Inventory Protocols

Updated June 2019

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BACKGROUND

Green Seattle Partnership

The vision of the Green Seattle Partnership (GSP) is to create a healthy livable city with sustainable urban forests by meeting the following goals:

- Connect people to nature and improves the quality of life by restoring urban forests and natural areas;
- Galvanize an informed, involved, and active community around restoration and stewardship of our shared natural areas;
- Enhance the long-term sustainability of urban natural areas by removing invasive plants, maintaining functional ecosystems, and establishing the resources to carry the program into the future.

The Green Seattle Partnership began in 2004 as a public-private partnership between the City of Seattle and Forterra. They provide resources and technical support to local non-profits and volunteer community groups as well as contracted and crew labor with a goal to restore and maintain 2,500 acres (and now 2,750 acres) of Seattle's forested parkland.

Inventory Program

The GSP has instituted a set of standardized inventory protocols to understand the condition of forested parklands under its stewardship. The protocols are a collection of procedures that can be replicated over time and in different places to compare the condition of management units (zones) against each other or over time.

The inventory is similar to the GSP Monitoring Protocols. Monitoring plot data provides detailed measurements of progress towards the GSP Target Forest Types in ***sample*** locations, while the inventory provides the status of conditions of ***each*** zone so that forest managers can understand how and where work is being conducted across the city, and where more work needs to take place. Both programs inform management decisions.

INVENTORY PROCESS OVERVIEW

Data collection for the GSP inventory provides an assessment of a zone, the primary management unit within the GSP. It can occur at any point in the restoration process, and it can be conducted by contractors, professionals from a partner organization, or by trained volunteers. The process is carried out in the following steps:

1. **Office Preparation:** Before going into the field, surveyors verify the zone(s) to be inventoried. Measurement tools, data sheets, and appropriate zone maps and characteristics are also gathered and if digital data collection devices are used, information is loaded and batteries are charged at this time.

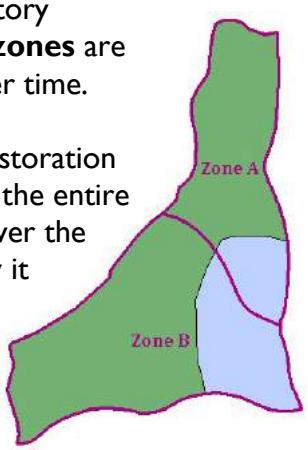
2. **Field Data Collection**: There are three distinct processes for data collection:
   - **Inventory Profile:** Once at the zone, surveyors walk through the zone from end to end, following a path that they feel is representative of the zone, observing and recording general information about the physical condition of the zone, the suitability of the zone for a particular Target Forest Type (reference habitat), and summarizing the composition of the vegetation.
   - **Regeneration Plot:** Surveyors will stop 1time per zone acre along the profile to create a 16 foot radius circular plot and record the regenerating tree species within the plot.
   - **Tree Density Plot:** Surveyors will stop at 2 trees per zone acre along the profile to measure and record the distance to the 5 closest trees.
   - **Phase Mapping:** Surveyors map out the boundaries of restoration activity on the site and apply a phase to each area within the zone.

3. **Data Management:** Data management includes data quality assurance activities, in-office data management, as well as data packaging. This work assures the accuracy and usability of the data and is an ongoing process.

Zones and Sites

The **Zone** is the primary management unit of GSP, and most inventory observations are taken at this level. In the image on the right, the **zones** are delineated by the purple lines. Zone boundaries do not change over time.

A **Site** is an area in which restoration is taking place or in which restoration has taken place. A site's boundaries are fluid and will eventually be the entire area of a zone. A site may be mapped and its area measured, however the only other observation made during an inventory (and the only way it will differ from the rest of the zone) is phase. In the image to the right, the blue areas represent sites within in Zone A and Zone B that are in different phase than the rest of these zones.



OFFICE PREPARATION

Proper planning before field deployment ensures field time is optimized and helps avoid confusion. The important work that needs to be done before departure includes:

1. **Determining the zone(s) for Inventory:** At the beginning of each field season, Seattle Parks and Recreation will create a list of priority areas for inventory. Consideration for inventory should include the following criteria (in order):
    - **a.** If the zone has not been inventoried in more than two years
    - **b.** If the zone has had recent restoration activity (check CEDAR work logs)

2. **Print or Load Maps for Zones:** Once the zones are selected, make sure that you know (1) how to get there, and (2) how to determine when you have arrived. This may include using a GPS enabled device with an online map or printing out a paper map that includes the zone boundaries.

3. **Print or Load Data Sheets:** Data sheets help ensure the consistency and quality of data collection in the field. Ensure that you have either an electronic version of the data sheets or a physical printout for each zone that you will inventory. It is also wise to begin filling out the datasheets with the general zone attributes such as the zone and park names while you have access to that information.

4. **Pack Necessary Equipment:** Before departing, ensure that you have everything you'll need for the field inventory process. An equipment list can be found in Appendix A.

FIELD DATA COLLECTION

Field data collection occurs during the leaf-on season, generally May 15 – October 15 in the Puget Sound Region. For each zone, the data collection takes place in three parts: an inventory profile, a regeneration plot, and phase mapping. For each part, the unit of observation is different. For the inventory profile, observations are made for the zone as a whole. For the regeneration plots, observations are made on the individual plots. And for the phase mapping, observations are made for each separate area of restoration.

They should thus be treated as a separate processes, though collections can take place simultaneously to ensure timely data collection. The subsections below outline each part of the process and provide an explanation of the parameters observed.

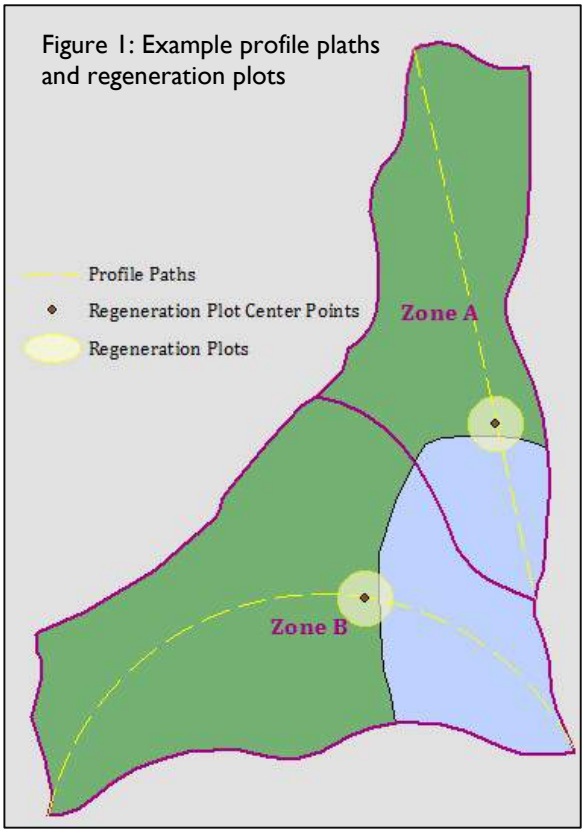


Figure 1: Example profile plaths and regeneration plots

Inventory Profile

An Inventory Profile is a line, or path cut through a site representative of the site's species composition, level or restoration, and target forest type. The Inventory Profile is also used as the path to locate Inventory plot locations.

The following steps outline methods for establishing an inventory profile:

1. Locate the zone using available work log data (CEDAR), or priority inventory zone list
2. Print zone maps using available GIS data, or the project-mapping website. The zones, which are subareas within a park, should be determined from the priority list
3. Verify zone boundary and locate profile route using GPS or Zone map
4. Determine the profile and plots based on zone area. Every zone will have 1 profile and for every acre within the zone there will be 1 regeneration plot and 2 tree density plots. For example, 2 acres will be 1 profile with 2 regeneration plots and 4 tree density plots. All zones less than 1 acre will have a minimum requirement of 1 profile, 1 regeneration plot, and 2 tree density plots.

Zone Size	# of Profiles & Plots
Greater than 0 acres and less than 2 acres	1 profile, 1 regeneration plot, 2 tree density plots
2 acres or greater and less than 3 acres	1 profile, 2 regeneration plots, 4 tree density plots
3 acres or greater and less than 4 acres	1 profile, 3 regeneration plots, 6 tree density plots
4 acres or greater and less than 5 acres	1 profile, 4 regeneration plots, 8 tree density plots

5. Run an inventory profile representing the longest straight line possible through the site. To run a zone profile, walk through the zone from one side to another by the longest possible path to get an idea of the total characteristics of the zone. Ideally, the path would be in a straight line, however, when the zone is an unusual shape (as in Zone B of Figure 1), sometimes it makes more sense to take a curved or bending path.

There are six data sheets to capture zone characteristics: *Inventory Zone Characteristics*, *Inventory Tree Assessment*, *Inventory Vegetation Assessment, Inventory Regeneration Plots, Inventory Tree Density Plots,* and *Phase Mapping*. As you record your observations along the profile, make a measurement or two to calibrate estimates on some of these characteristics. Do not worry about being very precise - this data is meant to be a relatively rapid evaluation of site conditions.

