

Beaver Reintroduction Project - Beaver Site Assessment Surveys

Date: _____ Observer(s): _____ Site Name: _____

Watershed: _____ GPS Coordinates: _____

Site accessibility: _____

Initial screening — the following conditions may change the site's suitability

Recent beaver presence or activity, describe _____

Heavy human infrastructure/presence, describe _____

_____ **Woody food score = multiply a x b x c**

- | | | | |
|----|----------------------------|---------------------|----------------------------|
| a. | ① Other hardwoods | ② Includes alder | ③ Includes willow or aspen |
| b. | ① Within 300 feet of water | ② Within 100 feet | ③ Within 30 feet |
| c. | ① Dozens of stems | ② Hundreds of stems | ③ Thousands of stems |

_____ **Herbaceous food (grasses and non-woody flowering plants, Scale 0—3)**

- ① No grasses/herbs ② 25% cover ③ >50% cover

_____ **Woody building materials, conifers or hardwoods 1-6-inch diameter (Scale 1—5)**

- ① Dozens of stems ② Hundreds of stems ⑤ Thousands of stems

_____ **Dominant stream substrate (Scale 0—5)**

- ① Rock ② Sand or cobble ⑤ Silt/clay/mud

_____ **Historic beaver use (Scale 0—10)**

- ① No signs of previous use ⑤ Multiple old beaver chew marks ⑩ Old dams, lodges, and chew

_____ **Floodplain structure (Scale 1—10)**

- ① Narrow & steep, 'V' shaped channel ⑤ wider, "_/" shaped channel ⑩ Wide and flat, adjacent floodplain area

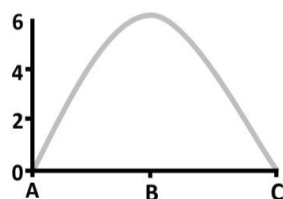
_____ **Stream gradient (Scale 1—5)**

- ① ≥9% ③ ~5% ⑤ ≤3%

_____ **Water cover (Scale 0—10)**

- ① No pools ⑤ At least 1 pool > 1.5 feet deep and 15 feet wide ⑩ Multiple pools > 3 feet deep >30 feet wide

_____ **Stream discharge (Scale 0—6)**



A: Intermittent flow (no flow or < garden hose)

B: Year-round flow, but never destructive (flow similar to 10" - 30" pipe)

C: Destructive flow that may inhibit damming (flow too high to wade safely)

_____ **TOTAL SCORE**

Data collection protocol:

Completing this scorecard will allow Bark to rank potential beaver reintroduction sites in Mt. Hood National Forest by using criteria known to influence the presence and persistence of the species.

- **You will need:** 1) Datasheet with clipboard, 2) measuring tape, 3) a smartphone with the Avenza app and site map downloaded, and 4) a clinometer.
- **Divy up tasks:** In a group of 3-4 surveyors, choose one person to be the “scribe”, who will be responsible for making sure the scorecard is completely filled out. One additional person will be using Avenza to keep track of the team’s route, dropping pins, and taking photos. And the remainder of the group will generally be responsible for taking measurements, and making observations known to the other two teammates.
- **Choosing your survey location:** Using the Avenza app for navigation, safely walk as much of the delineated site as possible. Record your track in the app. After you have done this, choose the location of your survey based on the following: deepest and widest water, greatest amount of mud substrate, flattest terrain, greatest number of old beaver structures, and greatest number of hardwood trees closest to the water. If you begin your survey and later find a more appropriate location based on these criteria outside the delineated area, start your survey over at this location.
 - In your initial exploration, look for the plants listed on the form and look around to see what woody building material 1-6 inches in diameter exist. Walk the streambanks to see how much mud is available for building and digging. Look for old beaver lodges, dams and chew on branches. Pay close attention to how steep vs. flat and narrow vs. wide the stream channel is overall. How many deep, wide pools exist, if any? Does this stream flow year-round? What kind of flow does this stream have compared to a garden hose, road culvert, or river rapid?
- **Datasheets:** When you are ready to begin your survey, record your scores for each category listed on the datasheet. For each category, select a score within the range that is provided. The extremes as well as the mid-ranges are listed to help you better gauge a score based on your observations, but all numbers between those listed are options for selection.
- **Measuring stream gradient:** Use a clinometer to record the slope of the stream channel. Do this across three 30-foot segments of the bank. If this isn’t possible, try to break up the stream channel or pond inflow/outflow into 2 or more sections where you can visually measure ~30 feet of slope parallel to the direction of water flow.
- **Remember:** Date, name of observers, the site name on the map provided, watershed, and GPS coordinates (include the location of the pin you drop in Avenza at your initial survey site). As you are exploring the site, remember to take photos and drop pins in Avenza to display locations of your survey site. Include photos of any sign of beaver presence (old or recent). When you get back home, export your Avenza data and send it to forestwatch@bark-out.org
- **Total your score:** At the end of your survey, total all the scores recorded on the bottom of the scorecard.