

Habitat Point Data Form – Sinlahekin Wildlife Area

(Northern Rocky Mountain Dry-Mesic Montane Mixed Conifer Forest, Northern Rocky Mountain Ponderosa Pine Woodland and Savanna, and Rocky Mountain Aspen Forest and Woodland)

Observer:

e-mail:

Phone 1:

Phone 2:

Additional observers:

Day:

Month:

Year:

Time:

Point #:

Accuracy (meters):

Did you revise the location?

Specific location (UTM or lat-long)

NAD:

Zone:

UTM-E:

UTM-N:

Latitude:

Longitude:

Photos N:

Photos E:

Photos S:

Photos W:

Other photos:

Soil surface rank:

Woody debris cover:

Total understory plant cover:

Native perennial grass cover:

Invasive cover:

Disease/mistletoe rank:

Density of trees by DBH class (snags are dead trees >10 cm and stumps are >53 cm)

Tree species	Saplings	>2.5-10 cm	>10-30 cm	>30-53 cm	>53 cm	Snags	Stumps
Ponderosa pine							
Aspen							
Other:							
Other:							

Additional notes or details:

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General header information

Observer: The primary observer should be identified by full name

e-mail: Provide the observer's e-mail address.

Phone 1: Provide the observer's phone number.

Phone 2: Provide a second number for the observer, if there is one.

Additional observers: List the names of additional observers.

Day: List the day of the month.

Month: List the number for the month of the survey.

Year: List the year (full 4 digits).

Time: List the time with a 24-hour clock (e.g., 13:30 = 1:30 PM).

Location details

Point #: List the number of the point (e.g., SL36).

Accuracy (meters): Provide the estimated GPS accuracy in meters.

Did you revise the location? Answer with a 'yes' or a 'no'. The basic reason for revising the location is that the exact point happened to be on, or close to, a border between ecosystem types. Each plot should extend outward 8 meters from the center point. However, if the point happens to fall in an area of a deep soil shrubsteppe ecosystem, but within a couple meters of a shallow soil shrubsteppe ecosystem, it would be best to move the point further into the deep soil area so that the ecological integrity assessment will be consistent for the identified ecosystem type. It is important in this situation to record the 'corrected' location.

Specific location (UTM or lat-long): Provide a specific location for the center of the survey plot using a GPS unit or smartphone. If the location is recorded as a UTM coordinate, the North American Datum (NAD – should appear in the 'settings for your GPS unit), zone (always zone 11 for Swanson Lakes Wildlife Area), UTM-E (UTM easting), and UTM-N (UTM northing) should be recorded (for example, 395627 east and 5275124 north). If the location is recorded as a latitude-longitude (lat-long), each coordinate should be recorded as accurately as possible, preferably using degrees and decimals, rather than degrees, minutes, and seconds.

Photo details

It will be helpful to have a permanent record of what the plot looked like when you did your sampling. In most ecosystems this can be accomplished by taking 4 digital photographs while standing at the center of the plot. Generally use the widest angle possible (usually the

default setting) and try to hold the camera about 1.5 meters above the ground (normal height while standing). Frame the photos so that the horizon is about $\frac{3}{4}$ up from the bottom of the photo. If trees are in the photo, the average base of the trees should be approximately in the vertical middle of the photo. Take one pointing north (N or 360), east (E or 90), south (S or 180), and west (W or 270). In wetland ecosystems, take representative photos of the system, not necessarily at standard directions. The same guidance about framing still applies. When you upload the images it is preferable to rename each of the files with the Wildlife Area abbreviation provided followed by the plot number and the word North, East, South, OR West (for example: SLWA36_East.jpg). An example of an appropriate photo follows.



Photos N, E, S, and W: Record the number and/or order in which photos are taken so that they can be correctly assigned. They should be uploaded in order.

Other: Record the number, order, and/or subject of additional photos. For example, try to photograph the dominant species of grass (native and/or introduced).

