

Introduction

Surface sediment samples were collected at the fore-dune, mid-dune, back-dune, berm/upper beach (high tide), and swash zone (low tide) from every one of the restoration sites for granulometric analysis.

Methods

Sediment samples were collected by surface scooping with a small garden shovel from every one of the restoration sites. The samples were marked and stored in plastic bags before being analyzed. Sand samples were dried in a laboratory oven at 40° C for 24 hours and then weighed in a 250 ml glass laboratory beaker then a representative weighed sample was poured into the top sieve of a geologist sieve set. The geologist sieve set had five sieves (#1 = 4.750-1.829 mm; #2 = 1.828 - 1.016 mm, OPN = 72, US Std. Sieve No. = 10; #3 = 1.015 - 0.508 mm, OPN = 40, US Std. Sieve No. = 18; #4 = 0.507-0.117 mm, OPN = 20, US Std. Sieve No. = 35; #5 = 0.116-0.053 mm, OPN = 0.46, US Std. Sieve No. = 120 (see table 1).

Once the sieves were loaded, they were shaken by hand for 5 minutes and then each fraction on each sieve was weighed in an electronic balance. The mass on each sieve was then analyzed to get a cut-off point or specific size range, which is then captured on a screen.

To calculate the percent of aggregate passing through each sieve we first calculated the percent retained in each sieve (Wsieve = mass of aggregate in the sieve and Wtotal = mass of the aggregate).

%Retained =
$$\frac{W_{Sieve}}{W_{Total}}$$
 ×100%

The cumulative percent of aggregate retained in each sieve was calculated by adding the total amount of aggregate retained in each sieve. We added the total amount of aggregate that is retained in each sieve and the amount in the previous sieves. The cumulative percent passing of the aggregate is found by subtracting the percent retained from 100%.

%Cumulative Passing = 100% - %Cumulative Retained.

Fraction	Grain size (mm)	Filter size (OPN)	US Std. Sieve No.
#1	4.750 - 1.829	N/A	N/A
#2	1.828 - 1.016	72	10
#3	1.015 - 0.508	40	18
#4	0.507 - 0.117	20	35
#5	0.116 - 0.053	0.46	120

WS = Well Sorted, MS = Medium Sorted, VWS = Very Well Sorted

Table 1. Mesh sizes of the geologist set and codes used in the granulometry study.

