RAPID ASSESSMENT OF SHORE ZONE CONDITION AND ECOLOGICAL FUNCTION

Equipment Checklist:

- Rapid Assessment paperwork
- Rapid Assessment Field Guide
- Clipboard
- Satellite imagery/GIS information
- Tidal Data
- Measuring tape
- Camera
- GPS

DIRECTIONS:
Please answer <u>all</u> questions below and fill out the attached data sheet as completely and thoroughly as possible. Use the field guide to assist with ecology-based questions in the rapid assessment. If you see vegetation or wildlife you are unable to identify, take photos or sketches and make note in your response that you are unsure.

<u>Collector Name:</u>

<u>Collector Contact Info:</u>

<u>Date, Time and Tide of Observations:</u>

<u>Area of Interest (ID on map ahead of time)</u>

1. Why are you interested in shore zone? Pending re-development? Repair?

2. Where is your shore zone? (Provide Lat/Long and physical description on the ground)

3. Give any information you may have derived from municipal parcel or land use databases (zoning restrictions, ownership).

4. Anything unique or otherwise relevant about your shoreline? (i.e. targeted for development, potential toxic materials)

<u>Problem Description</u>
Are any of the following present? If so, please take photos or sketches.

5. Evidence of erosion? *(undercut banks, failing walls)*

6. Water intake? Pipe Discharge?

7. Vulnerable infrastructure? (Waste water plant, fuel storage)

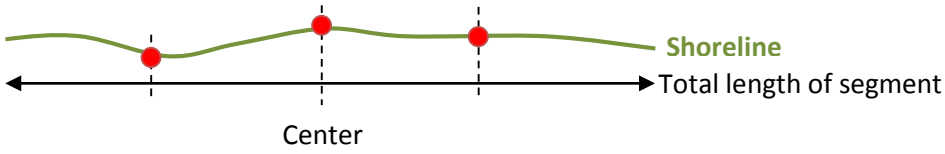
8. Human uses (Launch, beach, marina)?

9. Are there any invasive species? (Refer to field guide if needed)

10. Other noticeable problems?

Physical Description

For the remaining variables in the assessment (slope through vegetation) you will do 3 point assessments for each segment, one at center of segment, then halfway between the center and each end. If segment is > 200 m then do 5 assessments.



The segment should be reasonably uniform i.e. not switch between sandy beach and rip-rap; those would represent two different segments.

ALSO ENTER ANSWERS TO REMINAING QUESTIONS ON THE DATA SHEET FOR EACH POINT ASSESSMENT

11. **Total Length** of shore area (segment) in meters _____
    Number of different "point assessments"_____

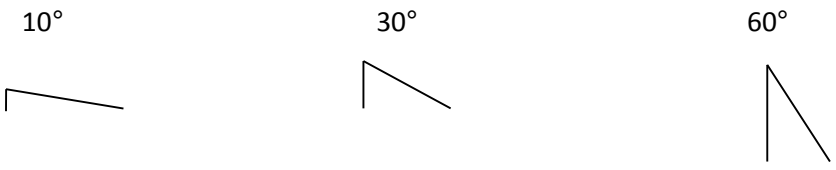
12. **Sinuosity** of entire segment– (Assign based on bird's eye view of each segment)
    a. nearly straight
    b. concave (i.e. embayment, cove)
    c. convex (i.e. shore bends into water)
    d. wavy (3-5 undulations per 100m segment)

13. **GPS Coordinates**- record GPS coordinates of <u>each</u> point in the segment on data sheet.

14. **Slope** – Assign based on average slope in degrees between High and Low water line:
    a. <10°
    b. 10-30°
    c. 30-60°
    d. >60°

    (Requires knowledge of tide stage. Easiest if you can do assessment at low tide, otherwise you have to "guesstimate" the portion below water)

    Examples of slopes for comparison:



[NOTE: for 15-17 you are looking at the patch between high and low water, approximately 2 m wide. If there is an obvious break in the nature of material make note such as top half is all rock, sand to low water line]

15. **Substrate Cover** - Assign value 0-4 based on percent cover. Use the field guide for additional assistance. **Do not put decimals, a range of numbers, or numbers greater than 4.**

Percent Cover	Absent	1-10%	11-40%	41-75%	>75%
Value to Assign	0	1	2	3	4

Assign a cover for EACH of the four substrate sizes below.

a. Bedrock/Manmade (bulkheads, seawalls, concrete, timber, sheet pile, brick) (> 4m, size of a car)
b. Boulder (between 0.25 and 4 m, basketball to car size)
c. Cobble/Gravel (between 2 and 250 mm, pea to basketball size)
d. Sand/mud (<2 mm)

16. **Wrack** __ Present __ Absent
Wrack is generally dead plant material, submerged aquatic vegetation (i.e. water chestnut, stems of cattail, common reed), leaf litter and small sticks occurring in a band near the high water mark.

17. **Large Woody Debris (LWD)** __ Present __ Absent
Includes 6" diameter branches up to entire dead trees

18. **Adjacent Upland Land Use** *(describe as best as possible)*

<u>Vegetation</u>

19. **Vegetation Cover**- Consider an area 5 meters on each side of your observation point, reaching 10 m landward from high water line. **Use 0-4 cover classes like in question 5 for <u>each</u> of the vegetation types below:**
    a. Canopy (Plant Height > 5 m)
    b. Understory (>0.5 but less than 5 m)
    c. Groundcover (<0.5 m)

20. **Composition** – Can you list the 5 most common plants?
(Use the field guide for additional guidance)

21. **Aquatic Plants** __Present __Absent
Visual observations can be made at low water during July/August

22. **Evidence of mowing or other vegetation management?** __Yes __No

DATA SHEET FOR POINTS WITHIN EACH SEGMENT

OBSERVERS_____ CONTACT INFO_____

LOCATION _____ DATE/TIME_____

TOTAL SEGMENT LENGTH (in meters) _____

SINUOSITY OF SEGMENT_____

Point within segment	1	2	3	4	5
GPS (north/east; UTM83)					
SLOPE					
SUBSTRATE (Cover 0-4)					
Bedrock/Manmade					
Boulder					
Cobble/Gravel					
Sand/Mud					
Other					
WRACK (Y/N)					
LWD (Y/N)					
ADJACENT UPLAND LAND USE					
VEGETATION (Cover 0-4)					
Canopy					
Understory					
Groundcover					
COMPOSITION (list vegetation)					
AQUATIC PLANTS (Y/N)					
MOWING/MANAGEMENT (Y/N)					