

**BOARD OF FORESTRY AND FIRE PROTECTION**

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**Status Report****February 18, 2011****Project name:** Protection of Wildlife - Aspen and Meadow Restoration**Project Type:** Update of Forest Practice Rules. 14 CCR § 939.15 [959.15]**Background:**

In 2009, a stakeholder requested the Board to evaluate CAL FIRE's interpretation of this regulation. This regulation has been interpreted to limit the size of the openings for aspen, meadow and wet area restoration projects because the regulation refers to "clearcutting" which is an evenaged silvicultural system defined in the FPRs. Evenaged systems have limitations that include:

- Harvest area size maximum of 20 to 40 acres in size per 14 CCR § 933.1 [953.1] (a) (2);
- Harvest of stands adjacent to a previously harvested evenaged stand can not occur for a 5 year period or until the adjacent stand has trees five feet tall or five years of age per 14 CCR § 933.1 [953.1] (a) (4)(A)



Post harvest conditions where conifers were removed to restore aspen and meadow habitats on Fruit Growers Supply Co. lands in Lassen County.

The limitation on opening size prohibits otherwise appropriate restoration actions greater than 20-40 acres in size without the use of an "alternative practice" per 14 CCR § 897 (e)-(h). It further has the consequence of delaying/deferring evenaged harvesting of commercial conifer forest stands adjacent to the aspen, meadow or wet area restoration area.

**Status:**

- The Forest Practice Committee began evaluating CAL FIRE's interpretation and considering the need for regulatory amendments in October 2009.
- Stakeholders provided testimony on issue to the FPC from November through December 2009.
- The Board held a field trip on October 28, 2010, to review recent aspen restoration projects in Lassen County.

- The Board has requested staff in December 2010 to update the initial draft regulations that address removing the limitations of maximum opening sizes and” adjacency” requirements in 14 CCR § 933.1 [953.1] (a) (4) (A).

### **Milestone and Timeline:**

- Summary report of issue and alternatives to FPC in November 2009
- Testimony provided by stakeholders: November 3, 2009.
- Additional discussion at the December 8, 2009 meeting focused on expanding alternative regulatory proposals, consider field review of issue, and review past regulation files that enacted the “meadow restoration” portion of the rule to identify past Board intent.
- Board deferred further review of rule until a field trip was conducted.
- Exploratory field trip held in October 2010 in Lassen County.
- FPC directed staff to amend the initial proposed rules to address issues and bring revisions to the FPC in December 2010.

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### **Analysis**

The FPC members recalled that the regulation adopted for this restoration in 2006 was intended to relieve post harvest stocking standard requirements but not necessarily other evenaged size opening requirements. The administrative record for this action does not address Board intent on maximum opening sizes, but made a finding that environmental impacts of the rule are not significant because (among other things) all other FPRs [including evenaged harvesting limitations] are in place.

Questions were raised regarding the evenaged “adjacency” requirements in 14 CCR § 933.1 [953.1] (a) (4) (A). The regulation in 14 CCR § 939.15[959.15] waives the “stocking” requirements for entry into an adjacent/contiguous stand, but is silent in regard to the waiver of “dominate and co-dominate” conifer tree five years/five feet tall issue. There is no specific rule language addressing when a person can enter an adjacent aspen, meadow or wet area restoration project: In five years? When aspen trees are five feet tall? What level of aspen “stocking” is sufficient to allow for adjacent stand harvesting? What about meadows and wet areas that are not intended to become stocked?

Contrary to initial stakeholder input, regulatory agencies including DFG and CAL FIRE report that the aspen restoration regulation is being used and is appropriately being reviewed and applied in the field. Agencies reported that they support the concept of appropriate aspen restoration projects that exceed the 20-40 acre limitation. DFG provided information on the project sizes that have been approved in DFG Northern Region 1 and this documentation indicates that about 1/3 of the projects (4 of 12) are greater than 40 acres and have been approved in the past with appropriate pre-project evaluation by their

agency. All of these were meadow restoration projects and likely included the entire meadow area. Only 3 projects were reported as aspen restoration projects and none of these exceeded 16 acres.

It appears that the basic issues to address are:

- 1) Should there be a size/acreage limitation to the restoration projects?
- 2) Should there be a waiver of the “adjacency” limitation in 14 CCR § 933.1 [953.1] (a) (4) (A) to provide for contiguous restoration units or evenaged commercial conifer forest harvest adjacent to restoration projects that would together exceed 20-40 acres?
- 3) Are past projects approved under this section of the rules meeting the intent of the Board for aspen/meadow restoration?
- 4) What are the impacts of previous projects and what would the impacts be if the acreage and adjacency limitations are eliminated/reduced?