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Total weight (g): Fraction #1 (g): % Fraction #1: Composition: Fraction #2 (g): % Fraction #2: Composition: Fraction #3 (g): % Fraction #3: Composition: Fraction #4 (g): % Fraction #4: Composition: Fraction #5 (g): % Fraction #5: Composition: Fraction #5 (g): % Fraction #5: Composition: Fraction #5 (g): % Fraction #5: Composition: Fraction #5: Composition: Fraction #5: Composition: Fraction #4 (g): % Fraction #4: Composition: Fraction #5: Composition: Fraction #4: Composition: Fraction #5: Composition: Fraction #5: Composition: Fraction #4: Composition: Fraction #5: Composition: Fraction #5: Composition: Fraction #4: Composition: Fraction #5: Composition: Fraction #6: Composition: Frac																
Total weight (g): Fraction #1 (g): % Fraction #1 (g): % Fraction #2 (g): % Fraction #2 (g): % Fraction #3 (g): % Fraction #3 (g): % Fraction #4 (g): % Fraction #4 (g): % Fraction #4 (g): % Fraction #4 (g): % Fraction #5 (g	116.92	0.13	0.11%	VPS	2.15	1.84%	WS	70.91	60.65%	VWS	43.53	37.23%	VWS	0.11	0.09%	VWS
Total weight (g): Fraction #1 (g): % Fraction #1 (g): % Fraction #2 (g): % Fraction #2 (g): % Fraction #3 (g): % Fraction #3 (g): % Fraction #3 (g): % Fraction #4 (g): % Fraction #5 (g																
Total weight (g): Fraction #1 (g): % Fraction #1 (g): % Fraction #2 (g): % Fraction #2 (g): % Fraction #3 (g): % Fraction #3 (g): % Fraction #3 (g): % Fraction #4 (g): % Fraction #5 (g	Top of Dune															
91.83		Fraction #1 (a):	% Fraction #1:	Composition:	Fraction #2 (a)	% Fraction #2:	Composition:	Fraction #3 (a):	% Fraction #3:	Composition:	Fraction #4 (a):	% Fraction #4:	Composition:	Fraction #5 (a)	% Fraction #5	Composition:
Front of Dune Total weight (g): Fraction #1 (g): WFraction #1: Composition: Fraction #2 (g): WFraction #2: Composition: Fraction #3 (g): WFraction #4: Composition: Fraction #5: Composition: Fraction #5: Composition: Fraction #4: Composition: Fraction #5: Composition: Fraction #5: Composition: Fraction #4: Composition: Fraction #5: Composition: Fraction #5: Composition: Fraction #4: Composition: Fraction #6: Composition: Fraction #																
Total weight (g): Fraction #1 (g): % Fraction #1 (g): % Fraction #2 (g): % Fraction #2 (g): % Fraction #3 (g): % Fraction #3 (g): % Fraction #4 (g): % Fraction #5 (g	91.03		0.00 /6	IN/A	0.1	0.11/6		54.5	39.1370	V VV3	37.33	40.07 /6	V VV3	U	0.00 /6	IN/A
Total weight (g): Fraction #1 (g): % Fraction #1 (g): % Fraction #2 (g): % Fraction #2 (g): % Fraction #3 (g): % Fraction #3 (g): % Fraction #4 (g): % Fraction #5 (g																
97.46 0.12 0.12% MS 2 2.05% WS 41.92 43.01% VWS 55.12 56.56% VWS 0 0.00% N/A Dune and High Water Mark Total weight (g): Fraction #1 (g): W Fraction #1: Composition: Fraction #2 (g): W Fraction #2: Composition: Fraction #3 (g): WFraction #4: Composition: Fraction #4 (g): WFraction #4: Composition: Fraction #5 (g): WFraction #5: Composition: Fraction #6:																
Dune and High Water Mark Total weight (g): Fraction #1 (g): % Fraction #1: Composition: Fraction #2 (g): % Fraction #2: Composition: Fraction #3: Composition: Fraction #4 (g): % Fraction #4: Composition: Fraction #5: Composition: Fraction #5: Composition: Fraction #6: Composit														Fraction #5 (g):	% Fraction #5:	
Total weight (g): Fraction #1 (g): % Fraction #1 (g): % Fraction #2 (g): % Fraction #2 (g): % Fraction #3 (g): % Fraction #3 (g): % Fraction #4 (g): % Fraction #5 (g	97.46	0.12	0.12%	MS	2	2.05%	WS	41.92	43.01%	VWS	55.12	56.56%	VWS	0	0.00%	N/A
Total weight (g): Fraction #1 (g): % Fraction #1 (g): % Fraction #2 (g): % Fraction #2 (g): % Fraction #3 (g): % Fraction #3 (g): % Fraction #4 (g): % Fraction #5 (g																
Total weight (g): Fraction #1 (g): % Fraction #1 (g): % Fraction #2 (g): % Fraction #2 (g): % Fraction #3 (g): % Fraction #3 (g): % Fraction #4 (g): % Fraction #5 (g	Dune and High W	ater Mark														
79.51 1.35 1.70% MS 10.04 12.63% WS 39.65 49.87% VWS 28.31 35.61% VWS 0 0.00% N/A Average Total weight (g): Fraction #1 (g): % Fraction #1: Composition: Fraction #2 (g): % Fraction #2: Composition: Fraction #3 (g): % Fraction #4 (g): % Fraction #4: Composition: Fraction #5 (g): % Fraction #5: Composition:			% Fraction #1.	Composition	Fraction #2 (a):	% Fraction #2	Composition	Fraction #3 (a)	% Fraction #3	Composition	Fraction #4 (a):	% Fraction #4	Composition	Fraction #5 (a)	% Fraction #5	Composition:
Average Total weight (g): Fraction #1 (g): % Fraction #2 (g): % Fraction #2: Composition: Fraction #3 (g): % Fraction #3: Composition: Fraction #4 (g): % Fraction #4: Composition: Fraction #5: Composition:																
Total weight (g): Fraction #1 (g): % Fraction #2 (G): % Fraction #3 (G): % Fraction #4 (G): % Fraction #4 (G): % Fraction #4 (G): % Fraction #5 (G	79.51	1.35	1.70%	MS	10.04	12.63%	VVS	39.65	49.87%	VWS	28.31	35.61%	VVVS	U	0.00%	N/A
Total weight (g): Fraction #1 (g): % Fraction #2 (G): % Fraction #3 (G): % Fraction #4 (G): % Fraction #4 (G): % Fraction #4 (G): % Fraction #5 (G																
	Average															
	Total weight (q):	Fraction #1 (q):	% Fraction #1:	Composition:	Fraction #2 (a):	% Fraction #2:	Composition:	Fraction #3 (q):	% Fraction #3:	Composition:	Fraction #4 (q):	% Fraction #4:	Composition:	Fraction #5 (q):	% Fraction #5:	Composition:
101.000														10.7		· ·
	385.72	I 1.35	0.35%		10.04	2.60%		39.65	10.28%		28.31	7.34%		0	0.00%	