Inventory Zone Characteristics

The zone characteristics help us understand the environmental and structural composition of the zone. The below attributes should pertain to the entire zone. Sometimes zone characteristics will not be homogenous. In those cases, please select your observation based on *what you feel represents the most area within the zone.* Record the following attributes into the datasheet (Appendix B):

Attribute	Explanation/Considerations
Date	Use the date that the inventory takes place.
Park Name	Reference the GSP ArcGIS online map for the full GSP name of the Park .
Zone Name	Reference the GSP ArcGIS online map for the full GSP name of the Zone.
Crew	Include full crew names.
Slope	Use a clinometer to measure the prevailing slope steepness, preferably in degrees.
Aspect	You may want to use a compass to determine the predominant direction of slope on the site. Aspect is best described as the direction in which water flows off the site. Options include *N, NE, E, SE, S, SW, W, NW, or Flat.*
Soil texture	Options are (from more coarse to fine): *gravel, sand, silt, or clay.*
Soil moisture	Do not include the litter or bark mulch layer when surveying the soil. Soil moisture options include *standing water, saturated soil, damp soil,* or *dry soil.*
Soil compaction	Observe the presence of compacted areas on the plot that are human caused. Record the level of compaction on the entire site in one of the following categories: *none, light, moderate, or heavy.*
Soil compaction notes	Note the cause(s) of compaction in the notes section (e.g. trail, campsite).
Soil stability	Observe the presence of erosion over the entire plot and record as one of the following categories: *none, erosion, slumping,* or *slides.*
Litter depth	Probe the depth of the litter or mulch layer on top of the soil. Record the depth in one of the following categories: *0, 0-0.5", 0.5-1", 1"+.*
Bare ground	Determine the percent of the site that has bare ground or mulch (no plants present) for the entire site. Record the percent bare ground in one of the following categories: *0-20%, 20-40%, 40-60%, 60-80%, 80-100%.*
Coarse woody debris (CWD) cover	Visually estimate the percent cover of CWD. CWD includes branches and trees that are newly fallen as well as those that are well into the decomposition process. The CWD must have a diameter of >5". Record CWD percent cover in one of the following categories: *0-5%, 6-10%, 11-25%, 26-50%, 51-100%.*

Canopy Cover	Record the total canopy cover of zone: *0-25, 26-50%, 51-75, >76%.*
Tree Diameter	Record the category representing the average overstory tree diameter: *<5", 5-15", 16-20", 20-30", >30".*
Special features	Note any special features found on the site such as trails, wetlands, streams, dumps, camps, power lines, etc.
Camps	Keep a tally of and note the number of tents or other makeshift structures visible from the path of the profile.
Restoration Status	Determine restoration status based on description (see field sheet).
Percentage of Restoration	Estimate percentage of restoration in zone: *0-20%, 20-40%, 40-60%, 60-80%, >80%.*

Inventory Tree Assessment

The Tree Assessment provides important information on overstory tree species size and cover. This assessment is done for the entire zone on all tree species and snags greater than 5" DBH. Record the following information into the datasheet (Appendix C).

Attribute	Explanation/Considerations
Date	Use the date that the inventory takes place.
Park Name	Reference the GSP ArcGIS online map for the full GSP name of the Park .
Zone Name	Reference the GSP ArcGIS online map for the full GSP name of the Zone.
Crew	Include full crew names.
Species code	Refer to the species list (Appendix H); all native, non-native, and invasive species should be included in this assessment.
Common Name	Refer to the species list (Appendix H); all native, non-native, and invasive species should be included in this assessment.
Tally	Number of trees, for each species, within view from the profile.
Estimated Average DBH	Measure the DBH of two trees with diameter tape. Use these measurements to calibrate an ocular estimate of the average DBH for the species within the zone; DBH refers to Diameter at Breast Height and is the diameter of the tree's main stem or trunk at 4'6".
Estimated Average Height	Measure the height of two trees with a clinometer, relaskop, or laser range finder. Use these measurements to calibrate an ocular estimate of the average tree height for the species within the zone.
Cover (%)	Estimate percent cover for each overstory (>5" DBH) tree species found in the zone .

Inventory Vegetation Assessment

The vegetation assessment collects information about the shrub and herbaceous vegetation on the site. Record the following information into the datasheet (Appendix D).

Attribute	Explanation/Considerations
Date	Use the date that the inventory takes place.
Park Name	Reference the GSP ArcGIS online map for the full GSP name of the Park .
Zone Name	Reference the GSP ArcGIS online map for the full GSP name of the Zone.
Crew	Include full crew names.
Species code	Refer to the species list (Appendix H); all native, non-native, and invasive species should be included in this assessment.
Common Name	Refer to the species list (Appendix H); all native, non-native, and invasive species should be included in this assessment.
Cover (%)	Estimate percent cover for each shrub and herbaceous species intersecting the profile, fractions of a percent should be estimated when coverage appears below 1 percent.

Regeneration Plot

The regeneration plot is a representative sample of a zone, covering approximately 1/50th of an acre. The number of plots per zone should be determined by the zone's acreage (refers to the chart in Step 4 of the Inventory Profile section above). Plots should be randomly spaced throughout the profile. To set up the plot, use a stake with exactly 16' of webbing placed at the center of the plot. The end of the webbing stretched from the stake represents the extent of the plot. If possible, coordinates of the plot center should be taken with a GPS unit.

For each species of regenerating tree (< 5" DBH), provide the following information in the datasheet (Appendix E). Make sure that for **every** species found in **any** of the plots within a zone, a number of regenerating stems (especially if it is zero) is recorded for **every** plot in that zone. Record multiple stems that are connected above ground as a single stem.

Attribute	Explanation/Considerations
Date	Use the date that the inventory takes place.
Park Name	Reference the GSP ArcGIS online map for the full GSP name of the Park .
Zone Name	Reference the GSP ArcGIS online map for the full GSP name of the Zone.
Crew	Include full crew names.
Species code	Refer to the species list (Appendix H); all native, non-native, and invasive species should be included in this assessment.
Common Name	Refer to the species list (Appendix H); all native, non-native, and invasive species should be included in this assessment.
Plot Tally	Record a hash count of trees smaller than 5" DBH per species that intersect webbing as you walk in a complete circle.
Estimated % Cover	For each species present within plots in the zone, estimate the percent cover regenerating (<5" DH) trees have within the plot.

Tree Density Plot

The tree density plot is a representative sample of a zone that is used to estimate the density and number of trees in the zone. The number of plots per zone should be determined by the zone's acreage (refers to the chart in Step 4 of the Inventory Profile section above). Plots should be randomly spaced throughout the profile. To set up the plot, find a tree close to the profile line to serve as the center point. Measure and record the distance to each of the closest 5 trees and snags that are greater than 5" DBH. Provide the following information in the datasheet (Appendix F):

Attribute	Explanation/Considerations
Date	Use the date that the inventory takes place.
Park Name	Reference the GSP ArcGIS online map for the full GSP name of the Park.
Zone Name	Reference the GSP ArcGIS online map for the full GSP name of the Zone.
Crew	Include full crew names.
Visit Plot #	Record the tree density plot number within the zone. If this is the first plot, for example the Visit Plot # would be .
Distance from Plot Center Tree	For each of the closest 5 trees to the center tree, measure and record the distance (in feet) from the center tree.

Phase Mapping

In order to update the phase of restoration, or the work status, of each GSP site or zone, the areas that have seen work in the previous year are mapped annually. The Phases of Restoration include:

Phase 0: Inactive
Phase 0 means that no restoration has taken place. Or, a previously restored site now requires intensive invasive removal and planting.
Phase 1: Initial invasive plant removal
Phase 1 focuses on removing invasive plants for the first time. In areas with high levels of invasive coverage, it may take more than one year to complete initial invasive removal. Signs of activity may include invasive plant compost piles, burlap bags, woodchip mulch, tree rings, herbicide/injection shells. Or, a previously planted site win which there has been very high mortality, but limited re-invasion.
Phase 2: Planting
Phase 2 includes follow-up invasive plant removal (weeding), as well as planting of native trees, shrubs, and groundcovers. May still require spot weeding and planting.
Phase 3: Establishment weeding and watering
Phase 3 repeats invasive plant removal (weeding), if needed, and focuses on plant establishment. Sites are weeded, mulched, and watered as needed. Some sites may stay in Phase 3 for up to five years.
Phase 4: Longterm maintenance and monitoring
Phase 4 is longterm site stewardship, including monitoring by crews and volunteers to provide information for long-term site maintenance. Phase 4 is determined by the Plant Ecologist team, not during phase mapping.

The following process is used for updating the phase map:

1. Determine priority phase mapping locations for the season using work log data (cedar) or from a phase mapping priority list developed by Seattle Parks and Recreation staff.

2. Print current phase maps using the GSP ArcGIS Online map (http://bit.ly/1vvT1xt) or ArcGIS GSP Geodatabase. It is recommended that you display and print roads, trails and imagery. Or, update this information in a handheld GPS unit.
3. Print out associated work log data. Or, update this information in a handheld unit for access in the field.
4. Once in the field, visually locate the boundary of the site and use the following rules as a guide:
    - Compare observations in the field against the work log data
    - The boundary of the new site is where Phase 1, 2 or 3 restoration activities terminate (e.g. a cleared area with < 5% invasive cover with recently installed native plants is situated adjacent to an area of > 5% invasive plant cover that does not show any sign of restoration activity)
5. Walk along the boundary of the restoration site with a mapping device or static map, to record and create a new site boundary feature within each zone. Decide on a starting point and a route that makes the data collection as efficient as possible.
6. Record data in the *Phase Mapping* datasheet (Appendix G).

Attribute	Explanation/Considerations
Date	Use the date that the phase mapping is taking place
Park Name	Reference the GSP ArcGIS online map for the full GSP name of the Park
Zone Name	Reference the GSP ArcGIS online map for the full GSP name of the Zone
Crew	Include full crew names
Estimated Tree-iage	Enter the Treeiage value observed for the entire zone
Phase	Phase identified for the site for visit
Notes	Include any notes or follow up questions

7. If using static maps, digitize and update attributes in ArcMap. Reference the ArcGIS Attribute list included below. Send updated data to the GIS administrator.

* Please use the coordinate system NAD 1983 State Plane Washington North FIPS 4601 Feet.

DATA QUALITY ASSURANCE

Quality assurance includes procedures to ensure that field data is collected and managed accurately. The following two procedures should be used throughout the field season to check the consistency and accuracy of data collected by the field crews, as well as the accuracy of data entry and management processes.

Daily Checks

For inventory and phase mapping data, daily checks should be used by each crew member. These self-checks include the following activities:

- After recording an ocular estimate in the field, take a measurement, then compare your estimate.
- Have two crew members come up with an estimate for the same attribute independently, then compare estimates.
- Before leaving a zone, check to assure all data is recorded properly – all required data attributes are complete and saved properly.
- Upload and review data daily. If a problem with data collection systems exist, resolve it right away.

5% Checks

The 5% Checks are a more formal quality assurance procedure done by an inspector or alternate crew member throughout the field season. 5% of the total acres for the year should be revisited and checked within 2 weeks of their completion date. This applies to both the inventoried acres and the phase mapped acres. Select the zones at random. Do not tell the field crew that a given zone will be reviewed.

To carry out the 5% Check, print the collected data or necessary maps, visit the zone, and walk through the data collected. Re-measure a portion of all the data attributes. Note inconsistencies or errors for follow up.

