

Environmental Plastic Assessment Program (EPAP) Data Sheet

DATE: Month _____ Day _____ Year _____

Team Information:

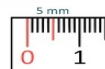
RIB # (circle which applies): #1 #2 #3 #4

Surveyors Full Name		
Organization Name (if applicable)	Organization Location (City, Country)	
Email Address	Cleanup Start Time	Cleanup End Time

Survey Area:


Name of Beach		Coordinates Lat: _____ Long: _____	
Major Usage (check most appropriate option) <input type="checkbox"/> Recreation <input type="checkbox"/> Commercial <input type="checkbox"/> Remote/Unused <input type="checkbox"/> Other: _____	Reason for Location Choice (check all that apply) <input type="checkbox"/> Proximity/Convenience <input type="checkbox"/> Known for Debris <input type="checkbox"/> Other: _____	Compass Direction (facing the water, with your back to the spine) <div style="text-align: center;">_____ °</div>	
Nearest River Output Name: _____			
Approximate Distance from “zero” on the Spine: _____			
Last Tide Before Clean Up Type (circle one): Low High Height: _____ Time: _____		Next Tide After Clean Up Type (circle one): Low High Height: _____ Time: _____	
Wind Speed: _____ Direction: _____ <u>COMMENTS:</u> <div style="height: 40px;"></div>	<u>Slope</u> (check the most appropriate one) (See glossary) <input type="checkbox"/> Winter Profile <input type="checkbox"/> Summer Profile	<u>Substrate Type</u> (check all that apply) <input type="checkbox"/> Sand <input type="checkbox"/> Pebble <input type="checkbox"/> Rip Rap (large boulders) <input type="checkbox"/> Seaweed <input type="checkbox"/> Other: _____	

MACRO-Debris Surface Rib Scan: plastic must be larger than 5mm

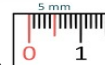


A pencil eraser is 5mm



	Rib #1 (closest to 0)		Rib #2		Rib #3		Rib #4 (closest to 100)			
SPINE Start Point (0-100 m)									Put Totals of all 4 Ribs in	
RIB LENGTH (m)									the Columns Below ↓	
Item Type	Fresh	Weathered	Fresh	Weathered	Fresh	Weathered	Fresh	Weathered	(F)	Total (W)
Cigarette Butts										
Fishing Line										
Polypropylene Rope										
Plastic Cups and Lids										
Plastic Straws										
Film Plastic (stretchy thin plastics e.g. bags)										
Plastic Bottles										
									TOTAL (F)	TOTAL (W)
									PAGE 2 TOTALS GO HERE 	

MACRO-Debris Surface Rib Scan: plastic must be larger than 5mm



A pencil eraser is 5mm

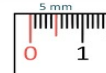


Item Type	Rib #1		Rib #2		Rib #3		Rib #4		(F) Total (W)	
	Fresh	Weathered	Fresh	Weathered	Fresh	Weathered	Fresh	Weathered		
Plastic/Metal Bottle Caps										
Urethane Foam										
Styrofoam										
Plastic based cloth such as nylon/polyester										
Plastic Hygiene Items										
Plastic PPE										
Multi-layered plastics (e.g. chip bags & candy wrappers)										
Misc. Plastic										
PAGE 3 TOTALS GO HERE →									TOTAL (F)	TOTAL (W)

MACRO-Debris Accumulation Survey

If unable to complete an accumulation survey, check box as to why:				
<input type="checkbox"/> Not enough time	<input type="checkbox"/> Not enough people	<input type="checkbox"/> Too much area	<input type="checkbox"/> Too much trash	
<input type="checkbox"/> Other:				
Item Type	Fresh	Weathered	(F)	Total (W)
Cigarette Butts				
Fishing Line				
Polypropylene Rope				
Plastic Cups and Lids				
Plastic Straws				
Film Plastic				
Plastic Bottles				
Plastic or Metal Bottle Caps				
Urethane Foam				
Styrofoam				
Clothes (e.g., nylon/polyester)				
Plastic Hygiene Items				
Plastic PPE				
Multi-layered Plastics				
Misc. Plastic				
PAGE 4 TOTALS GO HERE —————→			TOTAL (F)	TOTAL (W)

MICRO-Debris Surface Rib Scan:

 plastic must be $\leq 5\text{mm}$


A pencil eraser is 5mm



	Fresh	Weathered	Total (F)	Total (W)
Rib 1				
Rib 2				
Rib 3				
Rib 4				
MICRO DEBRIS TOTALS GO HERE →			TOTAL (F)	TOTAL (W)



Surface Rib Scan Totals From pgs. 2&3 (Use Numbers)		
	Total Fresh	Total Weathered
PAGE 2 TOTALS		
PAGE 3 TOTALS		
PAGE 2 & 3 TOTALS GO HERE →	TOTAL (F)	TOTAL (W)

Cumulative Cleanup Totals (Use Numbers)			
	Total Fresh	Total Weathered	TOTAL
Totals from Accumulation Survey (pg.4)			
Totals from <u>Micro Debris</u> Surface Rib Scan (from above)			
Totals from <u>Macro Debris</u> Surface Rib Scan (from above)			
TOTAL OF ALL PIECES GOES HERE →			

<u>Total Weight</u> of All Pieces	
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GLOSSARY:

Accumulation Sweep: The accumulation sweep documents the remaining 80% of the field area. Volunteers line up at arm's length at one end of the 100 m 'spine' (see below) and pick up and record all plastic trash along the spine. This can only be done if you have enough volunteers to cover every portion of the field area, and time to complete the task.