Darah Namai	Middles Conton														
Beach Name:	Middles Center														
Date:	1/23/20														
Coordinates:	18.512421, -67.039335														
Municipality:	Isabela														
Back of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:		Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:		Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
98.11	0.18	0.18%	MS	5.46	5.57%	WS	4445	4530.63%	VWS	47.94	48.86%	VWS	0	0.00%	N/a
Top of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
104.29	0	0.00%	N/A	0.52	0.50%	WS	35.6	34.14%	VWS	67.95	65.15%	VWS	0	0.00%	N/A
												•	•		
Front of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
100.95	0	0.00%	N/A	0.88	0.87%	WS	224.88	222.76%	VWS	74.44	73.74%	VWS	0.18	0.18%	VWS
n Dune and High Wa	ter Mark														
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (q):	% Fraction #5:	Composition:
91.56	3.52	3.84%	MS	16.16	17.65%	WS	37	40.41%	VWS	34.48	37.66%	VWS	0	0.00%	N/A
Average															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (q):	% Fraction #3:	Composition:	Fraction #4 (q):	% Fraction #4:	Composition:	Fraction #5 (q):	% Fraction #5:	Composition:
394.91	3.52	0.89%		16.16	4.09%	,	37	9.37%		34.48	8.73%	,	0	0.00%	
							- '	1 /0			2 0 70		•		

Beach Name:	Sonia Rican														
Date:	1/30/20														
Coordinates:	18.515131, -67.08774	3													
Municipality:	Isabela														
Back of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
114.21	0	0.00%	N/A	0	0.00%	N/A	1.4	1.23%	VWS	112.9	98.85%	VWS	0	0.00%	N/A
Top of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):		Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
176.48	0	%	N/A	0	0.00%	N/A	3.01	1.71%	VWS	102.41	58.03%	VWS	0	0.00%	N/A
Front of Dune							 								
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
116.17	0	0.00%	N/A	0.47	0.40%	MS	39.3	33.83%	VWS	76.33	65.71%	VWS		0.00%	N/A
Dune and High W	Vater Mark					J						J			
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):		Composition:	Fraction #4 (g):			Fraction #5 (g):	% Fraction #5:	Composition:
102.16	0	0.00%	N/A	0	0.00%	N/A	15.43	#REF!	WS	86.35	84.52%	VWS	0	0.00%	N/A
Average															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Material Composition:	Fraction #2 (g):		Material Composition:			Material Composition:		% Fraction #4:	terial Compositi	Fraction #5 (g):	% Fraction #5:	Material Composition:
509.02	0	0.00%		0	0.00%		15.43	3.03%		86.35	16.96%		0	0.00%	

Beach Name:	Pozo Brujo														
Date:	24/01/2020														
Coordinates:	18.5082583, -6	7. 0130097													
Municipality:	Isabela														
Back of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5	Composition:
101.36	0	0.00%	N/A	0	0.00%	N/A			VWS	38.58	38.06%	VWS	0	0.00%	N/A
Top of Dune															
Total weight (g):	Fraction #1 (q):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (q):	% Fraction #3:	Composition:	Fraction #4 (q):	% Fraction #4:	Composition:	Fraction #5 (q):	% Fraction #5:	Composition:
101.91	0	0.00%	N/A	0.43	0.42%	WS	73.76	72.38%	VWS	27.39	26.88%	VWS	0	0.00%	N/A
Front of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
106.24	0	0.00%	N/A	1.48	1.39%	WS	44.6	41.98%	VWS	59.55	56.05%	VWS	0	0.00%	N/A
Between Dune an	ıd High Water Mark														
Total weight (g):	Fraction #1 (g):		Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
111.27	0.15	0.13%	PS	4.36	3.92%	WS			VWS	47.85	43.00%	VWS	0	0.00%	N/A
Average															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (q):	% Fraction #2:	Composition:	Fraction #3 (q):	% Fraction #3:	Composition:	Fraction #4 (q):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
420.78	0	0.00%		1.91	0.45%			42.95%	•	125.52	29.83%		0	0.00%	
				,	,										
Beach Name:	Pozo Brujo Cente	er													
Date:	30/01/20														