BACK IN THE OFFICE

Data Management

Master versions of the Inventory and Phase Mapping databases reside on City of Seattle servers. Once field data collection is complete, inventory data should be compilied into an excel workbook of a consistent format to facilitate its integration into master datasets. Templates of this workbook will be provided to teams involved with data collection. If collection has taken place with paper datasheets, the recorded characterisitics can be entered directly into the workbook. For electronic data collection, field names may have to be changed or observations may have to be copied and pasted into the workbook. This process offers one additional chance to ensure that species codes, zone names, and regeneration fields are filled out correctly.

For phase mapping, a template ArcGIS shapefile or geodatabase feature class will be provided into which complete new versions of each zone visited should be added, along with site-specific attributes. For data collected by paper, this will involve digitizing hand drawn maps or boundaries. In either case, the outer boundaries of each zone should follow the original, but the internal boundaries between sites within a zone may be different. Ensure that zone name fields retain integrity with the zone name list and that the date field for each zone is the same.

Once the data has been cleanly entered into the provided template excel workbook (for inventory) and feature class or shapefile (for phase mapping), it should be delivered to either Seattle Parks and Recreation or a contracted data manager for final review and integration into the master databases.

APPENDICES

Appendix A – Equipment List

Inventory Equipment
Backpack
Map with overlay of Zone Boundaries
Wood Stake with 16ft of webbing attached
Measuring Tape or Reel Tape (at least 100')
Compass (with declination)
Clinometer or Rangefinder
Diameter Tape (DBH)
GPS Unit
Digital Camera
Camera Case
Small Sledge Hammer
Wild Plants of Seattle by Arthur Jacobson
Plants of the Pacific Northwest by Pojar and Mackinnon
Clipboard
Protocol Field Guild
Data Entry Device or Field Datasheets
AA Batteries
Optional > Smartphone w/ mapping app (Google Earth, ESRI Collector) or Trimble w/ ArcPad

Additional 10 Field Essentials:
Sun protection (sunglasses, lip balm, and sunscreen)
Bug repellent
Proper clothing and footwear to deal with harsh terrain or inclement weather. Rain gear, waterproof hiking/work boots and gaiters are especially helpful in wet times and places and Insulation like gloves, hats, and jacket.
First Aid Supplies
Utility knife or multi-tools (e.g. Leatherman, Swiss army knife)
Food
Lots of Water! (Plus an extra day's supply)

Appendix B – Field Datasheet: Inventory Zone Characteristics

Inventory Zone Characteristics

GREEN SEATTLE PARTNERSHIP

Date		**Zone Name**	
Park Name		**Crew** *full names*	

Aspect	N	NE	E	SE	S	SW	W	NW	Flat
Slope	degrees	percent	value:						
Soil Texture	sand		silt		clay		gravel		
Soil Moisture	standing water		saturated soil		damp soil		dry soil		
Soil Compaction *visual evidence*	none		light		moderate		heavy		
Compaction	notes:								
Soil Stability *circle if present*	erosion		slumping		slides		stable soils		
Litter Depth	0"		< 1/2"		1/2" - 1"		> 1"		
Bare Ground	0 - 20 %		20 - 40 %		40 - 60 %		60 - 80 %		> 80 %
CoarseWoody Debris *circle percent cover*	0-5%		5 - 10 %		11 - 25 %		26 - 50%		> 50%
Canopy Cover *overstory trees*	0 - 25 %		26 - 50 %		51 - 75 %		> 76 %		
Tree Diameter *average overstory*	< 5"		5" - 15"		16" - 20"		20" - 30"		> 30"
Special features *circle all that apply*	trail	camp	dump	powerline	road	mtn beaver	other:		
	seep	wetland	stream	lake	gully	slide			
Camps	tally:		total:		notes:				
Restoration Status *circle one*	not in restoration		cleared only (not planted)		planted only (not cleared)		cleared and planted		
	partially cleared (not planted)		partially cleared and planted		survival rings cleared only		other:		
Percentage of Restoration	0 - 20 %		20 - 40 %		40 - 60 %		60 - 80 %		> 80 %

Appendix C – Field Datasheet: Inventory Tree Assessment

Inventory Tree Assessment

GREEN SEATTLE PARTNERSHIP

Date		**Zone Name**	
Park Name		**Crew** *full names*	

Species Code	Common Name	Tally	Estimated Average DBH *in inches*	Estimated Height *in feet*	Estimated Cover *% (entire zone)*	Notes

Appendix D – Field Datasheet: Inventory Vegetation Assessment

Inventory Vegetation Assessment

GREEN SEATTLE PARTNERSHIP

Date		Zone Name	
Park Name		Crew *full names*	

Species Code	Common Name	Estimated Coverage %	Species Code	Common Name	Estimated Coverage %

Appendix E – Field Datasheet: Inventory Regeneration Plot

Inventory Regeneration Plot

GREEN SEATTLE PARTNERSHIP

Date		**Zone Name**	
Park Name		**Crew** *full names*	

Plot Number		**Plot 1**		**Plot 2**		**Plot 3**	
GPS Coordinates		*x*	*y*	*x*	*y*	*x*	*y*
Species Code	**Common Name**	**Tally**	**Estimated Cover**	**Tally**	**Estimated Cover**	**Tally**	**Estimated Cover**

Appendix F – Field Datasheet: Tree Density Plot

Inventory Tree Density Plot

GREEN SEATTLE PARTNERSHIP

Date		**Zone Name**	
Park Name		**Crew** *full names*	

Plot #	Distance From Plot Center Tree (ft)				
	Tree 1	Tree 2	Tree 3	Tree 4	Tree 5

Phase Mapping

GREEN SEATTLE PARTNERSHIP

Date		**Zone Name**	
Park Name		**Crew** *full names*	

Field Name	**Zone Attributes**				
Observed TFT					
Observed Treeiage					
Site Number	**Site 1**	**Site 2**	**Site 3**	**Site 4**	**Site 5**
Phase					

Phase 1: Initital invasive plant removal

Phase 1 focuses on removing invasive plants for the first time. In areas with high levels of invasive coverage, it may take more than one year to complete initial invasive removal.

Phase 2: Planting

Phase 2 requires follow-up invasive plant removal (weeding), as well as planting of native trees, shrubs, and groundcovers.

Phase 3: Establishment weeding and watering

Phase 3 repeats invasive plant removal (weeding), if needed, and focuses on plant establishment. Sites are weeded, mulched, and watered as needed. Some sites may stay in Phase 3 for up to three years.

Phase 4: long-term maintenance and monitoring

Phase 4 is long-term site stewardship, including monitoring by crews and volunteers to provide information for long-term site maintenance.

Appendix H – Master Species List

The following species list is the master list for the Green Seattle Partnership and should be followed closely. If a species is not represented here, first review the synonyms in the database. If it a synonym is not found, please note your addition and provide a list of new species to Parks staff during the fall data transfer. Use the USDA Plants Database to determine species codes for unlisted species. The following are life form categories: T = tree, S = shrub, H = herbaceous, G = Grass. No new species codes should be created for species that are already listed as another life form (e.g., . a tree that you would like to list as a shrub).

Species	Scientific_Name	Common	Life_Form	Native	Synonym1	Synonym2
ABAM	Abies amabilis	silver fir	T	Yes		
ABBA	Abies balsamea	Balsam Fir	T	No		
ABGR	Abies grandis	grand fir	T	Yes		
ABIES	Abies sp.	fir	T	No		
ABLA	Abies lasiocarpa	subalpine fir	T	No		
ABPR	Abies procera	noble fir	T	Yes		
ABTH	Abutilon theophrasti	velvetleaf	H	No		
ACCA5	Acer campestre	field maple	T	No		
ACCI	Acer circinatum	vine maple	S	Yes		
ACER	Acer sp.	maple tree	T	No		
ACER_	Acer sp.	maple shrub	S	No		
ACFR	Acer xfreemanii	freeman maple	T	No		
ACGL	Acer glabrum	Rocky Mountain maple	S	Yes		
ACMA3	Acer macrophyllum	bigleaf maple	T	Yes		
ACMI2	Achillea millefolium	yarrow	H	Yes		
ACOC3	Achnatherum occidentale	western needlgrass	G	Yes	Stipa occidentalis	
ACPA2	Acer palmatum	Japanese maple	T	No		
ACPL	Acer platanoides	Norway maple	T	No		
ACPS	Acer pseudoplatanus	sycamore maple	T	No		
ACRE3	Acroptilon repens	Russian knapweed	H	No		
ACRU	Acer rubrum	red maple	T	No		
ACRU2	Actaea rubra	baneberry	H	Yes		
ACSA2	Acer saccharinum	silver maple	T	No		
ACSA3	Acer saccharum	sugar maple	T	No		
ACTR	Achlys triphylla	vanilla leaf	H	Yes		
ADAL	Adiantum aleuticum	maidenhair fern	H	Yes	Adiantum pedatum	

ADBI	Adenocaulon bicolor	pathfinder	H	Yes		
AEHI	Aesculus hippocastanum	horse chestnut	T	No		
AEPO	Aegopodium podagraria	snow-on-the-mountain	H	No		
AGCA5	Agrostis capillaris	creeping bentgrass	G	No	Agrostis tenuis	
AGEX	Agrostis exarata	spike bent grass	G	Yes		
AGROS2	Agrostis sp.	bentgrass	G	No		
AGST2	Agrostis stolonifera	creeping bentgrass	H	No		
AIAL	Ailanthus altissima	tree of heaven	T	No		
AICA	Aira caryophyllea	silver European hairgrass	G	No		
AJRE	Ajuga reptans	bugleweed	H	No		
ALCE2	Allium cernuum	nodding onion	H	Yes		
ALMA12	Alhagi maurorum	camelthorn	H	No		
ALMY	Alopecurus myosuroides	blackgrass	H	No		
ALNUS	Alnus sp.	alder	T	No		
ALPE4	Alliaria petiolata	Garlic mustard	H	No		
ALPL	Alisma plantago-aquatica	water plantain	H	No		
ALPR3	Alopecurus pratensis	meadow-foxtail	G	No		
ALRU2	Alnus rubra	red alder	T	Yes		
ALVIS	Alnus viridis ssp. sinuata	slide alder	T	Yes	Alnus sitchensis	
AMAL2	Amelanchier alnifolia	serviceberry	S	Yes		
ANAR16	Anchusa arvensis	annual bugloss	H	No		
ANCO2	Anthemis cotula	Stinking Chamomile	H	No		
ANGE2	Angelica genuflexa	kneeling Angelica	H	Yes		
ANMA	Anaphalis margaritacea	pearly everlasting	H	Yes		
ANMI3	Antennaria microphylla	little-leaf pussytoes	H	Yes		
ANOD	Anthoxanthum odoratum	sweet vernalgrass	G	No		
ANOF	Anchusa officinalis	common bugloss	H	No		
ANPO	Andromeda polifolia	bog rosemary	S	Yes		
ANSY	Anthriscus sylvestris	wild chervil	H	No		
AQFO	Aquilegia formosa	western columbine	H	Yes		
AQUIL	Aquilegia sp.	columbine	H	No		
ARAB3	Artemisia absinthium	absinth wormwood	H	No		
ARAN7	Argentina anserina	silverweed	H	Yes	Potentilla anserina	
ARBUT	Arbutus sp.	arbutus shrub	S	No		
ARBUT_	Arbutus sp.	arbutus tree	T	No		