Field Area: If the field area being surveyed is extremely wide, the spine can be placed approximately 50 m from the water's edge, or at the change of substrate. Each individual survey lead needs to decide on how large the survey area should be. Once decided, all subsequent survey dimensions in this field area must remain the same to maintain consistency.

Film Plastic: Thin-gauge packaging material used as a bag or a wrap. Examples include grocery sacks, trash bags, drycleaner bags, agricultural sheeting, and plastic wrap.

Micro Debris: Any pieces of plastic smaller than 5 mm.

Miscellaneous Plastic: Pieces or fragments of plastic that may or may not be identifiable. This category includes countless different types of plastic such as: hangers, toys, shotgun wads, etc.

Multi-layered Plastic: Whole pieces or fragments of non-stretchy plastic film such as candy wrappers, chip bags, granola wrappers, etc.

Plastic Hygiene Items: Whole pieces or fragments of toothbrushes, combs, hairbrushes, tampons etc.

Plastic PPE (Personal Protective Equipment): Medical face masks, shields, gloves, gowns etc.

Rib: The four ribs begin at randomly generated starting places along the 100 m spine that run perpendicular to the spine toward the water's edge.

Spine: A 100 m section of the shoreline that runs parallel to the water's edge that is typically located in the back beach where there is a change of substrate. The surveyors have the choice to shorten the rib when necessary.

Substrate: The type of material that makes up the shoreline that you are surveying. The substrate can be sand, gravel, rock, seaweed, grass, or other materials.

Summer Beach Profile: The major distinction of a summer beach profile is that it has a steeper slope down to the water than the winter beach profile. The summer beach profile typically has an uphill slope to the water called the berm. The 'berm crest' is the point where the beach starts sloping steeply toward the water. The summer beach profile typically has the presence of a berm and more sand than the winter beach profile.

Surface Rib Scan: Starting at the spine, volunteers walk toward the water, surveying one side of the rib at a time. Pick up and record all plastic items only on the surface that are greater than 5 mm. The survey area is 2.5 m on either side of the Rib, making a total of 5 m per Rib. After four surface rib scans are completed, 20 m of the field area have been documented.

Urethane Foam: Soft, porous foam material typical from a mattress or seat cushion which commonly turns brown as it oxidizes.

Winter Beach Profile: The winter beach profile has a gentle slope to the water, often nearly flat. The winter beach profile typically lacks the berm, the portion of the beach that slopes uphill toward the water. Winter beaches typically have less sand than the summer beach.

EPAP Data Sheet Instructional Guide

While completing the EPAP Data Sheet, please use a blue or black pen and write as neatly as possible. It is also important to ensure that all fields on the sheet are thoroughly filled out. Please refrain from using abbreviations, for example, write out the complete four-digit year (e.g., 2024) instead of using any shortened forms.

TEAM INFORMATION

Surveyor's Full Name: Please enter everyone's first and last name that is participating in the survey.

RIB # (circle which applies): In certain instances, large school groups are subdivided into groups of two or four. Each designated group then marks the specific Rib they are surveying on their individual data sheet. Generally, however, small groups conduct surveys collectively on all four Ribs, therefore they would circle all four Rib #s.

Organization Name and Location: Please provide the name and location of the High School, College, Company, or Vendor you are associated with. If you are working independently, simply write "Citizen Scientist".

Please be sure to include your email address and the Start and End Time

SURVEY AREA

Name of Beach: Write in the formal name of the beach. If the beach has local nicknames, you can also include them.

Coordinates: You can find apps on your phone that will tell you your precise latitude and longitude. Please find an app that uses degrees, minutes, and seconds for your location and record those 6 numbers.

The numbers should look something like 36°, 47', 15" North and 122°, 18', 30" West. Use a small circle for degrees, one tic mark (‘ - foot icon) for minutes, and the “ (inch) icon for seconds.

Major Usage and Reason for Location fields should be self-explanatory.

Compass Direction: For this field we want you to use a compass direction between 0 and 360 degrees. Some smartphones include a compass app. If not, you can find one on the internet. Enter the compass direction you observe when you stand with your back to the 100 m spine facing the water.

Nearest River Output Name: Typically, there is a river or creek near the survey area. If you are unaware of where this might be, you can refer to Google Maps or Google Earth.

Approximate Distance from Zero on the Spine: Estimate to the best of your ability how far the river mouth is from your Spine, using the zero end of the Spine. Please use Metric for this and all measurements. If you are used to miles or feet, you can convert to kilometers or meters. There are 0.62 mile/km and 3.28 ft/meter

Last Tide Before Cleanup and Next Tide After Cleanup: Please refer to your local tides which can be found in a Tide book, newspaper, or the internet. In the case of Tides, we prefer to use FEET, which is the most traditional method used in the US. If you are outside the US and tide height in meters is the standard, use meters. Typically there will be two digits such as 6.1, 3.2, or -0.8, etc.

Wind Speed and Direction: Please use Knots for the wind speed. If you are unfamiliar with Knots, you can find [general descriptions of Knots](#) on the internet. For Wind Direction: Keep in mind winds are named on their origin (where they are coming *from*), not their destination. Use one of the following: North (N), Northeast (NE), East (E), Southeast (SE), South (S), Southwest (SW), West (W) or Northwest (NW).

SLOPE: Summer vs Winter Beach Profiles: Please refer to the glossary for descriptions of summer and winter beach profiles. If your beach is all gravel, or covered with seaweed, this may not apply and you can just enter NA.

Substrate Type: The term "substrate" typically pertains to the material composing the bottom of an environment. Please select the appropriate box or provide a descriptor if the available choices do not apply.

IMPORTANT: When your survey is completed, please make sure to add up all the data on page 5.