Commentary from agencies and FPC members indicated that it is appropriate to waive certain MSP stocking considerations because this not a commercial timber production related rule. However, the removal of MSP requirements for conifer-dominated aspen areas or the affect from delayed harvesting on MSP in adjacent commercial forests must be balance versus the value obtained from the restoration action. The intent of the “five year” re-entry limitation into an adjacent stand, coupled with the acreage limitations was predicated on the need to reduce disturbance to avoid cumulative effects.

### **Stakeholder and Agency input from November 2009 and December 2009 meetings**

- Rulemaking actions must have a standalone California environmental quality act analysis. It is not good enough that “another project.” Analysis will avoid significant impact. Also use of “special prescriptions” as defined in the FPRs should be an alternative considered to address aspen restoration
- Stakeholders want analysis and disclosure regarding what this rule does for adjacency. issues for clearcutting adjacent to aspen or meadow restoration areas.
- CAL Fire suggested that if the silvicultural limits in the FPRs in terms of opening sizes are exceeded, then the general alternatives pathway for expanding a greater size should be used. This would make the regulatory requirements clear, provide the appropriate CEQA disclosures upfront, and improve harvest plan processing for applicants.
- Forest Practices Committee members noted that any rule regarding actions taken for restoration should have a monitoring component maintenance requirements to sure that the goals were met.
- FPC recommended that a field trip with experts focusing on acreage limitation issues be held prior to considering regulatory revisions.

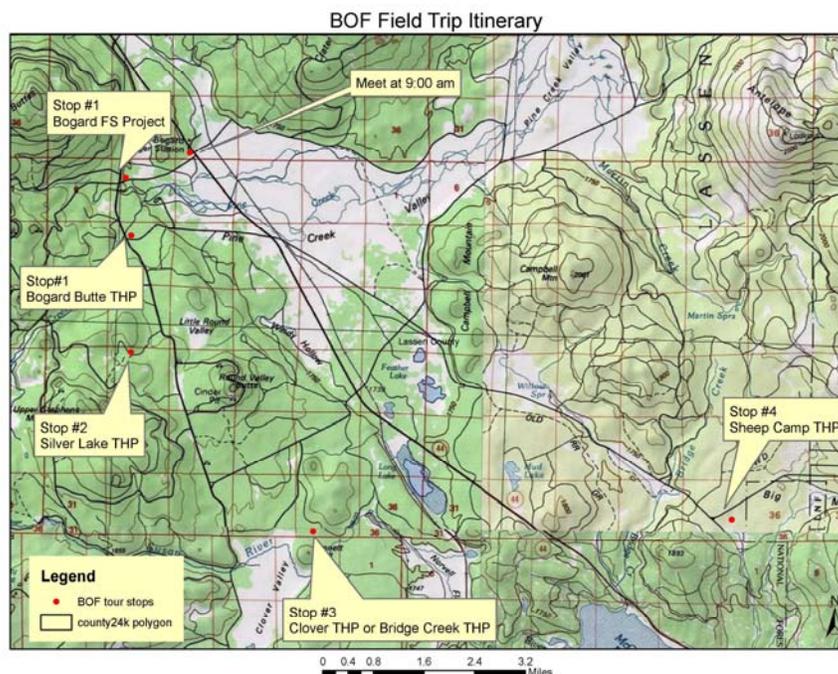
## Results of field trip help on October 28, 2010

- The State Board of Forestry and Field Protection held a field trip to review aspen restoration projects as part of a review of the California Forest Practice Rules section 14 CCR § 939.15 [959.15] Protection of Wildlife - Aspen and Meadow Restoration.

- The field trip was held in Lassen County, CA on Fruit Growers Supply Company lands and Lassen National Forest. The area is west and south of Bogard Rest Area on Highway 44.

Bogard is located 30 miles northwest of Susanville and

20 miles south of Old Station, CA. See map of locations.