ARCO3	Arctostaphylos columbiana	hairy manzanita	S	Yes		
ARCTI	Arctium sp.	burdock	H	No		
ARCTO3	Arctostaphylos sp.	kinnickinnick species	S	No		
ARDIA	Aruncus dioicus var. acuminatus	goatsbeard	H	Yes	Aruncus sylvester	
AREL3	Arrhenatherum elatius	tall oatgrass	G	No		
ARIT	Arum italicum	Italian Arum	H	No		
ARME	Arbutus menziesii	Pacific madrone	T	Yes		
ARMI2	Arctium minus	lesser burdock	H	No		
ARSU4	Artemisia suksdorfii	coastal wormwood	H	Yes		
ARTEM	Artemisia sp.	sages	H	No		
ARUN4	Arbutus unedo	strawberry tree	S	No		
ARUV	Arctostaphylos uva-ursi	bearberry, kinnickinnick	S	Yes		
ASCA2	Asarum caudatum	wild ginger	H	Yes		
ASTER	Aster sp.	Aster species	H	No		
ATFIC	Athyrium filix-femina ssp. cyclosorum	ladyfern	H	Yes		
AUJA	Aucuba japonica	Japanese laurel	S	No		
BAMBU	Bambusa sp.	bamboo	S	No		
BASC5	Kochia scoparia	kochia	H	No		
BEAL2	Betula alleghaniensis	yellow birch	T	No		
BEER	Berula erecta	cutleaf waterparsnip	H	Yes		
BEGL	Betula glandulosa	swamp birch	S	Yes		
BEIN2	Berteroa incana	hoary alyssum	H	No		
BEOC2	Betula occidentalis	water birch	T	Yes		
BEPA	Betula papyrifera	paperbark birch	T	Yes		
BEPE2	Bellis perennis	English daisy	H	No		
BEPE3	Betula pendula	European white birch	T	No		
BEPU5	Betula pubescens	downy birch	T	No		
BERBE	Berberis sp.	barberry	S	No		
BETH	Berberis thunbergii	Japanese barberry	S	No		
BETUL	Betula sp.	birch	T	No		
BIFR	Bidens frondosa	leafy beggar-ticks	H	Yes		
BLSP	Blechnum spicant	deerfern	H	Yes		
BOOF	Borago officinalis	borage	H	No		

BRAL4	Bryonia alba	white bryony	H	No		
BRASS2	Brassica sp.	mustard	H	No		
BRDI3	Bromus diandrus	ripgut brome	G	No	Bromus rigidus var. gussonei	
BROMU	Bromus sp.	brome	G	No		
BRRA2	Bromus racemosus	bald brome	G	No		
BRSI	Bromus sitchensis	Alaska brome	G	Yes		
BRSY	Brachypodium sylvaticum	false brome	G	No		
BRTE	Bromus tectorum	cheatgrass	G	No		
BRVU	Bromus vulgaris	Columbia brome	G	Yes		
BUDA2	Buddleja davidii	butterflybush	S	No		
BUSE2	Buxus sempervirens	common box	S	No		
BUUM	Butomus umbellatus	flowering-rush	G	No		
BUXUS	Buxus sp.	boxwood	S	No		
CAAC	Carduus acanthoides	plumeless thistle	H	No		
CABE8	Carpinus betulus	European hornbeam	T	No		
CACA	Cabomba caroliniana	fanwort	G	No		
CACA27	Cajanus cajan	Pigeonpea	G	No		
CACA4	Calamagrostis canadensis	Canada reedgrass, blue joint	G	Yes		
CADE12	Castanea dentata	American chestnut	T	No		
CADE27	Calocedrus decurrens	incense cedar	T	No		
CADE9	Carex deweyana	Dewey sedge	G	Yes		
CAHI3	Cardamine hirsuta	hairy bittercress	H	No		
CAJA9	Camellia japonica	camellia	S	No		
CAMEL2	Camellia sp.	camellia	S	No		
CAMI12	Castilleja miniata	scarlet Indian paintbrush	H	Yes		
CAMO32	Canadanthus modestus	great northern aster	H	Yes	Aster modestus	
CANO9	Callitropsis nootkatensis	Alaska yellow cedar	T	Yes	Chamaecyparis nootkatensis	
CANU4	Carduus nutans	musk thistle	H	No		
CAOB3	Carex obnupta	slough sedge	G	Yes		
CAPA14	Carex pachystachya	chamisso sedge	G	Yes		
CAPE20	Campanula persicifolia	peach-leaf bellflower	H	No		
CAPY2	Carduus pycnocephalus	Italian thistle	H	No		

CAQU2	Camassia quamash	common camas	H	Yes		
CARDA2	Cardaria sp.	hoary cress	H	No		
CAREX	Carex sp.	sedge	G	No		
CASE13	Calystegia sepium	hedge false bindweed	H	No	Convolvulus sepium	Calystegia sepium ssp. sepium
CAST5	Carex stipata	sawbeak sedge	G	Yes		
CASTA	Castanea sp.	chestnut	T	No		
CATAL	Catalpa sp.	Catalpa species	T	No		
CATE2	Carduus tenuiflorus	slenderflower thistle	H	No		
CEANO	Ceanothus sp.	ceanothus	S	No		
CEAT_	Cedrus atlantica	atlas cedar	T	No		
CECA2	Centaurea calcitrapa	purple starthistle	H	No		
CECA4	Cercis canadensis	eastern redbud	T	No		
CEDE2	Cedrus deodara	Deodar cedar	T	No		
CEDE4	Ceratophyllum demersum	coontail	H	Yes		
CEDI3	Centaurea diffusa	diffuse knapweed	H	No		
CEDRU	Cedrus sp.	cedar	T	No		
CEER5	Centaurium erythraea	Centaurium	H	No		
CEJA	Centaurea jacea	brown knapweed	H	No		
CEJA_	Centaurea jacea x nigra	meadow knapweed	H	No		
CEJA2	Cercidiphyllum japonicum	katsura tree	T	No		
CELO3	Cenchrus longispinus	longspine sandbur	G	No		
CEMA9	Centaurea macrocephala	bighead knapweed	H	No		
CENI2	Centaurea nigra	black knapweed	H	No		
CENI3	Centaurea nigrescens	Vochin knapweed	H	No		
CEOR9	Cercis orbiculata	California redbud	S	No	Cercis occidentalis	
CESO3	Centaurea solstitialis	yellow starthistle	H	No		
CEST8	Centaurea stoebe	spotted knapweed	H	No		
CEVE	Ceanothus velutinus	snowbrush	S	Yes		
CHAMA4	Chamaecyparis sp.	false cypress	T	No		
CHAN9	Chamerion angustifolium	fireweed	H	Yes	Epilobium angustifolium	Chamerion angustifolium ssp. angustifolium
CHJU	Chondrilla juncea	rush skeletonweed	H	No		
CHLA	Chamaecyparis lawsoniana	Port Orford cedar	T	No		

CHOB8	Chamaecyparis obtusa	Hinoki falsecypress	T	No		
CHPI12	Chamaecyparis pisifera var. 'Squarrosa'	moss falsecypress	T	No		
CHSP12	Chaenomeles speciosa	flowering quince	S	No		
CIAL	Circaea alpina	enchanter's nightshade	H	Yes		
CIAR4	Cirsium arvense	Canada thistle	H	No		
CIIN	Cichorium intybus	chicory	H	No		
CILA2	Cinna latifolia	drooping woodreed	G	Yes		
CIRSI	Cirsium sp.	thistle	H	No		
CIVU	Cirsium vulgare	bull thistle	H	No		
CLAL3	Clethra alnifolia	coastal sweetpepperbush	S	No		
CLAML	Clarkia amoena	farewell to spring	H	Yes		
CLEMA	Clematis sp.	clematis	H	No		
CLKE	Cladrastis kentukea	American yellowwood	T	No		
CLPE	Claytonia perfoliata	miner's lettuce	H	Yes		
CLSIS	Claytonia sibirica	Siberian miner's lettuce	H	Yes	Montia sibirica	
CLVI6	Clematis vitalba	evergreen clematis	H	No		
COAR4	Convolvulus arvensis	field bindweed	H	No		
COAV80	Corylus avellana	European hazelnut	S	No		
COBU4	Cotoneaster bullatus	hollyberry cotoneaster	S	No		
COCO6	Corylus cornuta	beaked hazelnut	S	Yes		
COCO7	Cotula coronopifolia	brass buttons	H	No		
CODI19	Cotoneaster divaricatus	spreading cotoneaster	S	No		
COFR3	Cotoneaster franchetii	franchet cotoneaster	S	No		
COHO80	Cotoneaster horizontalis	rockspray cotoneaster	S	No		
COMA2	Conium maculatum	poison hemlock	H	No		
CONU4	Cornus nuttalli	Pacific dogwood	T	Yes		
CONVO	Convolvulus sp.	bindweed	H	No		
COPA28	Comarum palustre	marsh cinquefoil	H	Yes	Potentilla palustris	
CORNU	Cornus sp.	dogwood shrub	S	No		
CORNU_	Cornus sp.	dogwood tree	T	No		
CORYL	Corylus sp.	hazelnut	S	No		
COSC4	Corydalis scouleri	Pacific fumitory	H	Yes		
COSE16	Cornus sericea	red-osier dogwood	S	Yes	Cornus stolonifera	
COSE4	Cortaderia selloana	pampas grass	H	No		

