Surveys were conducted by teams of 2 field technicians. The survey team visually assessed conditions while traversing each unit. Data were entered on site using handheld PDA's and then downloaded into an Access database. A GIS layer was created to represent the boundaries of each survey. The following outline describes all of the items observed and documented during each survey.

Location: park/property name.

Property Code: Use 2-4 character NR Property Code

Veg Unit: Also known as Polygon Code. This value represents the unique identifier for each survey. Standard format is (Property code*three digit unique number), for example MARI*004. Each park site had already been sub-divided into proposed survey units by aerial photo and other remote sensing imagery interpretation. Each unit should represent a distinct habitat type (e.g. evergreen forest). Once in the field, observers should alter unit boundaries and add or delete polygons from the GIS layer according to on the ground observation of vegetation communities.

Visit Date: Date of field visit, in the form mm-dd-yy.

Crew: Full names of data collectors/recorders.

Data Collector: Name of individual entering/recording data.

**These fields are only completed on the first Visit to a Veg Unit.

****Landform:** The landscape feature that the site occupies. Select from list:

- Ridge top / Peak >120'
- Ridge top / Peak < 120'
- Side hill, upper 1/3
- Side hill, middle 1/3
- Side hill, lower 1/3
- Canyon bottom < 600'
- Bench / Terrace
- Broad flat >600'
- Other (describe in Notes section)

****Aspect:** Aspect of the slope, using a compass and facing downslope. Select N, NE, E, SE, S, SW, W, or NW. Some units were large enough to encompass a range of aspects. In simple cases the aspect that most of the unit faced was used. In units with opposing aspects, such as a ravine, the direction that water would leave the unit was used.

****Slope percent:** Change in elevation divided by change in horizontal distance, times 100. Can be measured with clinometer, or estimated by trained professional. Select Slope Percent class: none, 0-5, 5-10, 10-20, 20-30, 30-60. In cases where slope varies within a unit, the value was averaged over the unit.

****Prior Land Use:** If obvious clues are present, indicate the likely prior land use; if no clear clues exist, leave this blank. Select from list: Agriculture, Pasture, Logging, Home Site, Undeveloped Natural Area, Industrial, Other (describe in Notes section).

Water Features: Indicate presence of streams (or river or slough), springs, and/or standing surface Water (lake, pond, etc). Check all that apply. Describe any special water features.

Wetland Indicators: Indicate presence of all wetland indicators observed in unit. Select all that apply from list: Silt, Drift Lines, Flood Debris, Watermarks, Saturated soils, Standing / flowing water, Hydrophilic vegetation.

Management issues: Note Management Issues in Veg Unit. Select all that apply from the list (below), and rate the severity. A rating of 1 indicates that the problem is present but not acute, 2 indicates that

the problem is moderately severe, 3 indicates that it is severe. If the issue does not apply to the Veg Unit, the default score is 0.

- Erosion (of slope or trail)
- Trampling (of vegetation)
- Soil Compaction
- Soil Contamination (chemical, etc.)
- Invasive species (vegetation)
- Domestic animals (dogs off leash, feral cats, etc.)
- Litter (small garbage on ground)
- Large refuse (dumped refuse, such as appliances or car parts)
- Yard debris
- Utility infrastructure (pipelines, cables, overhead wires, etc)
- Hardscape infrastructure (paved surfaces)
- Homeless camp
- Vandalism
- Stream bank erosion
- Mountain bikes (tire tracks on trail, ramps or jumps)
- Informal trails ("desire line" or "rogue" trails, any trail that is not official)
- Encroachment (adjacent property owners utilizing park property as their own)

Also, note presence (but do not rate) of Rare plants, Significant habitat potential, Beaver, or Other management issues (describe in Notes section).

Ecological Health rating: Estimate relative health of entire system, incorporating factors such as: level of disturbance, presence of invasive species, diversity of native species, structural and spatial diversity, connectivity with other systems, degree of erosion and magnitude of other negative impacts. Units were evaluated for ecological health on a scale of 1 to 5 as described below:

1- Healthy: The unit displays high levels of ecological function. For example, in a forest habitat, structural and species diversity are present (overstory and understory trees, tall and low shrubs, forbs); dead wood is present and soil and litter layers are not disturbed. Non-native invasive species are rare and not increasing. Impacts such as informal trails, trampling, erosion, or dumping are minimal. If present, streams and riparian habitat are intact.