- The trip was attended by about 20 participants from CAL FIRE, BOF, DFG, USFS, Fruit Growers Supply Company, Lassen County RCD, and SPI. Board members Lloyd Bradshaw and Mark Andre attended the trip.
- The field trip was organized and hosted by DFG staff biologist Jennifer Carlson. Ms. Carlson introduced the audience to the trip field sites and provided handouts regarding aspen enhancement supporting information. Of notable interest was the statistical characteristics of aspen in Lassen County. The total recorded amount of aspen forest is 3,770 acres with the maximum size stand of 324 acres and the mean size stand of about 6 acres. Ms. Carlson also noted in her handout technical information that describes potential operational impacts and typical best management practices for these types of operations.
- Stop #1, Bogard Butte THP 2-04-137-LAS and Bogard USFS Aspen Project, Lassen National Forest, Eagle Lake Ranger District, was a two to four year old harvested aspen/meadow restoration site that included harvesting over 200 acres. The prescription included retaining all trees over 30 inches DBH and removal of all remaining conifers. The goal was to increase sunlight light and allow aspen to naturally regenerate. Substantial sprouting began in year two. Some very selective harvesting to release aspen was conducted in a watercourse riparian buffer. Winter harvesting was used to mitigate the potential streamside impacts. Monitoring indicated no change in streamside soil bulk density and no significant increase in steam temperature due to treatments.



Pre-treatment photo 2003



Post-treatment photo 2007

Stop #1 Bogard USFS Aspen Project,  
Lassen National Forest, Eagle  
Lake Ranger District



- Stop #2, Silver Lake THP 2-04-195-LAS was harvested in 2008. It is a THP on Fruit Growers Supply Co lands. The project was 15 acres in size. The area is primarily a meadow where lodge pole and ponderosa pine was removed to release the aspen. Trees were removed about 50 feet from aspens. Operations were conducted in late fall before snowfall. Environmental impact issues included heavy equipment in wet meadow areas and Class III watercourses. Mitigation included a 15 foot wet areas ELZs, limiting the number of wet area crossings, directional felling, slash packing in skid trails and no harvesting in wet areas.

