

# STEWARDSHIP PLAN

## Part 3

### Native Plant Restoration

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Revised by: New Document Date: NA

Reserves Chairman \_\_\_\_\_ Date: \_\_\_\_\_

#### REVISION HISTORY

Revision	Major Changes
0	Creation of Document by Rick Leary

## I. General Recommendations

The best resource in determining the restoration issues in the Natural Reserves and the priority in which they should be addressed is other interested Innis Arden residents. Have at least one meeting every fall with the reserve committee to plan the budget and set task priorities for the next year. Second, be in contact with the individuals throughout the year.

Management goals within the Natural Reserves are to:

- 1) Reduce invasive species within the Natural Reserves
- 2) Increase conifer regeneration using such short-growing species as Shore Pine, Rocky Mountain Juniper, Mountain Hemlock (?), and Pacific Yew.
- 3) Restore the official trail network
- 4) Stabilize and re-vegetate steep eroding slopes in the Natural Reserves
- 5) Increase the amount of tall shrubs and multiple shrub strata in the Natural Reserves so that sunlight is filtered. This suppresses the growth of Himalayan Blackberries.
- 6) Preserve large snags where safe to do so and increase levels of coarse woody debris in many areas to serve as habitat for wildlife, including insects.

Finally, there are two types of restoration work that can be accomplished in the reserves by a work crew. There is *de minimis* restoration work which does not require a permit, and there is large-area restoration work in critical areas that does require a permit. The following provides help on deciding whether or not a permit from the City of Shoreline is required.

## 2. De Minimis Work

Pulling weeds would be considered *de minimis* work as would making English Ivy survival rings, or planting of native plants in the reserves. Removing Bindweed, removing scattered Himalayan Blackberry, removing scattered Scots Broom, trail maintenance, or more extensive work in areas of less than a 3000 square feet area that is not regulated by the Shoreline Critical Area regulations does not require a permit. Injecting herbicide pellets into English Laurel and English Holly or removing small patches of blackberry, even on slopes or in stream buffers, does not require a permit. Thus, some judgment is required.

A lot can be done within Innis Arden Reserves by volunteers or with hired crews, such as EarthCorps within the bounds of *De Minimis* work.

## 3. Permit Requiring Activities

Work requiring application for a clearing and grading permit usually involves critical areas, such as steep slopes, stream buffers, or wetlands and their buffers. A

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clearing and grading permit is also required when more than 3000 Square Feet of land is worked on where one is making major changes in the landscape.

The critical area requirements can be found in section 20.80 of the Shoreline Municipal Code. It is important to also look at definitions in section 20.20 to understand the code completely. In general, the geological hazard section, the fish and wildlife habitat section, the wetland section, and the stream areas section of the Critical Area code are most relevant to the Innis Arden Natural Reserves.

The application for a permit from the City of Shoreline approximately follows the following process:

A. Assessment. The first question to ask is whether or not whatever work is being done will affect steep slopes (such as disturbance of large quantities of soil), will have a major impact on a wetland, or will have a major impact within a stream buffer. In general we do not do work within streams as this may require Washington State Department of Fish and Wildlife involvement and possibly the Army Corp of Engineers at the federal level.

B. Pre-Application. Work with the City of Shoreline Department of Planning and Community Development (P&CD) to determine what steps are necessary and to get ideas for the restoration or enhancement plan in order to obtain the permit. Usually this is done in the form of a pre-Application meeting. At the meeting it will be important to establish what the planning staff is looking for in the permit application and what can be skipped.

C. Planning. Complete the restoration or enhancement application. The completed application will consist of a report and illustrations showing the restoration work and the planting plan and associated details.

D. Submission. Submit completed application to the City of Shoreline P&CD staff person with whom you are working.

E. Review. The P&CD staff will review the application and respond. The reviewer may require modifications to the application or added documentation of the application to ensure that it complies with the Shoreline Municipal Code.

F. Modifications. Make changes or corrections as request by the reviewer; resubmit application.

G. Post bond. After the P&CD Department approves the mitigation or restoration application, it may require a bond or financial guarantee. The purpose of this bond is to provide funds for the City to complete the project should the Innis Arden fail to do so.