Decel News	Danie Davis Court														
Beach Name:	Pozo Brujo Cente	er													
Date:	30/01/20														
Coordinates:	18.505840, -67.0	008026													
Muncipality:	Isabela														
Back of Dune															
Total weight (g):		% Fraction #1:		Fraction #2 (g):				% Fraction #3:		Fraction #4 (g):			Fraction #5 (g):		Composition:
101.64	0.09	0.09%	VPS	0.5	0.49%	WS	31.68	31.17%	VWS	69.03	67.92%	VWS	0	0.00%	N/A
Top of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
103.12	0	0.00%	N/A	0.32	0.31%	WS	18.63	18.07%	VWS	83.76	81.23%	VWS	0	0.00%	N/A
Front of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
104.22	0.14	0.13%	MS	1.77	1.70%	WS	25.68	24.64%	VWS	76.45	73.35%	VWS	0	0.00%	N/A
Between Dune and															
Total weight (g):		% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:					Fraction #4 (g):		Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
99.91	0.29	0.29%	MS	1.94	1.94%	WS	22.82	22.84%	VWS	74.36	74.43%	VWS	0	0.00%	N/A
Average															
Total weight (g):		% Fraction #1:	Composition:	Fraction #2 (g):				% Fraction #3:	Composition:	Fraction #4 (g):		Composition:	Fraction #5 (g):		Composition:
408.89	0.29	0.07%		1.94	0.47%		22.82	5.58%		74.36	18.19%		0	0.00%	

December Manager	Ob and Jaland														
Beach Name:	Shore Island														
Date:	21/01/2020														
Coordinates:	18.508824 , -67.028645														
Municipality:	Isabela														
Back of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
96.86	0.53	0.55%	VPS	0.29	0.30%	MS	5.73	5.92%	WS	98.85	102.05%	VWS	0.16	0.17%	VWS
Top of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
103.28	0	0.00%	N/A	0	0.00%	N/A	10.1	9.78%	VWS	101.74	98.51%	VWS	0	0.00%	N/A
Front of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
106.49	0	0.00%	N/A	0.15	0.14%	WS	59.4	55.78%	VWS	47.22	44.34%	VWS	0	0.00%	N/A
Dune and High Wa	ater Mark														
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
102.32	0	0.00%	N/A	0.17	0.17%	WS	44.32	43.32%	VWS	57.17	55.87%	VWS	0	0.00%	N/A
Average															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
408.95	0.53	0.13%	•	0.44	0.11%	•	75.23	18.40%		247.81	60.60%	•	0.16	0.04%	,

Beach Name:	Albizu Campos														
Date:	30/01/20														
Coordinates:	18.515512, -67.092721														
Municipality:	Isabela														
Back of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
101.64	0	0.00%	N/A	1.2	1.18%	WS	31.88	31.37%	VWS	68.39	67.29%	VWS	0	0.00%	N/A
Top of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
104.51	0	0.00%	N/A	0.6	0.57%	WS	30.6	29.28%	VWS	72.93	69.78%	VWS	0.09	0.09%	VWS
Front of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
105.66	0.13	0.12%	MS	0.54	0.51%	WS	16.92	16.01%	VWS	87.93	83.22%	VWS	0	0.00%	N/A
Dune and High Wa	iter Mark														
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
98.87	0	0.00%	N/A	0.39	0.39%	WS	17.11	17.31%	VWS	81.2	82.13%	VWS	0	0.00%	N/A
Average															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:		% Fraction #2:	Composition:	Fraction #3 (g):		Composition:		% Fraction #4:	Composition:	Fraction #5 (g):		Composition:
410.68	0	0.00%		0.39	0.09%		17.11	4.17%		81.2	19.77%		0	0.00%	