Ecosystem characteristics

Think of a plot as an 8-meter radius around a center point. Although this point represents a perfect circle, in some situations it may be advisable to not consider a small portion of the circle if it contains a different type of ecosystem. Vegetation and soil characteristics will be estimated for different parameters. For each of these the best estimate should be provided using the following guidelines as well as the guidebook with sample photographs. All cover values should be estimated into a 'bin': (0) absent; (1) present, but <1% cover); (5) 1-5% cover; (10) 5-

10% cover; (25) 10-25% cover; (50) 25-50% cover; (75) 50-75% cover; and (100) 75-100% cover. One way to visualize this is to imagine yourself taking 100 steps on the plot. If a key feature appears at the tip of your shoe on 7 occasions, then the estimated cover is 7%. Anything that is not plant cover should be bare ground, biological soil crust, rock, or dead plant material that is flattened and essentially part of the surface layer. Shrub and herbaceous cover should be the amount of surface area that is covered with vegetation not counting trees.

Rank: Soil surface (general condition of surface). This condition ranking should consider the current and historical impacts of disturbance. Some of these effects may be apparent, but others (old ruts) will be somewhat concealed by vegetation.

A = No unnatural soil disturbance; rutting and/or livestock trails are present. The only disturbance visible is that caused by native wildlife (e.g., burrows, soil mounding by gophers, and slender game trails).

B = Soil disturbance, rutting, and/or livestock trails may be present, but barely noticeable.

C = Soil disturbance, rutting, and/or livestock trails are common, but site is still functioning somewhat naturally.

D = Soil disturbance, rutting, and/or livestock trails are abundant and the natural functioning of site is severely degraded

Cover: Total woody debris and downed logs on the ground.

0 = Debris absent

1 = Debris present, but <1% cover

5 = 1-5% cover

10 = 5-10% cover

25 = 10-25% cover

50 = 25-50% cover

75 = 50-75% cover

100 = >75% cover

Cover: Total understory plant (shrubs and herbaceous cover combined). Shrubs are defined as woody plants that are < 3 meters tall or less than 2.5 cm DBH (diameter at breast height).

0 = Plants absent

1 = Present, but <1% cover

5 = 1-5% cover

10 = 5-10% cover

25 = 10-25% cover

50 = 25-50% cover

75 = 50-75% cover

100 = >75% cover

Cover: Native perennial grass (Bluebunch wheatgrass, Idaho fescue, Sandberg's bluegrass, Needle-and-thread, etc.). These species make up the foundation of the herbaceous component of a healthy ecosystem.

0 = Grasses absent

1 = Grasses present, but <1% cover

- 5 = 1-5% grass cover
- 10 = 5-10% grass cover
- 25 = 10-25% grass cover
- 50 = 25-50% grass cover
- 75 = 50-75% grass cover
- 100 = >75% grass cover

Cover: Invasive understory (Cheatgrass, Japanese brome, knapweed, etc.). These species are typical in systems faced with disturbance.

- 0 = Absent
- 1 = Present, but <1% cover
- 5 = 1-5% cover
- 10 = 5-10% cover
- 25 = 10-25% cover
- 50 = 25-50% cover
- 75 = 50-75% cover
- 100 = >75% cover

Rank: Disease/mistletoe rank (general condition of conifers – leave blank if dominated by aspen). This condition ranking should consider the current manifestation of disease (primarily beetles) and/or mistletoe associated with trees. Some of these effects may be apparent, but others (old ruts) will be somewhat concealed by vegetation.

- A = Leaves on the conifers are green with no obvious sign of beetle damage and no mistletoe is detected.
- B = Mistletoe may be present, but its impact on the health of the tree(s) is minor. Beetle damage, if present, should be almost undetectable.
- C = Beetle and/or mistletoe damage appears to be significant, but the trees appear to be surviving the exposure.
- D = Beetle and/or mistletoe damage is significant and the survival of the trees is in doubt or they are already dead as a result.

Tree density: Record the number of each tree species by DBH (diameter-at-breast-height) category. DBH can be measured with a specially-marked rope. Snags refer to dead trees at least 10 cm DBH and stumps refer to cut trees where the DBH would have been at least 53 cm. Because the tree has been cut, it is sufficient to measure the diameter at the height of the stump. Saplings refer to trees that are 2.5 cm DBH or less, often appearing as shrubs. The tree species will be listed in a ‘drop-down’ menu.

Tree species (examples)	Saplings	>2.5 – 10 cm	>10 – 30 cm	>30 – 60 cm	>60 cm	Snags	Stumps
Ponderosa pine							
Aspen							
Douglas fir							
Aspen							

Additional notes

Record other items that did not fit in specific categories. This is also an opportunity to mention specific issues related to the ecosystem plot. For example, it would be useful to mention sources of disturbance such as the presence of livestock.