

Appendix E - Mitigation Measures and Practices

Mitigation Measures and Practices (Alternative 2)

Pre-Treatment

- All sites considered for herbicide treatment will be evaluated for sensitive plant habitat suitability. Suitable habitat will be surveyed, as necessary, prior to treatment. Forest Botanists and/or Botany Program Manager will coordinate the need for field surveys based on factors including plant phenology at the time of treatment, species susceptibility to the herbicide, level of past disturbance, etc.
- Site-specific treatment guidelines will be developed in conjunction with the Forest Botanist and/or Botany Program Manager for herbicide application within or adjacent to known sensitive plant populations.
 - A procedure has been initiated for use in the FC-RONRW to assess potential risks associated with threatened, endangered and sensitive (T,E & S) plant habitat prior to herbicide treatment (Appendix C).
- Provide herbicide “awareness” information to wilderness users as opportunities arise. Treatment areas will be signed prior to and following herbicide applications within areas of special concern, as directed by the local District Ranger. Such areas may include mushroom and berry picking areas, trailheads, campsites, and other high use areas. Information on where and when spraying and other treatments will occur will be available to the public at the local Ranger District office.
- Adjacent landowners will be notified prior to treatment of noxious/invasive weeds on national forest lands.
- Ground disturbances resulting from noxious/invasive weed treatment activities will be evaluated for potential restoration. All seeding projects will be restricted to the use of certified noxious weed-free native seed. Seed originating from local native stock will be favored.
 - Managers will evaluate the need for restoration activity, including seeding, in compliance with Wilderness Management direction:
 - Maintain wilderness in such a manner that ecosystems are unaffected by human manipulation and influences so that plants and animals develop and respond to natural forces. Seed only species that are indigenous or naturalized to the area. Use broadcast seeding methods. Approve seeding only for areas where human activities have caused the loss or threaten the existence of indigenous plant species, and areas where human activities, including their livestock, have denuded or caused loss of soil, providing that the actions or activities responsible for the deterioration no longer exist and that natural revegetation is insufficient and/or ineffective.

- Seeding projects will first consider the use of seed sources collected from or near the project area. The Forests, in conjunction with their botany programs, will initiate a “bank” of native seed collected from various vegetative communities within the wilderness. This local native seed will be available for use in future restoration projects.

Herbicide Application

- Read and follow label instructions at all times. All herbicide use will comply with label restrictions and recommendations, and applicable laws, policy and guidelines. All Personal Protective Equipment required by the herbicide label will be used.
- Herbicides will be applied only when wind speeds are less than 8 miles per hour and when no significant precipitation is expected within 3 hours (light rain is acceptable with the use of Tordon 22K). Herbicides are most effective when applied when temperatures are below 85 degrees. No highly volatile herbicides are approved for use within the FC-RONRW.
- All herbicide application will be performed or directly supervised by a state licensed applicator.
- Appropriate safety and application information will be reviewed with all personnel involved in the handling of herbicides
- A dye solution will be used in the herbicide mix to visually detect uniform coverage of spray area. Diluted dye may be preferred in visually sensitive areas.
- Calibration will be conducted often enough to ensure proper amount of herbicide is being applied. Calibration should be conducted when changing to a different spray apparatus, changing nozzle size or setting, when the prescribed amount of chemical changes due to different site conditions or target species, when encountering different terrain or a change in speed of application, and by new applicators.
- All empty herbicide containers shall be triple-rinsed and the residue returned to the tank and sprayed on noxious/invasive weeds. All empty and rinsed herbicide containers shall be properly stored until disposed of at an appropriate site.

Use of authorized jet boat mounted spray equipment

The following safety practices and containment components are required for the use of jet boat mounted spray equipment:

Jet Boat Mounted Sprayer Safety Practices:

- Jet boat operator must be well qualified to operate the particular boat being used for herbicide treatment. Operator must be very familiar with navigating the sections of river being traveled at the water levels to be encountered during the use period.
- A qualified person will be tending the pump at all times while in operation.

- Actual spraying of herbicide will take place only while applicator is on land, and all appropriate riparian buffer strips will be adhered to.
- Excess water in the hull of the boat will be pumped out prior to spray operations in order to lessen the volume of wastewater in the case of a spill within the hull of the boat.
- Chemical concentrate will be triple wrapped/sealed and placed in a watertight compartment or securely fastened watertight storage container during transport.
- The spray tank will be empty while traveling to and from the treatment area and the launch site, and prior to navigating any class III or higher rapids in the vicinity of the treatment area.
- Jet boat and spray equipment will be maintained in good running order. Spray hoses and gaskets will be replaced prior to reaching their expected operating life.
- If a spill should occur within the boat, spray operations will cease until the boat is returned to the launch site or other suitable location for thorough cleaning.

Jet Boat Mounted Sprayer Containment Components:

- The boat will be equipped with a manual bilge pump fitted to optionally pump contaminated wastewater in the boats hull back into the spray tank or into a separate container, and not back into the river.
- The boat will be equipped with a separate durable containment compartment for the pump and tank, capable of holding a volume in excess of the capacity of the spray tank.
- Empty collapsible containers sufficient to hold the capacity of the spray tank will be on board in case of a leak in the spray tank.
- An emergency spill containment kit will be on board (see *spill abatement* below).

Identified Sensitive Plant Locations

- Mechanical control or chemical control with backpack sprayer are preferred methods.
- Apply the appropriate herbicide and only when wind speeds are less than 5 miles per hour.
- Implement any site specific treatment guidelines in T, E & S plant habitats as identified by Forest Botanist and/or Botany Program Manager prior to and/or during treatment activities.

Riparian Habitats

- Only herbicides approved for use adjacent to water bodies will be used within a 50-foot streamside buffer or other riparian areas.

- When appropriately labeled herbicides are to be applied within a 50-foot riparian buffer, only hand spraying will be allowed.
- Herbicide will be applied within riparian buffers only when wind speeds are less than 5 miles per hour.
- Drafting equipment used for filling herbicide spray tanks will be equipped with back siphoning prevention devices.
- Precautions will be taken to insure no detectible herbicide residue enters a stream or water body during mixing operations. Mixing must take place in an area where accidental spill will not contaminate a stream or other body of water before it can be contained and removed. Mixing of herbicides will normally take place at a distance greater than 100 feet of streams, rivers or lakes.
 - Spray equipment properly mounted in a separate containment compartment located within the hull of the jet boat is considered effective double containment of the herbicide being used. Mixing herbicides is allowed within the confines of a jet boat by a licensed applicator, when a jet boat mounted sprayer has been authorized for use and containment components are in place (see above).

Transport of Herbicides

- Only those quantities of herbicides necessary for a project will be transported
- Herbicides transported by boat will be triple wrapped in plastic and stored in appropriate compartment, such as a designed water proof storage box or a secured plastic cooler. Storage box/cooler will be securely fastened.

Spill Abatement

- A spill cleanup kit will be accessible on site when within ¼ mile of the main, middle and south forks of the Salmon River and at all sites when greater than 5 gallons of chemical concentrate is being used or stored. The spill cleanup kit will include at least the following: Shovel, box of large plastic bags, safety goggles, 10 pounds of absorbent material, rubber gloves, and protective overalls.
- A spill contingency plan will be developed prior to all herbicide applications. Individuals involved in herbicide handling or application will be instructed on the spill contingency plan and spill control, containment, and cleanup procedure.