

SUPPRESSION AND CONTROL OF INVASIVE, EXOTIC SPECIES AND VEGETATION

1. **In General:** Suppression efforts are aimed at the removal of invasive, exotic species (“target species”), which displace or prevent the establishment of native forests. The primary focus of this Final Forest Conservation Plan (FFCP) document is the suppression and control efforts of invasive and exotic species, as noted, primarily including but not exclusive to: Tree of Heaven (*Ailanthus Altissima*), Multiflora Rose (*Rose Multiflora*), and Japanese Honeysuckle Vine (*Lonicera Japonica*).
2. **Goal and Purpose:** Suppression efforts shall include the initial removal or treatment of the target species and the maintenance required to control re-growth. Implementation and choice of treatment and method shall be such that neither the invasive species nor the method of control adversely affects the establishment and survival of native species.

Target species are generally persistent with regard to eradication and control efforts. Therefore, the goal is to suppress the target species to allow the native species to form a dense canopy. The shade created by the dense canopy ideally will provide additional shade, which will manage the re-growth of the targeted species.

3. **Minimum Requirements:** A minimum of two applications or treatments shall be made during each one-year period of the Forest Improvement and Protection Agreement (FIPA).
4. **Frederick County Government Contacts:** Questions regarding the appropriateness or extent of control will be at the discretion of the Frederick County Environmental Compliance Section. The Environmental Compliance Section may be contacted at:

Frederick County Government Environmental Compliance Section 30 North Market Street Frederick, Maryland 21701	Phone: 301-600-1132 FAX: 301-600-3518 Website: http://www.co.frederick.md.us
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5. **Areas Affected:** Suppression areas are denoted in this FFCP document. Suppression and control efforts within the site shall take place in all forestation areas, tree save areas, and all forest retention areas (saved forest areas). Suppression and control efforts shall also take place in the existing forest areas retained to satisfy the Forest Resource Ordinance (FRO) requirements. As noted, all of the retained existing forest is included in the suppression area because of the presence of target species throughout the site. Also, new planting areas may also be subject to suppression efforts if there is a presence of target species within the planting areas.
6. **Timing of Operations:** *Suppression efforts may begin at any time.* However, if suppression efforts have not commenced prior to obtaining a Forest Conservation Permit, suppression efforts must begin in forest retention and tree save areas once a Forest Conservation Permit is obtained. Initial removal and treatment of the target species must occur prior to planting forestation areas.
7. **Flagging Required:** Target vegetation within the suppression area (s) shall be clearly flagged with surveyor's ribbon or otherwise identified in a clear and recognized manner. Flagging or otherwise identifying target vegetation shall be done so as to prevent removal of desirable (native) species along with the target species.

8. **Methods of Removal:** Suppression and control of the target species can be by mechanical or chemical methods or a combination of both. Mechanical controls include mowing or chopping at or near the ground level and removal of the plant by digging, pulling, or bulldozing. Mowing or chopping will likely result in re-growth from the stump or root sprouts. Therefore, this method requires also treating the remaining stump and/or root sprouts. The removal of the remaining roots by some means of excavation will disturb the soil. This may require sediment control measures, which is the responsibility of the contractor. Holes created by the removal of roots are to be filled with topsoil.
9. **Stabilizing Bare Ground:** All bare ground areas resulting from mechanical control methods are to be immediately stabilized. Disturbed areas with sufficient light shall be seeded per the improvement plan specifications. Densely shaded areas shall be mulched with 2" of shredded hardwood mulch or wood chips. The use of heavy equipment within non-wetland floodplain areas is prohibited, unless the soil is dry enough for the equipment to be supported without excessive damage to the soil or desirable ground cover plants. Heavy equipment is not allowed in wetlands or streams.
10. **Use of Chemicals:** Chemical control is by herbicide application to the target species. The use of herbicides shall be in strict accordance with state and Federal regulations and include but are not limited to:
 - The use and application of all herbicides shall be in strict accordance with the label on the herbicide's container and/or the instructions accompanying the herbicide.
 - Herbicides used in or near wetlands or streams shall be clearly labeled as to indicate that the herbicide is for use near bodies of water.
 - All herbicide applications shall be conducted during the appropriate time of year and under environmentally favorable conditions with consideration to weather elements (i.e. wind and temperature) and in accordance with the label.
 - Individuals who are qualified and licensed pesticide applicators will conduct all herbicide applications.
 - Herbicides are to be applied in a manner that only suppresses the target vegetation and does not suppress or destroy surrounding desirable plants.
11. **Protecting Living Root Mats:** Root mats of plants treated with herbicides are to remain in place to stabilize the soil.
12. **Debris Removal:** Brush, root mats, and debris resulting from the use of mechanical controls shall be removed from the site and properly disposed.
13. **Recommended Sources of Information:** Recommended suppression treatments can be obtained from publications written by Philip D. Pannill, Regional Watershed Forester, Western Region, Maryland Department of Natural Resources, Forest Service. Recommended are:
 - Problem Weed Species for Forestry in Maryland
 - Ailanthus Altissima – Controlling Tree of Heaven
 - Tree of Heaven Control
 - Control of Ailanthus in Forest Management

The contractor shall consult the above publications for recommended herbicides and additional treatment options. These publications as well as other relevant publications are available upon request by contacting:

Maryland Dept. of Natural Resources
1260 Maryland Avenue
Hagerstown, MD 21740

Phone: 301-791-4010
Email: ppannill@dnr.state.md.us
Website: www.dnr.state.md.us/forrest

14. **Specific Recommendations:** The contractor and pesticide/herbicide applicator shall choose the appropriate control measures to match both local conditions and available skilled labor so as to minimize impacts to the environment. The following treatment methods are advised:

- Japanese Honeysuckle: manually cut or pull vines or treat re-sprouts with herbicide (post-emerge).
- Multiflora Rose: repeated mowing or cutting or treat re-sprouts with herbicide (post-emergent).
- Tree of Heaven: initial cutting of trees followed by frequent cutting and mowing of sprouts. Herbicide treatments include post-emerge foliar spray, cut surface treatments and basal bark application.

15. **Follow-up Treatments:** Following the initial treatment, the suppressed areas shall be monitored/inspected and re-growth/re-infestation shall be treated at least three additional times during the three-year maintenance period.

16. **Long-term Management:** Re-growth and/or re-infestation shall be treated as indicated. Monitoring and maintenance activities shall be in accordance with the "Forest Improvements and Protection Agreement" (FIPA). Long-term control of invasive exotic species shall be per the "Forest Resource Inspection and Maintenance Covenants and Agreement" as recorded with the Forest Resource Deed of Easement.