COSEKE_	Cornus sericea var. 'Kelseyi'	redtwig dogwood 'Kelseyi'	S	No		
COSI82	Cotoneaster simonsii	Simons cotoneaster	S	No		
COTON	Cotoneaster sp.	cotoneaster	S	No		
COUN	Cornus unalaschkensis	bunchberry	H	Yes	Cornus canadensis	
CRATA	Crataegus sp.	horticultural hawthorne species	T	No	mostly C. monogyna	
CRCA3	Crepis capillaris	Smooth Hawksbeard	H	No		
CRDO2	Crataegus douglasii	Pacific hawthorn	T	Yes		
CRJA3	Cryptomeria japonica	Japanese cedar	T	No		
CRMO3	Crataegus monogyna	oneseed hawthorn	T	No		
CROCO	Crocosmia sp.	crocosmia	H	No		
CRPH2	Crataegus phippsii	Phipps' hawthorn	T	Yes		
CRVU2	Crupina vulgaris	common crupina	H	No		
CUCUR	Cucurbita sp.	garden squash	H	No		
CUPRE	Cupressus sp.	Cypress Sp.	T	No		
CYCLA	Cyclamen sp.	cyclamen	H	No		
CYCR	Cynosurus cristatus	crested dogstail grass	G	No		
CYES	Cyperus esculentus	yellow nutgrass	G	No		
CYSC4	Cytisus scoparius	scotch broom	S	No		
DACA6	Daucus carota	Queen Anne's lace	H	No		
DAFR6	Dasiphora fruticosa	shrubby cinquefoil	S	Yes		
DAGL	Dactylis glomerata	orchardgrass	G	No		
DALA11	Daphne laureola	Spurge Laural	S	No		
DAPHN2	Daphne sp.	daphne	S	No		
DECE	Deschampsia cespitosa	tufted hairgrass	G	Yes		
DEEL	Deschampsia elongata	slender hairgrass	G	Yes		
DIFO	Dicentra formosa	western bleedingheart	H	Yes		
DIFU2	Dipsacus fullonum	teasel	H	No	Dipsacus sylvestris	
DIGIT	Digitalis sp.	foxglove	H	No		
DIPU	Digitalis purpurea	foxglove	H	No		
DISA	Digitaria sanguinalis	hairy crabgrass	G	No		
DISP	Distichlis spicata	inland saltgrass	G	Yes		
DREX2	Dryopteris expansa	wood fern	H	Yes	Dryopteris austreaca	
DUIN	Duchesnea indica	mock strawberry	H	No		
ECCR	Echinochloa crus-galli	barnyard-grass	G	No		

ECVU	Echium vulgare	blueweed, viper's bugloss	H	No		
EGDE	Egeria densa	Brazilian elodea	H	No		
ELAEA	Elaeagnus sp.	elaeagnus	S	No		
ELCA7	Elodea canadensis	Canadian waterweed	H	Yes		
ELEOC	Eleocharis sp.	spike rush	G	No		
ELGL	Elymus glaucus	blue wildrye	G	Yes		
ELPA3	Eleocharis palustris	spike rush	H	Yes		
ELRE4	Elymus repens	quackgrass	G	No	Agropyron repens	
EMNI	Empetrum nigrum	black crowberry	S	Yes		
EPCI	Epilobium ciliatum	fringed willowherb	H	Yes		
EPCIW	Epilobium ciliatum ssp. watsonii	willowherb	H	Yes	Epilobium watsonii	
EPHI	Epilobium hirsutum	hairy willow-herb	H	No		
EPILO	Epilobium sp.	willowherb	H	No		
EPIME	Epimedium sp.	bishop's hat	S	No		
EPMI	Epilobium minutum	Chaparral Willow	S	No		
EQAR	Equisetum arvense	scouring rush	H	Yes		
EQHY	Equisetum hyemale	horsetail rush	H	Yes		
EQSY	Equisetum sylvaticum	wooland horsetail	H	Yes		
EQTE	Equisetum telmateia	giant horsetail rush	H	Yes		
EQUIS	Equisetum sp.	horsetail	H	No		
ERCA6	Eriodictyon californicum	yerba santa	S	No		
ERICA	Erica sp.	heath	S	No		
ERIGE2	Erigeron sp.	fleabane	H	No		
ERLA6	Eriophyllum lanatum	woolly sunflower	H	Yes		
EROR4	Erythronium oregonum	while fawn-lily	H	Yes		
ESCA2	Eschscholzia californica	California poppy	H	No		
EUAL13	Euonymus alatus	burning bush	S	No		
EUCAL	Eucalyptus sp.	eucalyptus	T	No		
EUES	Euphorbia esula	leafy spurge	H	No		
EUEU7	Euonymus europaeus	European spindle tree	S	No		
EUFO5	Euonymus fortunei	winter creeper	S	No		
EUOB4	Euphorbia oblongata	eggleaf spurge	H	No		
EUOC4	Euthamia occidentalis	Western goldenrod	H	Yes	Solidago occidentalis	
FAGUS	Fagus sp.	beech	T	No		

FASY	Fagus sylvatica	European beech	T	No		
FEIDR2	Festuca idahoensis ssp. roemeri	Idaho Fescue	G	Yes	Festuca roemeri	
FERU2	Festuca rubra	red fescue	H	No		
FESTU	Festuca sp.	fescue	G	No		
FICUS	Ficus sp.	fig	S	No		
FORSY	Forsythia sp.	forsythia	S	No		
FOVU	Foeniculum vulgare	fennel	H	No		
FRAGA	Fragaria sp.	strawberry	H	No		
FRAXI	Fraxinus sp.	ash	T	No		
FRCH	Fragaria chiloensis	beach strawberry	H	Yes		
FRLA	Fraxinus latifolia	Oregon ash	T	Yes		
FRPE	Fraxinus pennsylvanica	green ash	T	No		
FRPU7	Frangula purshiana	cascara	T	Yes	Rhamnus purshiana	
FRVE	Fragaria vesca	woodland strawberry	H	Yes		
FRVI	Fragaria virginiana	virginia strawberry	H	Yes		
GAAP2	Galium aparine	stickywilly	H	Yes		
GAEL	Garrya elliptica	silktassel	S	No		
GALIU	Galium sp.	bedstraw	H	No		
GAOF	Galega officinalis	goatsrue	H	No		
GASH	Gaultheria shallon	salal	S	Yes		
GATR2	Galium trifidum	threepetal bedstraw	H	Yes		
GEDI	Geranium dissectum	Cutleaf geranium	H	No		
GELU	Geranium lucidum	shiny geranium	H	No		
GEMA4	Geum macrophyllum	bigleaved avens	H	Yes		
GEMO	Geranium molle	dove-foot geranium	H	No		
GENIS	Genista sp.	broom	S	No		
GERAN	Geranium sp.	geranium	H	No		
GERO	Geranium robertianum	herb Robert	H	No		
GEUR	Geum urbanum	herb bennet	H	No		
GLECH	Glechoma sp.	glechoma	H	No		
GLEL	Glyceria elata	tall mannagrass	G	Yes		
GLHE2	Glechoma hederacea	ground ivy	H	Yes		
GLMA3	Glyceria maxima	reed sweetgrass	G	No		
GLST	Glyceria striata	tall mannagrass	G	Yes	Glyceria elata	

GLTR	Gleditsia triacanthos	honey locust	T	No		
GLYCE	Glyceria sp.	mana grass	G	No		
GRIN	Grindelia integrifolia	Pacific gumweed	H	Yes		
HEAU	Helenium autumnale	common sneezeweed	H	Yes		
HEBE	Hebe sp.	hebe	S	No		
HECI	Helianthus ciliaris	Texas blueweed	H	No		
HEHE	Hedera helix	English ivy	H	No		
HELE4	×Hesperotropsis leylandii	Leyland cypress	T	No	xCupressocyparis leylandii	Cupressocyparis leylandii
HELLE	Helleborus sp.	hellebore	H	No		
HEMA17	Heracleum mantegazzianum	giant hogweed	H	No		
HEMA3	Hesperis matronalis	dames rocket	H	No		
HEMA80	Heracleum maximum	cow parsley	H	Yes	Heracleum maximum	
HEMER	Hemerocallis sp.	daylilly	H	No		
HEMI7	Heuchera micrantha	small-flowered alumroot	H	Yes		
HIAL2	Hieracium albiflorum	White-flowered hawkweed	H	Yes		
HIAT2	Hieracium atratum	polar hawkweed	H	No		
HIAU	Hieracium aurantiacum	orange hawkweed	H	No		
HICA10	Hieracium caespitosum	yellow hawkweed	H	No		
HIERA	Hieracium sp.	all other non-native and invasive hawkweed	H	No		
HIFL3	Hieracium xfloribundum	yellow devil hawkweed	H	No		
HIGL3	Hieracium glomeratum	queen-devil hawkweed	H	No		
HILA4	Hieracium laevigatum	smooth hawkweed	H	No		
HILA8	Hieracium lachenalii	common hawkweed	H	No		
HIPI	Hieracium pilosella	mouseear hawkweed	H	No		
HISA4	Hieracium sabaudum	European hawkweed	H	No		
HOBR2	Hordeum brachyantherum	meadow barley	G	Yes		
HODI	Holodiscus discolor	oceanspray	S	Yes		
HOLA	Holcus lanatus	velvetgrass	G	No		
HOSTA	Hosta sp.	plantain lily	H	No		
HYDRA	Hydrangea sp.	hydrangea	S	No		
HYHI5	Hyacinthoides hispanica	Spanish bluebell	H	No		
HYPE	Hypericum perforatum	St. John's wort	H	No		