Loiza

/acia Talega														
2/09/2019														
8.449313 , -65.90492	28													
oiza														
Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
0.33	0.29%	ws	0.58	0.51%	WS	63.15	55.53%	VWS	48.05	42.25%	VWS	0.86	0.76%	VWS
Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
0.18	0.15%	WS	0.58	0.50%	WS	6.05	5.21%	VWS	107.12	92.20%	VWS	1.84	1.58%	VWS
Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
0.1	0.13%	ws	5.28	6.99%	WS	32.36	42.83%	VWS	36.34	48.10%	VWS	1.32	1.75%	VWS
er Mark														
Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
0	0.00%	·	0.4	0.48%	WS	10.17	12.26%	VWS	67.24	81.06%	VWS	4.77	5.75%	VWS
Fraction #1 (g):	% Fraction #1:	Material Composition:	Fraction #2 (g):	% Fraction #2:	Material Composition:	Fraction #3 (g):	% Fraction #3:	terial Composition	Fraction #4 (g):	% Fraction #4:	Material Composition:	Fraction #5 (g):	% Fraction #5:	Material Composition:
0.61	0.16%	ws	6.44	1.66%	ws	101.56	26.15%	VWS	191.51	49.30%	vws	4.02	1.03%	VWS
ei	Fraction #1 (g): 0.33 Fraction #1 (g): 0.18 Fraction #1 (g): 0.1 or Mark Fraction #1 (g): 0 Fraction #1 (g): 0 Fraction #1 (g):	Fraction #1 (g): % Fraction #1: 0.33 0.29% Fraction #1 (g): % Fraction #1: 0.18 0.15% Fraction #1 (g): % Fraction #1: 0.1 0.13% or Mark Fraction #1 (g): % Fraction #1: 0.00% Fraction #1 (g): % Fraction #1: 0.00%	Fraction #1 (g): % Fraction #1:	Fraction #1 (g): % Fraction #1:	Fraction #1 (g): % Fraction #1:	Fraction #1 (g): % Fraction #1:	Fraction #1 (g): % Fraction #1:	Fraction #1 (g): % Fraction #1:	Fraction #1 (g): % Fraction #1: Composition: Fraction #2 (g): % Fraction #2: Composition: Fraction #3 (g): % Fraction #3: Composition: 0.33	Fraction #1 (g): % Fraction #1: Composition: Fraction #2 (g): % Fraction #2: Composition: Fraction #3 (g): % Fraction #3: Composition: Fraction #4 (g): 0.33	Fraction #1 (g): % Fraction #1: Composition: Fraction #2 (g): % Fraction #2: Composition: Fraction #3 (g): % Fraction #3: Composition: Fraction #4 (g): % Fraction #4: 2.25% Fraction #1 (g): % Fraction #1: Composition: Fraction #2 (g): % Fraction #2: Composition: Fraction #3 (g): % Fraction #3: Composition: Fraction #4 (g): % Fraction #4:	Fraction #1 (g): % Fraction #1: Composition: Fraction #2 (g): % Fraction #2: Composition: Fraction #3 (g): % Fraction #3: Composition: Fraction #4 (g): % Fraction #4: Composition: O.58	Fraction #1 (g): % Fraction #1: Composition: Fraction #2 (g): % Fraction #2: Composition: Fraction #3 (g): % Fraction #3: Composition: Fraction #4 (g): % Fraction #4: Composition: Fraction #5 (g): 0.58	Fraction #1 (g): % Fraction #1: Composition: Fraction #2 (g): % Fraction #2: Composition: Fraction #3 (g): % Fraction #3: Composition: Fraction #4 (g): % Fraction #4: Composition: Fraction #5: (g): % Fraction #5: (g): (g):

Beach Name:	Loiza 1														
Date:	09/12/2019														
Coordinates:	18.451899, -65.961658														
Municipality:	loiza														
Back of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
108.6	0.66	0.61%	VPS	2.48	2.28%	MS	57.85	53.27%	WS	47.22	43.48%	VWS	0.11	0.10%	VWS
Top of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
102.47	0	0.00%	N/A	0.24	0.23%	WS	35.81	34.95%	VWS	65.99	64.40%	VWS	0	0.00%	N/A
Front of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
105.46	0	0.00%	N/A	0.35	0.33%	MS	49.23	46.68%	VWS	55.53	52.66%	VWS	0	0.00%	N/A
Dune and High Wa	ater Mark														
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
93.16	0.39	0.42%	PS	19.7	21.15%	MS	60.7	65.16%	WS	11.98	12.86%	VWS	0	0.00%	N/A
Average															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
409.69	0.66	0.16%		3.07	0.75%		142.89	34.88%		168.74	41.19%		0.11	0.03%	

