

## DRAFT

# Vegetation Management in Sensitive Areas of the Lake Tahoe Basin: A Workshop to Evaluate Risks and Advance Existing Strategies and Practices

## Charge to the Technical Review Panel

### Background:

Elected officials, agency representatives and stakeholders representing many segments of the Lake Tahoe Basin community have all raised concerns over our limited progress in reducing excess vegetation biomass in Stream Environment Zones (SEZ) and steep slopes (collectively referred to as sensitive areas) in the Lake Tahoe Basin. Limited access, the potential for substantial environmental impacts arising from treatment methods, and a restricted field season all limit options for dealing with the excess biomass and translate into the completion of few projects with high cost and long timelines. Although excess forest biomass is a basin-wide problem, there is special concern over the existing situation in sensitive areas because of the potential to accelerate wildfire spread and propagate the fire over a larger area (PSW, 2007).<sup>1</sup> Riparian forests now have some of the heaviest ladder and surface fuel loads of any Sierran forest communities because they are less moisture limited than upland areas and are highly productive (Bisson et al. 2003, Stephens et al. 2004).<sup>2</sup> Following a severe crown fire, streams feeding into Lake Tahoe could receive and then transport substantial loads of sediment and debris flows affecting lake clarity and beach conditions (Byron and Goldman 1989, Stephens et al. 2004).<sup>3</sup> High intensity fires can render steep slopes highly susceptible to wind and water erosion (Carroll et al. in press).<sup>4</sup> In the aftermath of the Angora Fire, there is heightened interest in advancing the strategies and practices available to implement vegetation management projects in sensitive areas. However, there is recognition that we need approaches that optimize efficiency and effectiveness, while minimizing collateral environmental impacts.

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<sup>1</sup> PSW (Pacific Southwest Region, US Forest Service) 2007. An Assessment of Fuel Treatment Effects on Fire Behavior, Suppression Effectiveness, and Structure Ignition on the Angora Fire. Accessed on 9-18-07 at <http://www.fs.fed.us/r5/angorafuelsassessment/>

<sup>2</sup> Bisson, P.A., B.E. Rieman, C. Luce, P.F. Hessburg, D.C. Lee, J.L. Kershner, G.H. Reeves, and R.E. Gresswell. 2003. Fire and aquatic ecosystems of the western USA: Current knowledge and key questions. *Forest Ecology and Management* 178 (1-2): 213-229.

Stephens, S.L., T. Meixner, M. Poth, B. McGurk, and D. Payne. 2004. Prescribed fire, soils, and stream water chemistry in a watershed in the Lake Tahoe Basin, California. *International Journal of Wildland Fire* 13(1) 27-35.

<sup>3</sup> Byron, E. R. and C.R. Goldman. 1989. Land-use and water quality in tributary streams of Lake Tahoe California-Nevada USA. *Journal of Environmental Quality* 18 (1): 84-88.

<sup>4</sup> Carroll, E.M., W.W. Miller, D.W. Johnson, L. Saito, R.G. Qualls, and R.F. Walker. In Press. Spatial analysis of a large magnitude erosion event following a Sierran wildfire. *J. Environ. Qual.*

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### Workshop Purpose:

The purpose of this workshop is to explore the state of knowledge and current practices used by government agencies in the planning, review, and implementation of vegetation management projects in SEZ and steep slope areas in the Lake Tahoe Basin. Information and results provided at the workshop will be used to: 1) clarify the state of knowledge, 2) identify areas of uncertainty regarding environmental risk, and 3) develop recommendations to advance the strategies and practices of vegetation management available to government agencies in the Lake Tahoe Basin.

### Review Panel Charge:

The panel is asked to evaluate and comment on the appropriateness and adequacy of: 1) the technical information used in planning vegetation management projects in sensitive areas, and 2) the technical information and technical basis used in the regulatory review of vegetation management projects in sensitive areas. Specific questions the panel is asked to address, include:

- Is the technical information and state of knowledge agencies rely on appropriate and adequate for planning and regulatory review of vegetation management projects in sensitive areas? If not, what additional information or knowledge is recommended?
- Are our assessments of environmental risk appropriate and well reasoned? If not, what additional factors should be considered in these assessments?
- What efforts (e.g., pilot projects, applied research, monitoring, additional analyses, review of existing literature, etc.) should agencies pursue in the near-term (next 2-4 years) to reduce areas of uncertainty related to environmental risk of treatment methodologies?
- Are there new or existing technologies or methodologies that agencies should consider applying to vegetation management projects in sensitive areas? What are the specific advantages and disadvantages of these new technologies or methodologies?
- Overall, what specific recommendations does the panel have to advance the strategies and practices of vegetation management in sensitive areas of the Lake Tahoe Basin?