Stop #2, Silver Lake THP 2-04-195-LAS, Fruit Growers Supply Co. lands

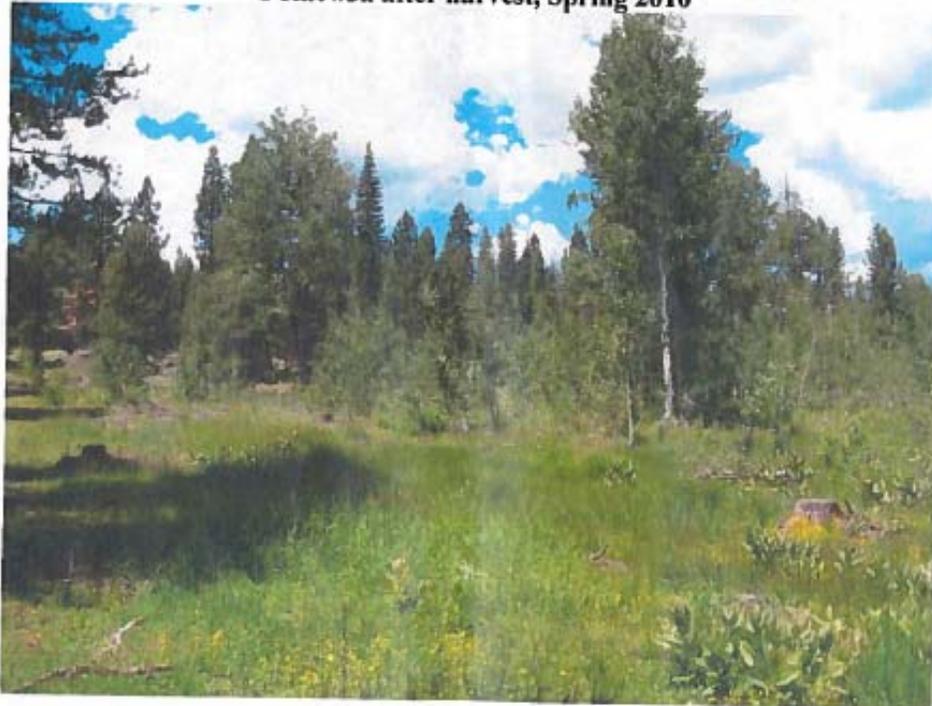


Stop #2, Silver Lake THP 2-04-195-LAS, Fruit Growers Supply Co. lands

**Point #3a before harvest, Fall 2008**



**Point #3a after harvest, Spring 2010**



**Point #8 before harvest, Fall 2008**



**Point #8 after harvest, Summer 2010**



- Stop #3, Bridge Creek THP 2-06-145 LAS was in the process of being harvested. It is a THP on Fruit Growers Supply Co lands. The group observed release of smaller mature aspen within upslope dense conifer forests. Aspens were “released” by removing about a one-tree-length opening around the aspen. The aspen sites are three small areas totaling five acres in size. Environmental impact issues included harvesting with the WLPz of a Class I watercourse. Mitigation included no harvesting within 25 feet of Class I WLT line, suspending logs during removal using feller buncher and stabilizing 90% of disturbed areas by spreading slash.
- Stop #4, Sheep Camp THP 2-08-047-LAS was an approved THP, but not harvested. The observed site were small meadows (several acres) with a Class III watercourse where conifer trees were planned to be removed from the WLPZ and the watercourse to release the aspen. Removals around the aspen were limited to about 1/3—tree-length in distance. The project host noted that the Lahontan Regional Water Quality Control Board had reviewed the project and one primary concern was that if operations were conducted over snow that the compacted snow in the watercourse could create an “ice dam” that when thawed could divert the stream course flow thread creating a new channel.

#### **Findings of field trip help on October 28, 2010**

- The Board determined that based on the field trip, few if any individual or cumulative adverse impacts would result for waiving the “clearcutting” size and adjacency limitations. The Board heard testimony in the field that there was excellent oversight by agencies of proposed restoration projects, and great diligence by RPFs in conservative planning and operations on the restoration sites to ensure avoiding adverse environmental impacts.
- In Lassen County, there is strong multi-stakeholder and interagency cooperation in addressing restoration needs. It was noted that participation of the Lahontan Regional Water Quality Control Board was essential for project design, and ensuring that projects meet legal and permitting requirements.
- Each site has specific and unique environmental values and beneficial uses of water that need to be identified and addressed for protection measures. Project specific BMPs are necessary to avoid potential adverse environmental impacts.
- Aspen and meadow restoration project were generally small, although a 200 acre project was completed on USFS lands. Further the distribution of aspen in Lassen County is very small compared to the acreage of commercial forest lands. This finding contributes to the determination of no individual or cumulative adverse impacts from projects.
- Monitoring and post project determination of “success” in achieving aspen restoration was not well developed, often due to the time lag of aspen resprouting. Proposed rules regarding actions taken for restoration should have a monitoring component and maintenance requirements to ensure that the restoration goals were met.

- Restoration projects which remove conifer forests can conceptually conflict with MSP requirements if projects do not result in meeting restoration goals.

### **Alternatives:**

**Alternative #1** - Use the existing regulatory “alternative practices” pathways in 14 CCR § 897 (e) and 936.6 [956.6] to conduct aspen restoration activities under 14 CCR § 939.15 [959.15] when the harvest areas will exceed the size or adjacency limitations. This alternative is apparently working in the field, but has the impact of additional RPF analysis time and five pages of THP documentation.

**Alternative #2** – Modify the regulation under 14 CCR § 939.15 [959.15] to remove the word “clear cutting”. This has the effect of eliminating the silvicultural limitations found in 14 CCR § 933.1 [953.1] (a) (4) (A) related to maximum restoration unit size, and eliminating the silvicultural limitations on entry into an adjacent unit (either for commercial timber harvesting or for additional aspen restoration or other meadow restoration work). Potential regulatory changes and graphic depiction of resultant harvest adjacency requirements are shown below:

### **Amend 14 CCR § 939.15 and 959.15**

#### **939.15 [959.15]. Protection of Wildlife Habitat [Northern].**

All trees within aspen stands (defined as a location with the presence of living aspen (*Populus tremuloides*)), meadows and wet areas may be harvested ~~clearcut~~ and these areas exempted from stocking provisions and other provisions contained in 14 CCR § 933.1 [953.1] (a) (2), (3) and (4) (A) in order to restore, retain, or enhance these areas for ecological or range values, and to balance the protection and regeneration of aspen stands, meadows and wet area habitats in California's forest ecosystems with the other goals of forest management as specified in 14 CCR § 897. These areas shall be shown on the plan map and the plan shall describe the extent of the area proposed for harvesting ~~clearcutting~~. The RPF shall consult with DFG prior to plan submittal. If wet areas are proposed for harvesting ~~clearcutting~~, the RPF shall also consult with the appropriate RWQCB in those locations where the applicable basin plan identifies wet areas as a beneficial use.