HYPER	Hypericum sp.	St. Johnswort	H	No		
HYRA	Hydrocotyle ranunculoides	floating marsh-pennywort	H	Yes		
HYRA3	Hypochaeris radicata	hairy cat's-ear	H	No		
HYTE	Hydrophyllum tenuipes	Pacific waterleaf	H	Yes		
HYVE3	Hydrilla verticillata	hydrilla	H	No		
ILAQ80	Ilex aquifolium	English holly	T	No		
ILCR2	Ilex crenata	Japanese holly	S	No		
ILEX	Ilex sp.	Holly	T	No		
IMCA	Impatiens capensis	jewelweed	H	No		
IMGL	Impatiens glandulifera	Policeman's helmet	H	No		
IRDO	Iris douglasiana	Douglas iris	H	No		
IRIS	Iris sp.	iris	H	No		
IRPS	Iris pseudacorus	yellow flag iris	H	No		
IRTE	Iris tenax	Oregon iris	H	Yes		
ISTI	Isatis tinctoria	dyers woad	H	No		
JUAC	Juncus acminatus	tapertip rush	G	Yes		
JUBA	Juncus balticus	Baltic Rush	G	No	Juncus arcticus ssp. littoralis	Juncus arcticus ssp. balticus
JUCO6	Juniperus communis	common juniper	T	Yes		
JUEF	Juncus effusus	soft rush	G	Yes		
JUEN	Juncus ensifolius	daggerleaf rush	G	Yes		
JUFI	Juncus filiformis	thread rush	G	Yes		
JUGLA	Juglans sp.	walnut	T	No		
JUNCU	Juncus sp.	rush	G	No		
JUNI	Juglans nigra	black walnut	T	No		
JUNIP	Juniperus sp.	juniper	S	No		
JUNIP_	Juniperus sp.	juniper tree	T	No		
JURE80	Juglans regia	English walnut	T	No		
JUTE	Juncus tenuis	slender rush	G	Yes		
KAMI	Kalmia microphylla	Western swamp laurel	S	Yes		
KEJA	Kerria japonica	Japanese rose	S	No		
KNUV80	Kniphofia uvaria	torch lily	H	No		
LAAN2	Laburnum anagyroides	golden chain tree	T	No		
LABUR	Laburnum sp.	golden chain tree	T	No		
LACO3	Lapsana communis	nipplewort	H	No		

LAGA2	Lamiastrum galeobdolon	yellow archangel	H	No		
LAJA	Lathyrus japonicus	beach pea	H	Yes		
LAKA2	Larix kaempferi	Japanese larch	T	No		
LALA4	Lathyrus latifolius	everlasting pea	H	No		
LAMIU	Lamium sp.	deadnettle	H	No		
LANE3	Lathyrus nevadensis	Sierra pea	H	Yes		
LAOC	Larix occidentalis	western larch	T	Yes		
LAPO3	Lathyrus polyphyllus	leafy pea	H	Yes		
LAPU2	Lamium purpureum	dead-nettle	H	No		
LARIX	Larix sp.	larch	T	No		
LASE	Lactuca serriola	prickly lettuce	H	No		
LAVAN	Lavandula sp.	lavender	H	No		
LEGR	Ledum groenlandicum	Labrador tea	S	Yes		
LEHO7	Lepyrodiclis holosteoides	lepyrodiclis		No		
LELA2	Lepidium latifolium	perennial pepperweed	H	No		
LEMI3	Lemna minor	duckweed	H	Yes		
LEMO8	Leymus mollis	dune grass	G	Yes	Elemus mollis	
LEMOM2	Leymus mollis ssp. mollis	dunegrass	G	Yes	Elymus mollis	
LETA	Leontodon taraxacoides	hairy hawkbit	H	No	Leontodon saxatilis	
LEVU	Leucanthemum vulgare	oxeye daisy	H	No		
LIDAD	Linaria dalmatica ssp. dalmatica	Dalmatian toadflax	H	No		
LIGUS2	Ligustrum sp.	privet hedge	S	No		
LIRIO	Liriodendron sp.	tuliptree	T	No		
LISI	Ligustrum sinense	Chinese privet	S	No		
LIST2	Liquidambar styraciflua	American sweetgum	T	No		
LITU	Liriodendron tulipifera	tuliptree	T	No		
LOCI3	Lonicera ciliosa	orange honeysuckle	H	Yes		
LOCO6	Lotus corniculatus	bird's-foot trefoil	H	No		
LOHI2	Lonicera hispidula	hairy honeysuckle	H	Yes		
LOIN5	Lonicera involucrata	twinberry	S	Yes		
LOLIU	Lolium sp.	ryegrass	H	No		
LONI5	Lonicera nitida	box honeysuckle	S	No		
LONIC	Lonicera sp.	honeysuckle	S	No		
LOPE	Lolium perenne	perennial ryegrass	G	No		

LOUN	Lotus unifoliolatus	American bird's-foot trefoil	H	Yes		
LUAN	Lunaria annua	annual honesty	H	No		
LUAR2	Lupinus arcticus	arctic lupine	H	Yes		
LUBI	Lupinus bicolor	two -color lupine	H	Yes		
LUHE5	Ludwigia hexapetala	water primrose	H	No	Ludwigia grandiflora ssp. hexapetala	
LULA4	Lupinus latifolius	broadleaf lupine	H	Yes		
LUMU2	Luzula multiflora	common woodrush	H	Yes		
LUPA4	Luzula parviflora	small-flowered woodrush	G	Yes		
LUPE5	Ludwigia peploides	floating primrose-willow	H	No		
LUPIN	Lupinus sp.	lupine	H	No		
LUPO2	Lupinus polyphyllus	bigleaf lupine	H	Yes		
LUZUL	Luzula sp.	woodrush	G	No		
LYAM	Lycopus americanus	cut-leaved bugleweed	H	Yes		
LYAM3	Lysichiton americanus	skunk cabbage	H	Yes		
LYCO	Lychnis coronaria	rose campion	H	No		
LYCOP4	Lycopus sp.	water-horehound	H	No		
LYSA2	Lythrum salicaria	purple loosestrife	H	No		
LYUN	Lycopus uniflorus	Northern water horehound	H	Yes		
LYVU	Lysimachia vulgaris	garden loosestrife	H	No		
MAAQ2	Mahonia aquifolium	tall Oregon grape	S	Yes	Berberis aquifolium	
MADI	Maianthemum dilatatum	false lily-of-the-valley	H	Yes		
MADI6	Matricaria discoidea	pineapple weed	H	Yes		
MADIA	Madia sp.	tarweed	H	No		
MADO4	Malus xdomestica	domestic apple	T	No	Malus pumila	
MAFU	Malus fusca	western crabapple	S	Yes		
MAGR4	Magnolia grandiflora	southern magnolia	T	No		
MAHON	Mahonia sp.	Mahonia species variety	S	No		
MAIAN	Maianthemum sp.	solomon's seal	H	No		
MALUS	Malus sp.	horticultural apple species	T	No		
MANE2	Mahonia nervosa	low Oregon grape	S	Yes	Berberis nervosa	
MARA7	Maianthemum racemosum	false Solomon's seal	H	Yes	Smilacina racemosa	
MARE11	Mahonia repens	creeping barberry	S	Yes	Berberis repens	
MAST4	Maianthemum stellatum	Star-flowered false solomon's seal	H	Yes	Smilacina stellata	

MEAL2	Melilotus albus	white sweet clover	H	No		
MEAR4	Mentha arvensis	field mint	H	Yes		
MEGL8	Metasequoia glyptostroboides	dawn redwood	T	No		
MELU	Medicago lupulina	hop clover	H	No		
MENTH	Mentha sp.	mint	H	No		
MEOF	Melilotus officinalis	yellow sweet-clover	H	No		
MEOF2	Melissa officinalis	lemon balm	H	No		
MESP	Melica spectabilis	purple oniongrass	H	Yes		
MESU	Melica subulata	Alaska oniongrass	G	Yes		
MIGU	Mimulus guttatus	seep monkey-flower	H	Yes		
MIMO3	Erythranthe moschata	sticky monkey-flower	H	Yes	Mimulus moschatus	
MINY	Mirabilis nyctaginea	wild four o'clock		No		
MOAL	Morus alba	White mulberry	G	No		
MOCA6	Morella californica	pacific wax myrtle	S	Yes	Myrica californica	
MOMA3	Moehringia macrophylla	Big-Leaved Sandwort	S	Yes	Arenaria macrophylla	
MYAQ2	Myriophyllum aquaticum	parrot feather		No		
MYDI	Myosotis discolor	changing forget-me-not	H	No		
MYGA	Myrica gale	sweet myrtle	S	Yes		
MYHE2	Myriophyllum heterophyllum	variable-leaf milfoil		No		
MYMU	Mycelis muralis	wall-lettuce	H	No	Lactuca muralis	
MYOSO	Myosotis sp.	forget-me-not	H	No		
MYSC	Myosotis scorpioides	water forget-me-not	H	No		
MYSP2	Myriophyllum spicatum	milfoil	H	No		
MYSY	Myosotis sylvatica	garden forget me not	H	No		
NAGU	Najas guadalupensis	Guadalupe water-nymph	H	Yes		
NAOF	Nasturtium officinale	water cress	H	No	Rorippa nasturtium-aquaticum	
NARCI	Narcissus sp.	daffodil	H	No		
NONE3	Nothochelone nemorosa	woodland beardtongue	H	Yes		
NULUP	Nuphar lutea ssp. polysepala	yellow pond-lily	H	Yes	Nuphar polysepala	
NUPHA	Nuphar sp.	yellow water lily	H	No		
NYMPH	Nymphaea sp.	waterlily	H	No		