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H. Conduct monitoring. Monitoring of the mitigation area may be required for a period of three to five years. Monitoring reports shall be provided to the department according to a schedule set forth in the approved mitigation application.

K. Complete contingency. Where monitoring reveals a significant deviation from performance standards, you will need to submit a contingency plan and implement it once approved. This constitutes new mitigation plan and is subject to all mitigation and financial guarantee requirements including, but not limited to, monitoring for a period of up to five years.

#### 4. Annual Invasive Plant Maintenance

The King County website has an excellent discussion of how to eradicate various noxious weeds that may appear in the reserves. The website address is [www.kingcounty.gov](http://www.kingcounty.gov) . To get to weed control go to submenus:

Environment  
Animal and Plants  
Noxious Weeds  
Weed Control  
Best Practices.

Specific brochures on approximately 20 of the most common noxious weeds are downloadable with extensive information about effective removals of each type of plant. Common Invasive plants found in Innis Arden Natural Reserves are discussed below, but this website has a wealth of up-to-date information on many other invasive plants that may be found in our reserves.

Volunteer Work Parties. While they are good for community understanding and buy in to the restoration of the reserves, work parties are probably most suited to small projects with definite goals, such as planting a limited number of bare root trees or spreading wood chips around newly planted shrubs.

EarthCorps or hired Maintenance. Maintenance of the reserves requires many hours each year for invasive plant removal, site restoration and trail maintenance. Since early 2012 we have used a local organization: EarthCorps, 6310 NE 74th St, Suite 201E, Seattle, WA 98115 (206)322-9296 (206)322-9296 x101 fax(206)322-9312 and [info@earthcorps.org](mailto:info@earthcorps.org) or email: [projects@earthcorps.org](mailto:projects@earthcorps.org). At approximately \$1500 (2013) per day EarthCorps supplies 5 trained works with equipment. A supervisor will coordinate with the Reserves Chairman and the workers to set up the schedule. A crew can plant 300 to 400 bare root plants in a half acre plot in one day. They can remove invasive shrubs and plants in a fairly heavily infested 1 acre area in one day.

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## 5. Restoration Planting

Restoration Procedures. Use the King County document Critical Areas: Restoration & Enhancement in King County available online at [www.kingcounty.gov](http://www.kingcounty.gov) under the Environment tab, select permit and environmental review, and then select Critical Area Ordinance. This document includes the steps necessary when filing for a permit, including general information, a summary of existing conditions, an impact analysis, the proposed mitigation, the goals of the mitigation, and the performance standards. Use this information for guidance but check with Shoreline P&CD on any issue that might be questionable since Shoreline Municipal Code sometimes is more specific for requirements than the King County Code.

Plant selection. . The criteria considered in selecting plants for restoration was to:

- Provide species diversity to re-establish a healthy, native eco-system
- Attract wildlife while providing cover, food sources, and nesting sites
- Select species of trees that are genetically shorter in height allowing for the maintenance of view corridors where possible; less than 50 feet has been acceptable so far
- Identify species readily available in the nursery trade
- Reduce maintenance demands.
- Maintain slope stability

The plant species selection can be aided using [www.kingcounty.gov](http://www.kingcounty.gov), select Environmental tab, select Plants, animals, and habitat tab, and select native plants tab. Suggestions are made for a variety of environments (sunny, wet, dry, deep shade, etc). Furthermore, the website has many useful articles on planting details, sheet mulching, composting, etc. Also consider using local Shoreline nurseries that specialize in native plants, such as Kruckeberg Botanic Garden/MsK Rare Plant Nursery or GoNatives. They can be helpful both from the standpoint of appropriateness and eye appeal when selecting native plants.

Fertilizer and Mycorrhizal Application. Consider the use of Mycorrhizal fungi and fertilizer at time of planting. This is done to increase adsorption of nutrients and water. Do a web search on Mycorrhizal fungi to find potential sources of the material. (At one time, it was accepted that adding mycorrhizae is generally not needed, in that they are already in soil. You may need to check on this.)

Mulching. All restoration areas should be mulched with 2 inches of wood chips, stockpiled from tree removal and pruning operations, following planting as indicated on the planting details. Prevent any direct contact of mulch with the trunks or stems of plants.

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