**Midden Minders Annual Survey Instructions (Baseline established)**

*Equipment List*

* 10 meter rope marked in 1 meter increments (instructions for making your own on website)
* Tape measure marked in metric units (cloth or metal)
* Tape Measure extender (optional)
* Camera (cell phone or handheld)
* Handheld GPS (optional)
* Notebook
* Pencils
* Graph paper
* Annual Survey Data sheet

*Method (Measurements)*

1. Lay out the 10 meter rope from one endpoint to the other endpoint or an intermediate fixed point. Label the beginning endpoint #1 in your notes.

* Make a sketch in your notes to show where you are starting your measurements.
* Take a GPS reading at your first endpoint.
* Take a picture of the end point looking toward the other end point.

2. Using the tape measure, in a direction perpendicular to the rope, measure the distance at each meter mark on the rope to the eroding edge of the midden.

3. Record this distance on the attached data sheet.

4. Repeat with a measurement at every meter mark until you reach the other endpoint or the intermediate mark.

5. If you end at an intermediate mark, follow the above procedure to the next intermediate mark or other end point. Record the GPS reading at each intermediate point and the other end point. Take a photo from the place you are starting looking toward the final endpoint.

6. Continue taking measurements at each meter mark.

7. If this is a long survey, continue with the above method until you reach the final endpoint.

8.Take a photo at the other endpoint looking toward the first endpoint.

9. When you return from the field, use graph paper to make a map of the midden. (If you are not confident about making a map, send your data sheet and photos to middenminders@maine.edu, and we will plot it for you)

On your map, be sure to:

* Label the endpoints and intermediate points with their numbers.
* Include a scale and north arrow on your map.

10. Scan or photograph your map and data sheet and send it to middenminders@maine.edu OR send a paper copy to Midden Minders, Climate Change Institute, University of Maine, Orono, ME 04469

**Annual Measurement Data Sheet**

|  |  |  |
| --- | --- | --- |
| End/Intermediate Point # | GPS Northing | GPS Easting |
|  |  |  |
|  |  |  |
|  |  |  |

|  |  |
| --- | --- |
| Endpoint/Measurement | Distance from Baseline to Midden Edge (m) |
| Endpoint 1 |  |
| 1 m |  |
| 2 m  |  |
| 3 m |  |
| 4 m |  |
| 5 m |  |
| 6 m |  |
| 7 m |  |
| 8 m |  |
| 9 m |  |
| Intermediate 1 (10 m) |  |
| 11 m |  |
| 12 m |  |
| 13 m |  |
| 14 m |  |
| 15 m |  |
| 16 m |  |
| 17 m |  |
| 18 m |  |
| 19 m |  |
| Intermediate 2 (20 m) or Endpoint 2 |  |