Graphic depiction of a permissible activity under Alternative 2 where the aspen restoration project is 60 acres in size.

20 acre "upland" conifer stand	20 acre "upland" conifer stand	20 acre "upland" conifer stand
20 acre "upland" conifer stand	20 acre "upland" conifer stand	20 acre "upland" conifer stand
20 acre aspen or meadow restore area	20 acre aspen or meadow restore area	20 acre aspen or meadow restore area

No Harvest

Harvest Permitted

**Alternative #3** (proposed 12/09) – Modify the regulation 14 CCR § 939.15 [959.15] to include an acreage limitation for aspen only and to have slightly different language for aspen. The alternative would address the issue of limitation on size of area that can be restored in one entry, but provides a maximum acreage opening to guide the expectation of no significant adverse environmental impacts. Sample amendments are shown below:

**Amend 14 CCR § 939.15 and 959.15**

**939.15 [959.15]. Protection of Wildlife Habitat [Northern].**

All trees within aspen stands (defined as a location with the presence of living aspen (*Populus tremuloides*)), meadows and wet areas may be ~~harvested~~ and these areas exempted from stocking provisions ~~and other provisions contained in 14 CCR § 933.1 [953.1] (a) (2), (3) and (4) (A)~~ in order to restore, retain, or enhance these areas for ecological or range values, and to balance the protection and regeneration of aspen stands, meadows and wet area habitats in California's forest ecosystems with the other goals of forest management as specified in 14 CCR § 897. In aspen restoration stands, the maximum allowable harvest size is xxx acres when the project results in the same practical effect found in regeneration methods used in evenaged management, alternative prescriptions declared under 14 CCR § 913.6 [933.6, 953.6], subsection (b)(3) as most related to any evenaged management, variable retention, or rehabilitation. These areas shall be shown on the plan map and the plan shall describe the extent of the area proposed for ~~harvesting~~. The RPF shall consult with DFG prior to plan submittal. If wet areas are proposed for ~~harvesting~~, the RPF shall also consult with the appropriate RWQCB in those locations where the applicable basin plan identifies wet areas as a beneficial use.

## New aspen restoration alternative as a result of field trip review. Drafted 2/18/11:

**Alternative #4** – This alternative would delete the entire existing section in 939.15 [959.15], Protection of Wildlife Habitat [Northern]. The alternative establishes a new special prescription for aspen and meadow restoration under 913.4 [933.4, 953.4], subsection (e). The new subsection establishes performance standards, designed by the landowner or RPF, for timber operations that have a goal of restoring and enhancing the ecological values of aspen, meadows or wet area habitats. The alternative establishes postharvest measures of success, removes artificial regulatory constraints associated with even-age silvicultural rules allowing a wide range of projects designs, provides clear information about the proposed restoration activity, and requires post harvest monitoring and adaptive management to ensure successful accomplishment of the project.

Some of the core components of the alternative include:

- **Establishes a new silvicultural rule and prescription:** Located in 14 CCR 913.6 (e), this allows CAL FIRE, other public agencies and the general public to have a clear description of the proposed activity and measures of successful implementation.
- **Eliminates ambiguity on which silvicultural activities are intended for the project:** By creating a new prescription there is a clear understanding what silvicultural treatment is intended and eliminates the ambiguous term “harvesting” as proposed in Alternative 1-3.
- **Removes clear-cut and other even age silviculture restrictions that are not consistent with the restoration project:** This eliminates any artificial restrictions on project design such as opening size, adjacency limitations, or conifer re stocking standards.
- **Establishes landscape level assessments to ensure that appropriate projects are proposed:** Plan submitters would be required to make some assessment of the historic presence of aspen to ensure that proposed project size is commensurate to historical presence of the species.
- **Establishes performance based physical characteristics and monitoring that demonstrate accomplishment of the restoration project goals:** This includes establishment of measures of success and postharvest monitoring to ensure aspen restocking or other characteristics of successful restoration are accomplished.
- **Establishes time frames for expected accomplishment of restoration goals:** Requires the RPF or landowners to state the projected time needed to accomplish the goals of the project.
- **Establishes postharvest actions if project goals are not accomplished:** Requires identification of additional actions or maintenance should project goals not be realized (e.g. re-clear any new conifer seedlings or saplings that have encroached on the aspen remnants).
- **Shifts responsibility for development of appropriate restoration and protection**

**standards to the plan proponent instead of with Cal Fire or other agencies:** The proposed rule focuses on establishing performance standards and shifting the responsibility for project design implementation to meet the performance standards on the applicant.

