

Field Protocol for 2019 Beaver Surveys

as prepared by The Wetlands Conservancy and JCWC

METHODS:

Starting survey:

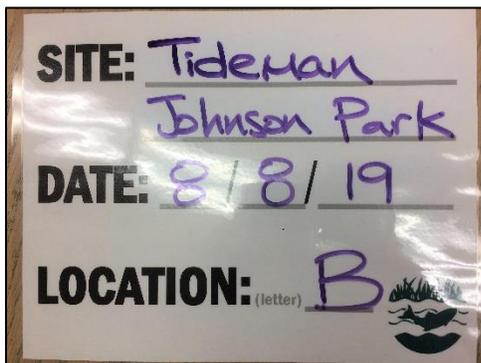
1. Orient yourself with your reach map/description and plan a route, starting from downstream.
2. Fill out date, observers, and survey reach name.
3. Go to starting point and log START on Anecdata app.

During survey:

4. Avoid going in the stream and stirring up sediment. Please be careful to avoid eroding the streambank and trampling on vegetation!
5. Move slowly and methodically up stream. Go a little ways up smaller streams that flow into the main-stream if possible. Stay on the map, within the boundaries of the property.

Recording data:

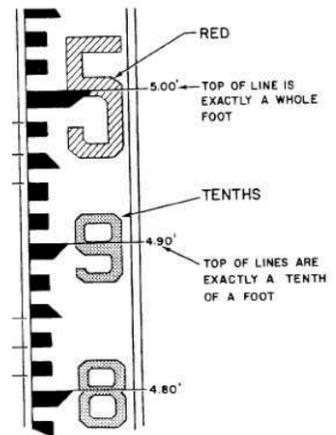
6. Create a data point when finding a dam, lodge, or stream gauge and also at your survey's start/end points. Take photos for found dams, lodges, and stream gauges. Measure and record data categories for dams.
7. On whiteboard, write the survey reach name, date, and location letter code (i.e., a new letter for each start/end pt., recorded dam, lodge, and staff gauge).
8. Take photo(s) and include the following features:
 - Person standing near or on top of dam/lodge for scale
 - Whiteboard close enough to photographer so that it is readable.
 - Entire structure in photo (ideally, capturing channel morphology, water level differences, etc.)



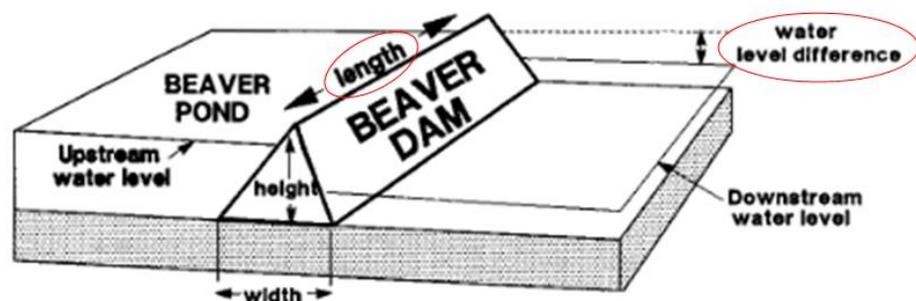
(Anecdata can store multiple photos for one data point!)

Explanations of data categories:

- Staff gauge present** (measurement in decimal feet; photo optional).
Water level markers are found at some sites (see reach map). Record surface water level in decimal feet (nearest tenth). Take a photo if staff gauge units or marker lines are unclear.
- Lodge present** (photo). Take a photo (including details described in step 8 above) to identify and document lodge.
- Dam present** (photo). Take a photo (including details described in step 8 above) to identify and document dam. This category includes dams intact or not; multiple dam sections count as one dam if water is held at the same level across. Fill out all fields:
 - Composition** (Wood/Mud/Grass/Cobble) - Select all materials making up the dam.
 - Active Dam** (Y/N/?). Use your best judgement. Look for the following signs of activity:
 - Freshly peeled sticks and mud added to the dam.
 - Fresh mud plastered on a nearby lodge.
 - Evidence of food caches.
 - Abundance of freshly cut trees, saplings, and woody shrub stems in vicinity of pond.
 - Dam Intact** (Y/N/?). Water is being held back by dam.
 - Water level difference** (measurement in decimal feet) - Estimate difference in surface water levels between sections upstream and downstream of beaver dam. See diagram below.
 - Dam length** (measurement in decimal feet) - Estimate by foot, include landforms between dam sections. See diagram below.

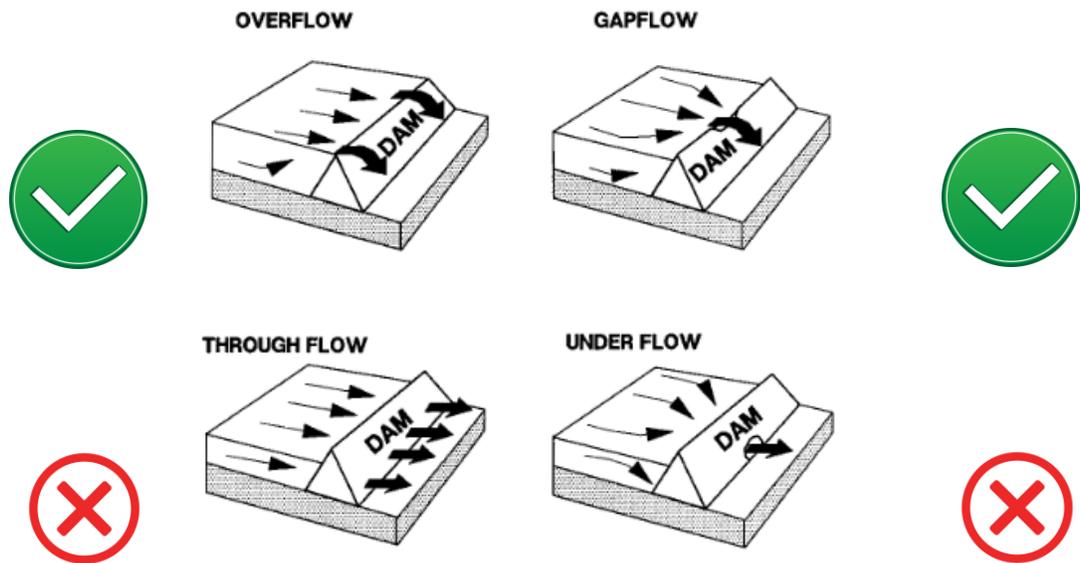


Measurements for dam length & water level difference.



- f. **Dam wider than channel (Y/N/?)** - Dam is confined to the channel (= N) vs. dam is constructed beyond bank, out in the floodplain, or part of a wide wetland (=Y).
- g. **Stream incised (Y/N/?)** - Bank walls eroded on one/both sides and streambed low (i.e., “tall bank walls”) (=Y) vs. banks gently sloping (=N).
- h. **Overflow at dam (Y/N/?)** – Overflow is when water flows above top of dam. See diagram below.

Both overflow and gapflow count as “overflow” on datasheet.
Both through-flow and under-flow do NOT count as “overflow”



- ❖ Be sure to click “Save” after each data point observation.
- ❖ If you are unsure about a measurement, select the “?” and write a brief note.
- ❖ Please record any other observations and signs of beaver activity (e.g., chews, slides, food caches, freshly cleaned sticks) in the bottom “Notes” field.

Finishing survey:

9. After you finish your survey, or if you need to leave early:
 - Record *End Time (real AM/PM time)* on app
10. Confirm data points are complete and record any extra observations. Have one person collect all borrowed gear for return.
11. Leave site and get home safely!