WASHINGTON STATE DEPARTMENT OF
Natural Resources

PR 14-006-040

Site Preparation and Vegetation Management

Supersedes: PR 14-006-040 – Controlling Competing Vegetation (August 1999), GL 14-006-050 – Container Disposal (August 1999), and GL 14-006-060 – Licensing (August 1999), which are hereby rescinded

Date: May 2009

Application: All forested state trust lands

Discussion

Responsible site preparation and vegetation management treatments are often vital in successful reforestation of forested state trust lands. The following site preparation and vegetation management considerations have over the years become required for these lands.

- Policy Trace
  - Forest Practice Rules: WAC 222-38
  - Integrated Pest Management, Legislative Declaration: RCW 17.15.005
  - Policy for Sustainable Forests, p.46: Policy on general silvicultural strategy
  - Sustainable Forestry Initiative® (SFI®) Reforestation Standards
  - Forest Stewardship Council (FSC) Reforestation Standards

- General Principles for Managing Competing Vegetation During the Reforestation Stage
  - Integrated pest management (IPM) – the United States Environmental Protection Agency (EPA) is the federal agency charged with national certification of pesticides for agricultural, forestry, domestic, and other uses. EPA defines IPM as

    > "an effective and environmentally sensitive approach to pest management that relies on a combination of common-sense practices. IPM programs use current, comprehensive information on the life cycles of pests and their interaction with the environment. This information, in combination with available pest control methods, is used to manage pest damage by the most economical means, and with the least possible hazard to people, property, and the environment."

    Meanwhile, the Washington State Department of Agriculture (WSDA) is charged with pesticide regulation within the state. WSDA defines IPM as

    > "a coordinated decision-making and action process that uses the most appropriate pest control methods and strategy in an environmentally and economically sound manner to meet agency programmatic pest management objectives."

    In agriculture, arrays of different pesticides are often applied repeatedly each year to the same site, while DNR's site preparation and vegetation management seeks to control only vegetative pests and does so very few times or not at all during a stand's rotation, with herbicides. In some forestry situations, one or a few herbicide applications may be the only treatment needed and the only feasible means of control. In other situations, a slashing done when growth hormones are in the crown and not

the root may suffice, while in yet other situations, crop species may simply out-grow weed species without any action being necessary. It is viewed as vital and consistent with the principles of IPM to select the method that most effectively serves the trusts while also considering public and worker safety as well as ecological health.

- Spectrum of treatment types -
  - Considering which species are suitable for reforestation on each particular site and these species' probable need for release from competing vegetation
  - If vegetation control is deemed necessary, evaluating mechanical treatment, broadcast burning, slashing, biological controls (if available), aerial broadcast herbicide treatment, ground broadcast herbicide treatment, and ground spot herbicide treatment
  - Considering varieties of each type of treatment relating to, for example, specifications for coverage, target species, and herbicide types.
- Rotational silvicultural prescriptions – developing each FMU's optimal bio-diversity pathway for timing and sequencing entries to optimally attain rotational stand objectives

- Biological Assessments
  - Assessment of threat to crop tree species from suppressive vegetation (risk analysis)
  - Susceptibility of target species to various types of treatments (effectiveness analysis)
  - Potential harmful effects to the ecosystem (sensitivity analysis)

- Legal – Regulatory Review
  - Prudent compliance with federal and state laws, regulations, and rules, including SEPA (particularly whether or not the action constitutes a Class IV Special Forest Practice)
  - Ensuring that herbicide certification, licensing, and application requirements are met or exceeded

- Herbicide Selection Screens
  - First screen: United States Environmental Protection Agency (EPA) and Washington State Department of Agriculture WSDA approval for the class of use
  - Second screen: Forester professional judgment in integrating IPM with the silvicultural prescription and achieve the best possible site-specific suitability and prudency of use
  - Third screen: Sustainable Forestry Initiative® (SFI®) "standards" and Forest Stewardship Council (FSC) "guidance," (which include stakeholder input--see App 1)

- Financial analysis
  - Comparing present cost of treatment vis à vis available budget
  - Predicting benefit of treatment in terms of net future benefit compared to no action
  - Noting cost changes in the rotational silvicultural prescription's financial analysis

Action

Field foresters shall pro-actively assess stands prior to final harvest and prepare or update rotational silvicultural prescriptions in accordance with PR 14-005-060, Silvicultural Rotational Prescriptions and PR 14—006-010, Reforestation. In that process, the need for site preparation and vegetation management shall be assessed. The above policy trace, general

principles, biological considerations, and, if applicable, legal and herbicide selection screens shall be used. Only herbicides approved by EPA and WSDA, for which registration information is officially available, and which are circumstantially condoned by applicable non-governmental certifying organizations (NGCOs—see appendix 1) constitute the department's approved list of herbicides that may be used on forested state trust lands. Herbicides not condoned by applicable NGCOs for the site-specific circumstances at hand shall be avoided for operational uses even if approved by EPA/WSDA. SEPA shall be performed per WAC 222-16-050 and as region managers otherwise deem prudent. Other public outreach shall be conducted as required for certification by applicable NGCOs or as region managers deem prudent. For further technical rules governing herbicide use, refer to WAC 222-38 and the FP Board Manual; for forest worker protection see TK 14-006-020. Only cost-effective, best practices types of site preparation and vegetation management treatments shall be implemented as consistent with the principles of IPM.