NYOD	Nymphaea odorata	fragrant waterlily	H	No		
NYPE	Nymphoides peltata	yellow floating heart		No		
OECE	Oemleria cerasiformis	indian plum	S	Yes		
OESA	Oenanthe sarmentosa	water parsley	H	Yes		
OLDO	Olsynium douglasii	purple-eyed grass	H	Yes		
ONAC	Onopordum acanthium	Scotch thistle		No		
OPHO	Oplopanax horridus	devil's club	H	Yes		
ORUM	Ornithogalum umbellatum	star-of-Bethlehem	H	No		
OSBE	Osmorhiza berteroi	sweet cicely	H	Yes	Osmorhiza chilensis	
OSMAN	Osmanthus sp.	devilwood	S	No		
OSPU	Osmorhiza purpurea	sweet cicely	H	Yes		
OSVI	Ostrya virginiana	hophornbeam	T	No		
OXALI	Oxalis sp.	sorrel	H	No		
OXOR	Oxalis oregana	redwood sorrel	H	Yes		
PACA6	Panicum capillare	Old Witch grass	G	No		
PAMY	Paxistima myrsinites	Oregon boxwood, Oregon boxleaf	S	Yes	Pachystima myrsinites	
PAPAV	Papaver sp.	poppies	H	No		
PASA2	Pastinaca sativa	wild parsnip	H	No		
PEFRP	Petasites frigidus var. palmatus	sweet coltsfoot	H	Yes		
PERU	Penstemon rupicola	rock penstemon	H	Yes		
PESE5	Penstemon serrulatus	coast penstemon	H	Yes		
PHAR3	Phalaris arundinacea	reed canarygrass	G	No		
PHAU7	Phragmites australis	common reed	G	No	Phragmites communis	
PHCA11	Physocarpus capitatus	Pacific ninebark	S	Yes		
PHILA	Philadelphus sp.	ornamental mock orange	S	No		
PHLE4	Philadelphus lewisii	mockorange	S	Yes		
PHOTI	Photinia sp.	chokeberry	S	No		
PHPR3	Phleum pratense	timothygrass	G	No		
PIAB	Picea Abies	Norway spruce	T	No		
PICEA	Picea sp.	spruce	T	No		
PICOC	Pinus contorta var. contorta	shore pine	T	Yes	var. contorta	
PIEN	Picea engelmannii	Engelmann's spruce	T	Yes		
PIHI	Picris hieracioides	oxtongue hawkweed		No		

PIJA3	Pieris japonica	Japanese pieris	S	No		
PIJE	Pinus jeffreyi	Jeffrey Pine	T	No		
PIMA	Picea mariana	black spruce	T	No		
PIMO3	Pinus monticola	western white pine	T	Yes		
PIMU80	Pinus mugo	mugo pine	T	No		
PINI	Pinus nigra	Austrian pine	T	No		
PINUS	Pinus sp.	pine	T	No		
PIPO	Pinus ponderosa	ponderosa pine	T	Yes		
PIPU	Picea pungens	blue spruce	T	No		
PIRE	Pinus resinosa	red pine	T	No		
PISA2	Pinus sabiniana	digger pine, gray pine	T	No		
PISI	Picea sitchensis	Sitka spruce	T	Yes		
PISY	Pinus sylvestris	scotch pine	T	No		
PITA4	Pinus tabuliformis	Chinese Pine	T	No		
PITH2	Pinus thunbergii	Japanese black pine	T	No		
PLANT	Plantago sp.	plantain	H	No		
PLECT2	Plectranthus sp.	plectranthus	H	No		
PLHI	Platanus ×hispanica	London planetree	T	No	Platanus ×acerifolia	
PLLA	Plantago lanceolata	lance-leaved plantain	H	No		
PLMA2	Plantago major	broad-leaved plantain	H	No		
PLMA3	Plantago maritima	salt marsh plantain	H	Yes		
PLOC	Platanus occidentalis	American sycamore	T	No		
POA	Poa sp.	bluegrass	G	No		
POAL7	Populus alba	white poplar	T	No		
POAN	Poa annua	annual bluegrass	G	No		
POBO10	Polygonum ×bohemicum	Bohemian knotweed	H	No		
POCO10	Polygonum convolvulus	black bindweed	H	No		
POCU6	Polygonum cuspidatum	Japanese knotweed	H	No		
PODE3	Populus deltoides	eastern cottonwood	T	No		
POGL8	Polypodium glycyrrhiza	licorice fern	H	Yes		
POGR9	Potentilla gracilis	slender cinquefoil	H	Yes		
POHY2	Polygonum hydropiperoides	mild waterpepper	H	Yes		
POLA4	Polygonum lapathifolium	smartweed	H	No		
POLYG4	Polygonum sp.	knotweed	H	No		
POMU	Polystichum munitum	sword fern	H	Yes		

PONI	Populus nigra	black poplar	T	No		
POPE3	Polygonum persicaria	spotted ladysthumb	H	No	Persicaria maculosa	
POPO5	Polygonum polystachyum	Himalayan knotweed	H	No	Persicaria wallichii	
POPR	Poa pratensis	Kentucky bluegrass	G	No		
POPUL	Populus sp.	horticultural poplar varieties	T	No		
POPUT3	Potamogeton pusillus ssp. tenuissimus	Berchtold's pondweed	H	Yes	Potamogeton berchtoldii	
PORE5	Potentilla recta	sulfur cinquefoil	H	No		
PORI2	Potamogeton richardsonii	Richardson's pondweed	H	Yes		
POSA4	Polygonum sachalinense	giant knotweed	H	No		
POTR15	Populus trichocarpa	black cottonwood	T	Yes	Populus balsamifera trichocarpa	
POTR5	Populus tremuloides	aspen	T	Yes		
PRAV	Prunus avium	sweet cherry	T	No		
PRCE2	Prunus cerasifera	cherry plum	T	No		
PRDO	Prunus domestica	horticultural plum	T	No		
PREM	Prunus emarginata	bitter cherry	T	Yes		
PRHOO	Prosartes hookeri var. oregana	Hooker's fairybells	H	Yes	Disporum hookeri	
PRIMU	Primula sp.	primrose	H	No		
PRLA5	Prunus laurocerasus	cherry laurel	T	No		
PRLU	Prunus lusitanica	Portugal laurel	T	No		
PRPU4	Prunus xpugetensis	hybrid bitter cherry	T	No		
PRSE2	Prunus serotina	black cherry	T	Yes		
PRSP	Prunus spinosa	sloe	T	No		
PRSU2	Prunus subcordata	Klamath plum	T	Yes		
PRUNU	Prunus sp.	horticultural cherry species	T	No		
PRVU	Prunella vulgaris	common self heal	H	Yes		
PSME	Pseudotsuga menziesii	Douglas fir	T	Yes		
PSST7	Pseudognaphalium stramineum	cotton-batting plant	H	Yes		
PTAQ	Pteridium aquilinum	bracken fern	H	Yes		
PUMOL	Pueraria montana var. lobata	kudzu	H	No		

PYCA80	Pyrus calleryana	bradford pear	T	No		
PYRAC	Pyracantha sp.	firethorn	S	No		
PYRUS	Pyrus sp.	ornamental pear	T	No		
QUCE	Quercus cerris	turkey oak	T	No		
QUDE4	Quercus dentata	Daimyo Oak	T	No		
QUERC	Quercus sp.	oak	T	No		
QUGA4	Quercus garryana	Garry oak	T	Yes		
QUKE	Quercus kelloggii	black oak	T	No		
QUPA2	Quercus palustris	pin oak	T	No		
QURO2	Quercus robur	English oak	T	No		
QURU	Quercus rubra	red oak	T	No		
RAAC3	Ranunculus acris	meadow buttercup	H	No		
RAFI	Ficaria verna	Lesser celandine	H	No	Ranunculus ficaria	
RARE3	Ranunculus repens	creeping buttercup	H	No		
RAUN	Ranunculus uncinatus	woodland buttercup	H	Yes		
RHAPH	Rhaphiolepis sp.	rhaphiolepsis	S	No		
RHGL	Rhus glabra	smooth sumac	S	Yes		
RHMA3	Rhododendron macrophyllum	western rhododendron	S	Yes		
RHODO	Rhododendron sp.	horticultural rhododendron varieties	S	No		
RHTY	Rhus typhina	staghorn sumac	S	No		
RHUS	Rhus sp.	sumac	S	No		
RIBES	Ribes sp.	currant	S	No		
RIBR	Ribes bracteosum	stink currant	S	Yes		
RIDI	Ribes divaricatum	wild gooseberry	S	Yes		
RILA	Ribes lacustre	swamp gooseberry	S	Yes		
RISA	Ribes sanguineum	red-flowering currant	S	Yes		
RIVI3	Ribes viscosissimum	sticky currant	S	Yes		
ROAU	Rorippa austriaca	Austrian fieldcress	H	No		
ROGY	Rosa gymnocarpa	baldhip rose	S	Yes		
ROMU	Rosa multiflora	Japanese rambler rose	S	No		
RONU	Rosa nutkana	Nootka rose	S	Yes		
ROOF	Rosmarinus officinalis	garden rosemary	H	No		
ROPI2	Rosa pisocarpa	clustered wildrose	S	Yes		

ROPS	Robinia pseudoacacia	black locust	T	No		
RORU	Rosa rugosa	beach rose	S	No		
RORU82	Rosa eglanteria	sweet briar rose	S	No	Rosa rubiginosa	
ROSA5	Rosa sp.	rose	S	No		
ROWO	Rosa woodsii	wood's rose	S	Yes		
RUAC3	Rumex acetosella	sheep sorel	H	No		
RUAQ	Rumex aquaticus	Western Dock	G	No		
RUAR9	Rubus armeniacus	Himalayan blackberry	S	No	Rubus bifrons	Rubus discolor
RUBUS	Rubus sp.	raspberry	S	No		
RUCR	Rumex crispus	curly dock	H	No		
RUHI2	Rudbeckia hirta	Black Eyed Susan	G	No		
RULA	Rubus laciniatus	evergreen blackberry	S	No		
RULE	Rubus leucodermis	blackcap	S	Yes		
RUMEX	Rumex sp.	dock	H	No		
RUOB	Rumex obtusifolius	bitter dock	H	No		
RUPA	Rubus parviflorus	thimbleberry	S	Yes		
RUSP	Rubus spectabilis	salmonberry	S	Yes		
RUUR	Rubus ursinus	creeping blackberry	S	Yes		
SAAE	Salvia aethiopis	Mediterranean sage		No		
SAAL2	Salix alba	white willow	T	No		
SAAL5	Sassafras albidum	common sassafras	T	No		
SABA	Salix babylonica	weeping willow	T	No		
SADE10	Salicornia depressa	Virginia glasswort	H	No		
SAGR	Sagittaria graminea	grass-leaved arrowhead	H	No		
SAHO	Salix hookeriana	Hooker's willow	S	Yes		
SAHO_	Salix hookeriana	Hooker's willow tree	T	Yes		
SALA2	Sagittaria latifolia	wapato	H	Yes		
SALIX	Salix sp.	willow	T	No		
SALIX_	Salix sp.	willow tree	S	No		
SALUL	Salix lucida ssp. lasiandra	Pacific willow	S	Yes		
SALUL_	Salix lucida ssp. lasiandra	Pacific willow tree	T	Yes		
SAMBU	Sambucus sp.	ornamental elder	S	No		
SANIC5	Sambucus nigra ssp. cerulea	blue elderberry	S	Yes	Sambucus cerulea	
SAOF4	Saponaria officinalis	bouncing bet	H	No		
SAPR2	Salvia pratensis	meadow clary	H	No		