- **Establishes compliance expectations or exemption from standard for FPRs:** Restoration project may need to be specifically designed to standards that do not need current forest practice rules. Field results have shown that activities in what watercourse and lake protection zones may be needed to restore aspen, and these activities should not necessarily have to meet every watercourse and lake protection rule.

Potential regulatory changes are shown below:

**Repeal 14 CCR § 939.15 and 959.15**

**Amend 14 CCR 913.4 [933.4, 953.4]**

**(e) Aspen, meadow and wet area restoration.**

All trees within aspen stands (defined as a location with the presence of living aspen (Populus tremuloides), meadows and wet areas may be harvested or otherwise treated in order to restore, retain, or enhance these areas for ecological or range values. Projects using this prescription shall be designed to balance the protection and regeneration of aspen stands, meadows and wet area habitats in California's forest ecosystems with the other goals of forest management as specified in 14 CCR § 897 and meet the following requirement:

**(1)** The RPF shall state each project type (aspen, meadow and /or wet area restoration).

**(2)** The RPF shall determine and include in the plan the biological assessment area for the proposed project. For aspen restoration projects, the biological assessment area shall include the area historically occupied by aspen in the THP and immediate surrounding area. Information for the biological assessment area shall incorporate information from the DFG Aspen Delineation Project Data Center ([www.dfg.ca.gov/rap/projects/aspen](http://www.dfg.ca.gov/rap/projects/aspen)).

**(3)** Each project type shall be shown on the plan map, consistent with 14 CCR 1034 (x), and at a scale that shows the locations of planned operations.

(4) The plan shall describe the extent of the area proposed for harvesting or treatment and the types of harvesting or treatments.

(5) The RPF shall consult with DFG prior to plan submittal and incorporate into the project written recommendations by DFG. If operations are proposed in wet areas, such as watercourse, WLPZs, or wet meadows, the RPF shall also consult with the appropriate RWQCB in those locations where the applicable basin plan identifies wet areas as a beneficial use and incorporate written recommendations.

(6) The RPF shall state the project goals and the measures of success for the proposed aspen, meadow or wet area restoration projects.

(A) For aspen projects, goals and measures of success shall be based on a condition assessment which includes description of stand structure, factors that may be putting stands at risk, and presence of any unique physical conditions such as insect/fungus damage, disease, geological refugia, wildfire, and human or animal impacts. Conditions assessments should be based on information contained in the document: Potential: Aspen location and Conditions Data Form, Aspen Delineations Project, June 2002.

(B) When aspen regeneration is a project goal, the plan shall state the intended post harvest stocking measures of success. Target stocking shall be a minimum of 500 stems per acre.

(C) Projects shall state the intended time period necessary to accomplish project goals.

(8) The RPF shall include in the plan monitoring and post monitoring adaptive management components. The monitoring component is intended to determine the level of accomplishment of the proposed measure of success stated in 14 CCR 913.6 (e)(6). Photo point records and GSP records shall be included. The adaptive management components is intended to determine what, if any, additional measure are necessary to meet the measure of success. The monitoring plan will provide information on compliance, implementation, and effectiveness. The adaptive management component will set forth action items necessary to fully meet the stated measures of success. Monitoring: and adaptive management shall occur anytime after plan approval concurrent with timber operations, and after completion of operations during the remainder period described in 14

CCR 913.6 (e) (4).

**(9) Exemptions from other FPRs:**

**(A) Silvicultural standards for opening size, adjacency requirements, or conifer stocking standards in 14 CCR 913.1 – 913.3 [933.1-933.3, 953.1-953.3]; 913.6 [933.6, 953.6]; and 913.8 do not apply to use of this prescription.**

**(B) Minimum conservation resource standards in 14 CCR 912.7 [932.7, 952.7] do not apply to use of this prescription.**

**(C) For purposes of this prescription, timberland productivity and MSP requirements as stated in 14 CCR 913.10 [933.10, 953.10]; 913.11 [933.11, 953.11], subsection (a), and 1034 (m) are met by successful implementation and attainment of the measures of success disclosed and approved by the department for this prescription.**

**(D) Where projects propose operations in WLPZ that do not meet requirements of 14 CCR 916 et seq., the RPF shall include requirements of 14 CCR 913.6 [933.6, 953.6]; 916.1 [936.1, 956.1], or 916.9 (v).**

End 2/18/11