APPROVED BY: /Signed 6/1/09/_____
Gretchen Nicholas, Manager
Land Management Division

See also:

GL 14-006-030 – Treatment Effectiveness

GL 14-006-040 – Handling Spills

<u>Appendix 1</u>: SFI® and FSC Standards for Herbicide Use and USDA-Forest Service Human Health and Ecological Risk Assessments[1]

- <u>SFI® [Herbicide] Standards – Applicable to All Forested State Trust Lands</u>

(re.: http://www.sfiprogram.org/files/pdf/sfi-standard-2005-2009-sept%2008%20update.pdf)

The reference in the above link to SFI® states:

"Program Participant shall *minimize* chemical use required to achieve management objectives while protecting employees, neighbors, the public, and the forest environment.

"**Indicators:**
1. *Minimized* chemical use required to achieve management objectives.
2. Use of *least-toxic* and *narrowest-spectrum pesticides* necessary to achieve management objectives.
3. Use of pesticides registered for the intended use and applied in accordance with label requirements. [re. forested state trust lands this means registered with WSDA and EPA]
4. Use of *integrated pest management* where feasible.
5. Supervision of forest chemical applications by state-trained or certified applicators.
6. Use of *best management practices (BMPs)* appropriate to the situation; for example,
    a. Notification of adjoining landowners or nearby residents concerning applications and chemicals used;
    b. appropriate multilingual signs or oral warnings;
    c. control of public road access during and immediately after applications;
    d. designation of streamside and other needed buffer strips;
    e. use of positive shutoff and minimal-drift spray valves;
    f. aerial application of forest chemicals parallel to buffer zones to *minimize* drift;
    g. monitoring of water quality or safeguards to ensure proper equipment use and *protection* of streams, lakes, and other water bodies;
    h. appropriate storage of chemicals;
    i. filing of required state reports; or
    j. use of methods to ensure protection of *threatened and endangered* species.

- <u>FSC Approach to the Use of Pesticides – Applicable to Forested State Trust Lands Certified by FSC</u>

(re.: http://www.fsc.org/fileadmin/web-data/public/document_center/international_FSC_policies/guidance_documents/FSC_GUI_30_001_V2_0_EN_FSC_Pesticides_Policy_Guidance__2007_.pdf)

The reference in the above link to FSC states:

"FSC's approach to the implementation of the applicable FSC Criteria was developed through a series of draft proposals and background papers between December 1999 and May 2002, and revised in 2005.

[1] This appendix will be updated w/o notification whenever the referenced SFI®, FSC, or USDA-Forest Service links are updated.

"The FSC Criteria include three core elements:

a) The identification and avoidance of 'highly hazardous' pesticides [see annex II to the link above];

b) Promotion of 'non-chemical' methods of pest management as an element of an integrated pest management strategy; and,

c) Appropriate use of the pesticides that are used.

"To date, FSC policy has focused primarily on the first of these elements: the avoidance of 'highly hazardous' pesticides. This guidance document follows this precedent, since it is this element that has attracted most comment. The remaining elements are introduced briefly in Sections 5 and 6 of this paper but are not covered in detail. FSC recognises [sic] that further guidance needs to be developed focussing [sic] on the remaining elements. . . .

"The listing of a pesticide as 'highly hazardous' does not mean that the pesticide cannot be used under any circumstances. Nor does the fact that a pesticide is not on this list mean that it is 'safe'. Inclusion on the list means that FSC considers the pesticide as 'highly hazardous' in relation to one or more of the specified indicators. In order to reduce the risk of negative environmental or social impacts these pesticides shall be avoided, and should only be used in FSC-certified forests and plantations if there is no viable alternative. This implies that less hazardous (or no) pesticides shall be preferred, and that ultimately, if possible, use of the most hazardous pesticides should be eliminated."

The manager of DNR's Land Management Division reserves the option to grant exceptions where compelling reasons to do so apply.

- USDA-Forest Service Human Health and Ecological Risk Assessments (including information on surfactants) may be reviewed at the following link: http://www.fs.fed.us/foresthealth/pesticide/risk.shtml