

Appendix F: Summary of Recommended Actions, Guidelines, and Specific Management Actions

Recommended Action 1: Remove Invasive Non-native Plants and Animals (from Management Plan)

Guidelines:

- Himalayan blackberry (*Rubus armeniacus*) will be controlled with the goal of eventual suppression in all sub-areas.
- Reed canarygrass (*Phalaris arundinacea*) will be pulled or treated with herbicides in upland sites and will be shaded out in moist or wet sites where appropriate or possible.
- Removal of other non-native grasses will not be a high priority.
- Class A and B designate weeds will be removed as specified by the King County Noxious Weed Control Program.
- (other invasives?)

Specific Management Actions:

Mowing.

Mowing is scheduled for late summer, after grasses have senesced and when the use of the site by nesting birds is minimal. Mowing is a management technique that targets woody species (especially blackberry)

Specific invasive plant removal.

Blackberry control by mowing is practiced as part of a triage of management methods. Grasslands are mowed, wetlands are too wet for blackberry, and woodland areas will create shade that eventually make blackberry uncompetitive. In woodland areas, surviving blackberry roots must be removed by hand, or individual plants must be subjected to herbicide application.

Non-chemical methods such as mulching and live-willow staking to produce shade have proven successful against *Phalaris arundinacea* (reed canary grass). On the other hand, *Lysimachia vulgaris* (yellow garden loosestrife) is currently a Class B Noxious Weed in King County and its eradication using herbicides was mandated in 2008. At the time of this publication, target invasives in UBNA include *Cirsium arvense* (Canada thistle), *Senecio jacobaea* (tansy ragwort), yellow loosestrife, reed canarygrass, *Rubus armeniacus* (Himalayan blackberry) and knotweeds *Polygonum cuspidatum* (Japanese) and *P. sachalinense* (giant).

Recommended Action 2: Add native plants (from Management Plan, 1995)

Recommended Action 3: Maximize habitat diversity and native biodiversity (from Management Plan, 1995)

Guidelines:

- Management will focus on creating habitat diversity and native plant and animal biodiversity.

- Canopy cover in the Loop Trail sub-area will not exceed 30%.
- Management activities will be carried out in a manner that minimizes impacts on water quality and improves aquatic habitat.
- Open areas will be maintained in specified locations in UBNA to improve habitat.

Recommended Action 4: Control human impact (from Management Plan, 1995)

(See recommendations for trails under Recommended Action #8—these serve both purposes.)

Recommended Action 5: Monitor Physical and Biological Conditions (from Management Plan, 1995)

Guidelines:

- Restored sites will be monitored and maintained so that they do not become re-colonized with invasive plants.

Recommended Action 6: Increase and coordinate teaching and research (from Management Plan, 1995)

Guidelines:

- Restoration projects can be used to teach a wide variety of subjects in the natural sciences and beyond; this use will be encouraged and supported.
- Faculty will be encouraged to engage classes in restoration projects on UBNA as long as there is support (tools, assistance, plants, mulch, maintenance) for this restoration from UWBG.
- Students in classes will not be used to do UBNA maintenance, unless enrolled in a maintenance class; volunteers will be encouraged to become involved in the maintenance activities that support UBNA.

Guidelines:

- Access to UBNA for the installation of research plots will require submission of a request to the faculty manager of the site. The manager will confer with a research committee that is made up of UWBG faculty, and with the facilities and grounds manager. Research must be appropriate for the site.
- Any proposed disturbance of the site must not negatively impact adjacent ongoing restoration or research and must not appreciably diminish wildlife or environmental values.
- Upon the completion of a project, the researcher must return the site to a condition acceptable to the research committee.

Recommended Action 7: Enhance personal safety.

*(***add - code blue phones etc. from current conditions section)*

Recommended Action 8: Ensure public accessibility.

Guidelines:

- Wahkiakum Lane will continue to be a major pedestrian and bicycle access route to the campus; this use will be supported and continued.
- The Loop Trail, corporation yard path and any future trail in the Northwest sub-area will provide access to the natural area and will be managed and maintained in a way that creates minimum impact to the surrounding habitat and wildlife.

Specific Management Actions:

Trail management. Both Wahkiakum and the loop trail are maintained to American Disabilities Act (ADA) standards for Class I trails. (Access Board, 1991) Such trails have a minimum width of 8'; the minimum cleared zone is this width plus two feet on either side of the trail, and 10' vertical clearance. Surface aggregate is to be clean, crushed, evenly graded aggregate, 100% passing 3/8" sieve, with some binder fines. Special care will be taken to maintain a non-rutting surface to sustain a good cycling surface during annual gravel applications (by selecting sharp-edged aggregate, adding fines, watering and rolling). Where possible, the trail will be crowned to eliminate ponding of water as a result of rainfall or snowfall. Because of surface subsidence, some depressions periodically appear and cause ponding, especially in fall and winter; efforts will be made to add material at such sites to bring them back to grade and maintain trail passability for pedestrian use.

Recommended Action 9: Provide educational interpretation (from Management Plan, 1995)

Guidelines:

- Public education will be promoted by interpretation, tours, lectures, use of print and electronic media, by promotion of the UWBG trail system, and by holding environmental and community events.
- Educational and interpretive materials will be produced in the appropriate format and in accordance with the UW Botanic Gardens' communication strategy.
- Signage will follow the Washington Park Arboretum Interpretive and Wayfinding Plan guidelines and the UW guidelines for form and size.
- The accessibility of a potential UBNA restoration site for education and public outreach will be considered as a factor in selection.

Specific Management Actions:

Interpretation

Interpretive signage is located at either end of Wahkiakum Lane at the east and west intersections of the loop trail. Such signage provides maps, rules, and information on the research and education missions of UBNA. In addition, at the location of specific research or restoration

projects, scenic views, or wildlife watching areas, etc., explanatory signage appropriate for each site may be installed. Temporary signage about class projects, maintenance operations, and during best viewing periods for birds and flowering plants will be encouraged.

Recommended Action 10: Community Involvement - NEW

Guidelines:

- Restoration projects carried out by neighborhood, corporate or civic volunteer groups in UBNA will be encouraged and supported.
- Restoration will continue at a sustainable rate in UBNA, using students, staff, volunteers and commercial contractors.