

Invasive plant management on the Oak Ridge Reservation

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Sponsor: **Reservation Management 3-Site Funding**

- ↪ **Elimination or reduction of invasive plant species encroaching on the ORR to minimize impacts to utility infrastructure, environmentally sensitive areas, security, wildland fire fuel reduction, remediation sites, monitoring sites, research areas, cultural resources, and wildlife habitat**
- ↪ **Control of invasive plants is a Federal priority per Executive Order 13122**
- ↪ **Plan includes inventory, prioritization, selection of treatment, allocation of resources, restoration, evaluation**
- ↪ **Targets are 1) individual species posing greatest threats 2) multiple species in particular areas to be protected 3) corridors of dispersal and invasion**
- ↪ **Priorities determined annually based on ranking of invasive species, available techniques, timing, resources**
- ↪ **Restoration of treated areas—often spontaneous—otherwise assisted with planting of native species; monitoring and maintenance as necessary**



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Elimination or reduction of invasive plant species encroaching on the Oak Ridge Reservation (ORR) benefits DOE by reducing costs from impacts to infrastructure, protecting special resources, and preserving the land base required for environmental research. Most of the land of the ORR serves as a necessary buffer for DOE facilities in addition to areas for environmental research, and has achieved special ecological significance due to protection from ongoing regional development for 60+ years. But the relatively pristine ORR is under siege by invasive plant species. Invasives are those plants not native to the ecosystem whose presence causes economic and environmental harm. This project seeks to control the 170 species of invasive plants encroaching on the ORR's mature interior forest, undisturbed wetlands, open water, riparian vegetation, and grass meadows; as well as utility infrastructure, security features, cultural resources, and wildlife habitat. The plan includes inventory of the types and extent of invasives, prioritization, selection of treatment, allocation of resources, restoration, and evaluation. Control of invasive plants is a Federal priority per Executive Order 13122. The ten most troublesome species at the ORR are Japanese grass, Japanese honeysuckle, Chinese privet, kudzu, multiflora rose, lespedeza, Chinese yam, Tree-of-heaven, field garlic, and autumn olive. Because many of these unwelcome plants have no natural controls in this area and compete with native vegetation they crowd out desirable species thereby reducing native biodiversity and causing economic problems. Plan targets are 1) individual species posing greatest threats 2) multiple species in particular areas to be protected and 3) corridors of dispersal and invasion. Priorities are determined annually based on ranking of invasive species, available techniques, timing, and available resources. The plan balances eradication and restoration activities with the goal of returning the reservation to a more natural condition. A main focus is on minimizing the opportunity for invasive plant species to become established by using native species in landscaping and quickly revegetating disturbed areas with desirable species. Control focuses on those invasives that pose greatest threats to native species and DOE mission operations, emphasizing those that are most feasible to contain or eliminate.

Parr, P. D., M. G. Ryon, H. D. Quarles, N. Giffen, M. S. Salk, and J. W. Webb. 2004. Draft Invasive Plant Management Plan for the Oak Ridge Reservation. ORNL/TM-2004/____. Oak Ridge, TN.

http://www.esd.ornl.gov/facilities/nerp/invasive_plants.html