

Saturday, January 24, 2009 (file cac189)

To: Dan Breedon

Subj: Fire retardant house/garden principles and specific federal grants for winterization

Background: Residential Stakeholders need some guidance through the voluminous literature re to fire retardant structures and landscaping approaches. The general problem of wildfire and the ancillary issues of rainfall capture/retention may well fall outside the purview of Butte County government but is appropriate that some attention be paid to these problems in the general plan.

Ref A: Sunset Western Landscaping, Sunset Publishing 1997, pp298-301

Ref B: L. AuCoin, Wildfire: a Century of Failed forest Policy, Inland Press to be published in spring 2009 (Summary of related material can be found in <http://www.californiachaparral.com/cforestfires.html> that includes a download of a paper by Daniel Donato on an analysis of the biscuit fire that appeared in Science Magazine and ignited a firestorm of political debate)

Comments:

1. Ref A is clearly a cut above "finding an expert and do what he/she says". The approach also counters many close in vegetation management schemes in the general literature (See Handyman-Save Energy book on cooling with shade pp86-89) that are not compatible with structures in high fire risk areas of Butte County. The only minor criticism of this qualitative approach in Ref A is the statement that stumps should be treated with 1 part glysohate to 3 parts water. The relatively expensive treatment and potential nearby desired vegetation avoidance means that treatment should be restricted to recently cut tanoak, and resprouting forms of Manzanita, Ceanothus, Whitethorn and cedar. Professional versions of Roundup, the leading glysohate product in surfactant form, can be helpful in dissolving scabbed over cuts. Injection axes, frilling and drilling need to be considered to enhance the injection typically late in the fall. Special consideration needs to be given to foliar treatment of poison oak and similar toxic vegetation that should deteriorate in place to avoid handling/chipping.
2. Ref B provides current sampling of the literature on industrial and non-industrial forest and chaparral management. From the Butte County's point of view, we need transparency and occasional pushing of higher levels of government. Species dependent spacing of seedlings needs to be established at the time of subdivision or parcel construction. In the absence of better information, a mean spacing of 12 feet or more could be recommended. At the time of pre-commercial thinning, the basal area, per the Forest Service, should be less than 90 square feet/acre for a high diversity stand to limit the extent of wildfire and suppression cost. The new federal administration may initiate a new policy on forest management that may have a local effect. Post wildfire treatment, hydrology and carbon sequestration issues at some level may need to be included in the general plan and associated documents. Local news media need to assist in maintaining transparency on vegetation and land use issues that are in danger of being politicized.

Potential action items:

1. Request a grant from the federal government to make an energy audit for individuals/families below the poverty line. Licensed energy auditors would perform a minimal cost survey that would look toward obtaining subsidies for energy and safety improvements based on ranked pay back periods and options. The following are likely candidates and associated options.
 - a. Conversion to higher efficiency lighting devices/fixtures options.
 - a. Halogen, fluorescent or LED
 - b. Dimmable vs non-dimmable
 - c. Integrated or separable ballast
 - d. Environment (outside-inside...)
 - e. Color spectrum
 - f. Light level and associated lamp and ballast rating
 - g. Cost
 - h. Geometry and directivity optimization
 - i. Motion sensor and associated false alarm and sustain features
 - j. Ballast/lamp efficiency, strobe rate and power factor
 - k. Degradation/failure statistics for light devices and ballasts
 - b. Controlling air leakage and/or addition of thermal insulation
 - a. Ceiling/attic
 - b. Sub-floor
 - c. Walls
 - d. Window shutters, storm windows, conventional multi pane windows & low e windows
 - e. Hot water heater insulation
 - c. Programmable thermostat
 - d. Perform maintenance and status performance of combustion/heat exchange subsystem and/or upgrade heating system