SAPU2	Salix purpurea var. 'Nana'	Alaska blue willow	S	No		
SARA2	Sambucus racemosa	red elderberry	S	Yes		
SASC	Salix scouleriana	Scouler's willow	S	Yes		
SASC_	Salix scouleriana	Scouler's willow tree	T	Yes		
SASC2	Salvia sclarea	clary sage	H	No		
SASI2	Salix sitchensis	Sitka willow	S	Yes		
SCACA	Schoenoplectus acutus var. acutus	hard-stemmed bulrush	G	Yes	Scirpus acutus	
SCAR7	Schedonorus arundinaceus	tall fescue	G	No	Festuca arundinacea	Schedonorus phoenix
SCCY	Scirpus cyperinus	woolgrass	G	Yes		
SCILL	Scilla sp.	wood hyacinth	H	No		
SCIRP	Scirpus sp.	bulrush	G	No		
SCMA8	Schoenoplectus maritimus	salt-marsh bulrush	G	Yes		
SCMI2	Scirpus microcarpus	small-seeded bulrush	G	Yes		
SCMU10	Schoenoplectus mucronatus	ricefield bulrush		No		
SCTA2	Schoenoplectus tabernaemontani	soft-stemmed bulrush	G	Yes	Scirpus validus	
SECI2	Senecio cineraria	dusty miller	H	No		
SEDUM	Sedum sp.	sedum	H	No		
SEGI2	Sequoiadendron giganteum	giant sequoia	T	No		
SEJA	Senecio jacobaea	tansy ragwort	H	No		
SENEC	Senecio sp.	groundsel	H	No		
SESE3	Sequoia sempervirens	coast redwood	T	No		
SICA8	Sisyrinchium californicum	golden-eyed grass	H	Yes		
SIHE4	Sidalcea hendersonii	Henderson's checker-mallow	H	Yes		
SIID	Sisyrinchium idahoense	Idaho blue-eyed grass	H	Yes		
SIMA3	Silybum marianum	milk thistle	H	No		
SOAR2	Sonchus arvensis	perennial sowthistle	H	No		
SOAR9	Sorbus aria	whitebeam mountain-ash	T	No		
SOAU	Sorbus aucuparia	European mountain ash	T	No		
SOCA6	Solidago canadensis	Canada goldenrod	H	Yes		
SODU	Solanum dulcamara	bittersweet nightshade	H	No		
SOEL	Solanum elaeagnifolium	silverleaf nightshade	H	No		

SOHA	Sorghum halepense	johnsongrass	G	No		
SOLID	Solidago sp.	goldenrod	H	No		
SONCH	Sonchus sp.	sowthistle	H	No		
SOOL	Sonchus oleraceus	annual sowthistle	H	No		
SORBU	Sorbus sp.	mountain ash	T	No		
SORO	Solanum rostratum	buffalobur	H	No		
SOSI2	Sorbus sitchensis	Sitka mountain ash	T	Yes		
SOTU	Solanum tuberosum	Irish potato	H	No		
SPAL	Spartina alterniflora	smooth cord grass	G	No		
SPAN5	Spartina anglica	common cordgrass	G	No		
SPBE2	Spiraea betulifolia	birch-leaved spirea	S	Yes		
SPDE2	Spartina densiflora	dense flower cordgrass	G	No		
SPDO	Spiraea douglasii	hardhack	S	Yes		
SPEU	Sparganium eurycarpum	broad-fruited bur-reed	H	Yes		
SPIRA	Spiraea sp.	spirea	S	No		
SPJAF	Spiraea japonica	Japanese spirea	S	No		
SPJU2	Spartium junceum	Spanish broom		No		
SPPA	Spartina patens	salt meadow cordgrass	G	No		
SPSA3	Sphaerophysa salsula	Swainson pea	H	No		
STACH	Stachys sp.	hedgenettle	H	No		
STCHC3	Stachys chamissonis var. cooleyae	Cooley's hedge-nettle	H	Yes	Stachys cooleyae	
STCR2	Stellaria crispa	curled starwort	H	Yes		
STME2	Stellaria media	chickweed	H	No		
SYAL	Symphoricarpos albus	snowberry	S	Yes		
SYHE	Symphoricarpos hesperius	creeping snowberry	S	Yes		
SYMO	Symphoricarpos mollis var. hesperius	creeping snowberry	S	Yes	Symphoricarpos hesperius	
SYMPH2	Symphytum sp.	comfrey	H	No		
SYMPH4	Symphotrichum sp.	aster	H	No		
SYOF	Symphytum officinale	garden comfrey	H	No		
SYRIN	Syringa sp.	lilac	S	No		
SYSU4	Symphyotrichum subspicatum	Douglas aster	H	Yes	Aster subspicatus	Symphyotrichum subspicatum var. subspicatum

TABR2	Taxus brevifolia	western yew	T	Yes		
TADI2	Taxodium distichum	bald cypress	T	No		
TAOF	Taraxacum officinale	dandelion	H	No		
TARA	Tamarix ramosissima	saltcedar		No		
TAVU	Tanacetum vulgare	common tansy	H	No		
TAXUS	Taxus sp.	yew	T	No		
TEGR2	Tellima grandiflora	fringecup	H	Yes		
THOC	Thalictrum occidentale	western meadow-rue	H	Yes		
THOC2	Thuja occidentalis	American arborvitae	T	No		
THPA7	Thymelaea passerina	spurge flax		No		
THPL	Thuja plicata	western red cedar	T	Yes		
TIAM	Tilia americana	American basswood	T	No		
TICO2	Tilia cordata	littleleaf linden	T	No		
TILIA	Tilia sp.	linden	T	No		
TITR	Tiarella trifoliata	foamflower	H	Yes		
TODI	Toxicodendron diversilobum	poison oak	S	Yes	Rhus diversiloba	
TOME	Tolmiea menziesii	piggy-back plant	H	Yes		
TRBOL	Trientalis borealis ssp. latifolia	starflower	H	Yes	Trientalis latifolia	
TRIFO	Trifolium sp.	clover	H	No		
TRITI	Triticum sp.	wheat	G	No		
TRLA6	Trientalis latifolia	western starflower	H	Yes	Trientalis borealis ssp. latifolia	
TRMA20	Triglochin maritima	seaside arrowgrass	G	Yes		
TROPA	Tropaeolum sp.	Nasturtium	H	No		
TROV2	Trillium ovatum	trillium	H	Yes		
TRPR2	Trifolium pratense	red clover	H	No		
TRRE3	Trifolium repens	white Dutch clover	H	No		
TSCA	Tsuga canadensis	eastern hemlock	T	No		
TSHE	Tsuga heterophylla	western hemlock	T	Yes		
TSME	Tsuga mertensiana	mountain hemlock	T	Yes		
TULIP	Tulipa sp.	tulip	H	No		
TYLA	Typha latifolia	cattail	G	Yes		
ULAM	Ulmus americana	American elm	T	No		

ULEU	Ulex europaeus	gorse	S	No		
ULMUS	Ulmus sp.	elm	T	No		
ULPR	Ulmus procera	English elm	T	No		
ULPU	Ulmus pumila	Siberian elm	T	No		
UMCA	Umbellularia californica	California bay	T	No		
Unknown grass sp.	Unknown grass sp.	Unknown grass sp.	G	No		
Unknown herb sp.	Unknown herb sp.	Unknown herb sp.	H	No		
Unknown shrub sp.	Unknown shrub sp.	Unknown shrub sp.	S	No		
Unknown tree sp.	Unknown tree sp.	Unknown tree sp.	T	No		
URDI	Urtica dioica	stinging nettle	H	Yes		
VACCI	Vaccinium sp.	huckleberry variety	S	No		
VAHE	Vancouveria hexandra	inside-out flower	H	Yes		
VAOV2	Vaccinium ovatum	evergreen huckleberry	S	Yes		
VAPA	Vaccinium parvifolium	red huckleberry	S	Yes		
VEAM2	Veronica americana	American brooklime	H	Yes		
VEBE	Veronica beccabunga	American brooklime	H	Yes		
VEOF2	Veronica officinalis	common gypsyweed	H	No		
VERON	Veronica sp.	speedwell	H	No		
VESE	Veronica serpyllifolia	thymeleaf speedwell	H	No		
VETH	Verbascum thapsus	mullein	H	No		
VIAM	Vicia americana	American vetch	H	Yes		
VIBO_	Viburnum bodnantense	dawn viburnum	S	No		
VIBUR	Viburnum sp.	viburnum	S	No		
VICA4	Viola canadensis	Canadian violet	H	Yes		
VICIA	Vicia sp.	vetch	H	No		
VICR	Vicia cracca	bird vetch	H	No		
VIED	Viburnum edule	high-bush cranberry	S	Yes		
VIGL	Viola glabella	pioneer violet	H	Yes		
VIHI	Vicia hirsuta	hairy vetch	H	No		
VILA8	Vitis labrusca	fox grape	S	No		
VIMA	Vinca major	bigleaf periwinkle	H	No		

VIMI2	Vinca minor	periwinkle	H	No		
VINCA	Vinca sp.	periwinkle	H	No		
VINIG	Vicia nigricans ssp. gigantea	giant vetch	H	Yes	Vicia gigantea	
VIOLA	Viola sp.	violet	H	No		
VIOP	Viburnum opulus	American cranberrybush	S	Yes		
VIOR	Viola orbiculata	round-leaved yellow violet	H	Yes		
VIRH	Viburnum rhytidophyllum	leatherleaf viburnum	S	No		
VISA	Vicia sativa	garden vetch	H	No		
VISE3	Viola sempervirens	evergreen violet	H	Yes		
VITI2	Viburnum tinus	laurustinus	S	No		
VITIS	Vitis sp.	grape	H	No		
XETE	Xerophyllum tenax	beargrass	H	Yes		
YUCCA	Yucca sp.	yucca	S	No		
ZESE80	Zelkova serrata	Japanese zelkova	T	No		
ZYFA	Zygophyllum fabago	Syrian bean-caper	H	No		

Appendix H - Treeiage 3.0 Flowchart