2- Good: Unit does not meet all criteria for a "healthy" condition, but with minor amount of intervention, the area could be brought up to "healthy" condition. For example, invading English holly trees could be permanently removed, or informal trails could be closed and revegetated.

3- Fair: Deficiencies are greater than for units in the "good" class. Multiple invasive species may be present; structural or species diversity may be low. Infrastructure problems such as poorly sited trails or stormwater inputs may be present.

4- Poor: These units are at risk of becoming "severely degraded" unless intervention addresses current stresses on the site. For example, immediate steps may be required to reduce or eliminate invasive species that are replacing the existing plant community. Damaging levels of informal trails or homeless camps may require policy or enforcement action.

5- Severely Degraded: Ecological function is severely compromised; little native structure is present. Invasive species may dominate or almost completely represent a structural layer. Fill or other changes in hydrology may have altered the habitat completely. Habitat improvement in these units would require a large capital investment and complete revegetation.

Notes-

General: Record narrative description of any other important information not captured by standard inventory form. Examples are evidence of restoration activities, management issues or land use history not on form, or any other anecdotal observations.

Ecological: Narrative description of ecological factors not captured by standard inventory. Examples are notable wildlife sightings or more detailed description of vegetation.

Manage: (Management recommendations) Provide narrative recommendations for management activities and interventions that could improve ecological health or prevent further degradation.

Local contact: Record the name and phone number of interested local individuals you meet on site. These individuals may prove useful when trying to reconstruct a land use history of the site or when recruiting volunteers for stewardship activities. Record details of conversation in Notes section.

Features (GPS): Record a GPS point for springs and significant management issues that need immediate attention.

Digital Photos: Take at least one digital photo for each Veg Unit, giving a representative view of the unit; name of file should include Veg Unit code and file should be stored in the subfolder for that Location. Also, take digital photos of significant management issues, special features, vegetation species of interest, or hydrologic or landscape features; name of file should include Veg Unit and should indicate the subject of the photo.

Visit Species
Instructions and Protocol

Identify all significant vegetation species. It is not necessary to identify and record all species within a Veg Unit. However a species should be recorded if:

- it is an invasive species
- it is a known indicator of site conditions (for example wetland indicators);
- it is a dominant or common species in its stratum;
- it occupies a unique niche within the community;
- it is otherwise thought to be rare or of interest.
- At least a few species from each stratum (overstory trees, understory trees, tall shrub, low shrub, groundcover) should be cataloged.

Species code: Unique four-letter species code, according to NRCS PLANTS database (found here: http://plants.usda.gov/). Example: THPL

Scientific name: Latin genus and species, according to established nomenclature. Example: *Thuja plicata*

Common name: Common name of species. Example: western red cedar

Dominant: Check if species is dominant in its stratum. Mark if "yes."

Regenerating: (TREES ONLY) Check if species is successfully reproducing itself on site (seedlings/saplings as well as adults present). Mark if "yes."

Planted: Check if any individuals of species have been planted as part of a restoration effort. Mark if "yes."

Cover class: Cover is expressed as the percentage of ground area covered by a vertical projection of the canopy of a species for the entire vegetation unit. This is an absolute value, not relative to the other species present. These percentages are broken down into 6 classes:

1 – Trace, <1% cover
2 – 1-10%
3 – 10-20%
4 – 20-50%
5 – 50-75%
6 – 75-100%

DBH class: DBH is ‘diameter at breast height.’ The US Forest Service has developed guidelines for taking this measurement. This value will be used as an indicator for stand age. Estimate the DBH class that is most representative. If there are both larger and smaller trees estimate the average and err toward the larger. There are 5 DBH classes:

1 – 0-5 inches
2 – 5- 10 in.
3 – 10-20 in.
4 – 20-30 in.
5 – > 30 in.

% Total Canopy: Estimate total tree canopy closure to closest 5%.

% Non-native cover: Estimate total amount of non-native species to closest 5%. This value was only recorded during the 2004 field season.