescribing controlled burning in non-harvest allocated forest habitats (such as LSRs) to re-establish open stand characteristics where site specific analysis determines an ecological need to maintain these conditions. Prime candidates for consideration would be upland Douglas fir stands on slopes less than approximately 60%.

*2008 Update/Response: recommendation is valid; however, given current policy with regard to modifying stand structure in LSRs, it is unlikely that these recommendations will be implemented in the near future. A more realistic recommendation would be to implement prescribed fire in stands adjacent to LSRs for the purpose of 'fire-safeing' LSRs in the event of a large wildfire. Burning should be focused on Condition Class 2 and 3 stands.*

c) develop a prescribed natural fire plan for high elevation habitat (silver fir, mountain hemlock and lodgepole pine) in non-harvest allocations. Prime candidates for consideration would be upland Douglas fir stands on slopes less than approximately 60%.

*2008 Update/Response: recommendation is valid; the Forest plans to develop a Wildfire Use Plan for wildernesses in the Cascades; Fire Use outside wilderness areas is unlikely to occur in the near future.*

d) breaking up contiguous fuel loading patterns in matrix allocations.

*2008 Update/Response: recommendation is valid; restoring fire to the landscape where fire suppression has excluded fire should be a primary goal of landscape planning. Prescribed underburning should be done in all harvest stands where the following conditions are met: 1) a natural fire interval has been missed. 2) residual tree species/size will allow under burning with low resultant mortality (<15% mortality). Burning should be focused on Condition Class 2 and 3 stands.*

e) Reducing fuel loading in the following:

f) Doug fir stands which are fuel model 10 or high fuel model 8 with heavy load of ladder fuels.

g) High elevation stands which are fuel model 10.

h) Western hemlock stands which are fuel model 10 and occur in large contiguous blocks or steep terrain.

*2008 Update/Response: recommendations are essentially valid; however, in many situations, fuel model 10 represents natural/historic conditions in the Western Cascades. Of greater emphasis should be to return fire to systems where it has been excluded, regardless of fuel model. Burning should be focused on Condition Class 2 and 3 stands.*

The following, additional recommendation to the Upper Middle Fork WA is as follows:  
*Prescribing controlled burning in timber harvest areas where residual trees are fire resistant species and >15" dbh.*

### **2002 Plan Update: Fire/Fuels Issues**

Existing recommendations in the 2002 WA Update are in response to Questions 10 and 14. These recommendations do not address fire/fuels issues in a substantial or comprehensive way. For this reason, deference should be given to the 1996 recommendations and 2008 updates (see previous section of this document).

---

### **Hills Creek Reservoir Watershed Update to 1995 WA**

Recommendations in the 1995 which pertain to fire/fuels issues are Habitat Diversity, Fire Pattern/Behavior/Intensity and Fire Suppression Response Time. Recommendations made in the 1996 Upper Middle Fork WA (and 2008 update) are also valid for the Hills Creek Reservoir watershed. In fact, the 1995 Hills Creek WA is less comprehensive than the 1996 Upper Middle Fork WA in terms of appropriate fire/fuels recommendations.

#### **Habitat Diversity**

*2008 Update/Response: Defer to Upper Middle Fork WA 1996 and 2008 recommendations under Issue 2: Vegetation Condition and Pattern—Fire Process.*

#### **Fire Pattern, Behavior and Intensity**

*2008 Update/Response: Defer to Upper Middle Fork WA 1996 and 2008 recommendations under Issue 2: Vegetation Condition and Pattern—Fire Process.*

#### **Fire Suppression Response Time**

1995 WA recommendation: Develop an Access and Travel Management Plan, including the LSR. Will need to balance fire suppression access priorities and need to reduce risks of human caused fires and damage to other late successional resources.

*2008 Update/Response: recommendation is generally valid; plan is in an ongoing process of development.*