

Section 12

Guidance for Application of Forest Chemicals

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PART 1. BEST MANAGEMENT PRACTICES

Forest management operations and Christmas tree operations using herbicides should apply the following best management practices (BMPs):

Nozzle Orifice:	Minimum size of D10 (0.156") when core plates are used. Minimum size of D7 (0.109") when no core plates are used.
Core Plate:	Size # 46 or larger.
Nozzle Orientation:	Maximum of 45 degrees downward and backward from the direction of flight.
Operating Pressure:	Not to exceed 30 pounds per square inch.
Boom Length:	Maximum length of 6/7 of rotor span for rotors less than 40 feet, and ? of rotor span for rotors 40 feet or greater.
Airspeed:	Not to exceed 60 miles per hour.
Release Height:	Minimum height consistent with safe operations. Nozzles must be shut off when ascending or descending over an obstacle that would alter the application release height by more than 10 feet, unless buffer-width adjustments have already been made on initiation of the flight line or swaths are adequate distance away from areas needing protection based on release-height buffer specifications in Tables 1 and 2 under WAC 222-38-020(4)(a)(i and ii) .

Forest management operations and Christmas tree operations using insecticides or fungicides should apply the following best management practices (BMPs)*:

Nozzle Orifice:	Minimum size of D8 (0.125") when core plates are used. Minimum size of D4 (0.063") when no core plates are used.
Core Plate:	Size # 46 or larger.
Airspeed:	Not to exceed 60 miles per hour on swaths adjacent to spray buffers.

*Recommendations on nozzle orientation, operating pressure, boom length, and release height for insecticides and fungicides are the same as those stipulated above for herbicide operations.

PART 2. NOZZLE, EQUIPMENT AND OPERATIONS

The nozzle size restrictions (nozzle orifice and orientation), equipment limits (boom length), operations restrictions (air speed, weather, and release height), and buffer requirements, in combination, are set to minimize drift off-target. Use of different aerial application equipment which produces an equivalent or lower volume-based percentage of droplets in the less than 150

micron size range or other equipment or operations restrictions which result in less drift off target, will be considered under Alternate Plan provision **WAC 222-12-040**.

Applicators should apply the following best management practices to weather conditions:

- Wind Speed:** Do not apply when wind speed exceeds 7 miles per hour.
- Favorable winds:** For purposes of determining the appropriate buffers and offsets described under **WAC 222-38-020(4)(a)(i - iii)**, favorable winds are those where wind direction effectively moves the spray cloud away from the water, RMZ, or WMZ based on visual observation of spray drift (or other commonly used indicators such as smoke) at the site of application.
- Unfavorable winds:** For purposes of determining the appropriate buffers and offsets described under **WAC 222-38-020(4)(a)(i - iii)**, unfavorable winds are any winds, which are not clearly favorable (see above) including calm conditions, inversions, or conditions of highly variable wind conditions.
- Temperature:** Do not apply when ambient air temperature exceeds 70 degrees Fahrenheit for ester formulations or 85 degrees Fahrenheit for other pesticides.
- Relative Humidity:** For Western Washington (**WAC 222-16-010**), do not apply when relative humidity is below 50% for ester formulations or below 40% for other pesticides.
- Precipitation:** If applying pesticides during early foliar or dormant seasons, when precipitation runoff events are most common, avoid direct over-spraying of temporarily dry segments of Type 4 or 5 waters. Do not apply pesticides directly to temporarily dry Type 4 or 5 waters during the 24 hours before a predicted rainfall accumulation event of 1/4" or the 24 hours after an actual accumulation event of more than 1/4".

PART 3. MAINTENANCE OF PESTICIDE RECORDS

Pesticide records should be maintained by the landowner in compliance with **WAC 16-228-190, Applicator Requirements**. The records should also include copies of the approved forest practices applications showing all streams within and adjacent to the application area and indicating which streams were buffered. Direct observation to determine the presence of surface water in Type 4 or 5 waters is recommended, although this is not intended to preclude best professional judgment of the field forester. Direct observation may include walking all streams or a representative sample of the stream segments, checking culverts for flow, provided that the culverts are in a suitable downstream location, and the use of infrared aerial photography. Aerial surveillance is not adequate if the stream segment is obscured by slash or vegetation. Direct observation can be made by a landowner representative, pesticide applicator, or a state agency or tribal representative.