Beach Name:	Loiza 2														
Date:	09/12/2019														
Coordinates:	18.450612 , -65.956536														
Municipality:	loiza														
Back of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
97.72	3.3	3.38%	PS	14.58	14.92%	MS	49.8	50.96%	WS	29.69	30.38%	VWS	0	0.00%	N/A
Top of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
95.96	1.31	1.37%	VPS	7.3	7.61%	WS	56.94	59.34%	WS	29.72	30.97%	VWS	0	0.00%	N/A
Front of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
90.61	0.67	0.74%	MS	3.75	4.14%	WS	43	47.46%	VWS	42.98	47.43%	VWS	0	0.00%	N/A
Dune and High W	ater Mark														
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
99.58	0.41	0.41%	PS	4.85	4.87%	MS	78.27	78.60%	WS	15.64	15.71%	VWS	0	0.00%	N/A
Average															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
383.87	0.41	0.11%	·	4.85	1.26%		78.27	20.39%		15.64	4.07%	•	0	0.00%	

Hatillo

Beach Name:	Mar Azul														
Date:	12/12/2019														
Coordinates:	.4905955 , -66.8132	20													
		.23													
Municipality:	Hatillo														
Back of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
100.77	4.72	4.68%	MS	10.64	10.56%	WS	52.6	52.20%	VWS	32.65	32.40%	VWS	0	0.00%	N/A
Top of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
93.43	2.74	2.93%	WS	2.85	3.05%	MS	53.22	56.96%	VWS	34.38	36.80%	VWS	0	0.00%	N/A
Front of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
108.89	1.53	1.41%	MS	2.35	2.16%	WS	75.36	69.21%	VWS	29.46	27.05%	VWS	0	0.00%	N/A
Dune and High Wa	ater Mark														
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
104.66	39.1	37.36%	VPS	23.46	22.42%	WS	30.49	29.13%	WS	4.41	4.21%	VWS		0.00%	
Average															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
407.75	8.99	2.20%		15.84	3.88%		181.18	44.43%		96.49	23.66%		0	0.00%	N/A

Manatí

D I. N	1														
Beach Name:	La Esperanza														
Date:	1/22/2020														
Coordinates:	18.477465, -66.513	184													
Municipality:	Manati														
Back of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
108.81	0.45	0.41%	MS	0.93	0.85%	ws	81.71	75.09%	VWS	25.4	23.34%	VWS	0	0.00%	N/A
Top of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
111.28	0	0.00%	N/A	0.36	0.32%	WS	67.76	60.89%	VWS	42.83	38.49%	VWS		0.00%	N/A
Front of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
100.72	0.43	0.43%	VPS	0.73	0.72%	MS	38.7	38.42%	WS	60.56	60.13%	VWS	0	0.00%	N/A
Dune and High Wa	later Mark														
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
82.76	2.86	3.46%	VPS	12.55	15.16%	WS	54.17	65.45%	VWS	13.11	15.84%	VWS	0	0.00%	N/A
Average															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
403.57	0.88	0.22%		2.02	0.50%		188.17	46.63%		128.79	31.91%		0	0.00%	

Beach Name:	Mar Chiquita														
Date:	12/10/2019														
Coordinates:	18.472768, -66.483	837													
Municipality:	Manati														
Back of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
101.32	0.84	0.83%	VPS	1.03	1.02%	WS	86.17	85.05%	VVWS	12.69	12.52%	VWS	0.47	0.46%	VWS
Top of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
103.93	0	0.00%	N/A	1.05	1.01%	WS	58.96	56.73%	VWS	43.48	41.84%	VWS	0.1	0.10%	VWS
Front of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
101.06	0	0.00%	N/A	0.31	0.31%	WS	52.69	52.14%	VWS	47.91	47.41%	VWS	0	0.00%	N/A
Dune and High Wa	ter Mark														
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):			Fraction #3 (g):			Fraction #4 (g):		Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
102.13	0	0.00%	PS	1.05	1.03%	WS	64.34	63.00%	VWS	36.47	35.71%	VWS	0	0.00%	N/A
Average															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):		Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
408.44	0.84	0.21%		2.39	0.59%		197.82	48.43%		104.08	25.48%		0.57	0.14%	

Beach Name:	Poza de las Mujeres														
Date:	12/10/2019														
Coordinates:	18.475819 , -66.505786														
Municipality:	Manati														
Back of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
109.05	0.11	0.10%	PS	0.8	0.73%	MS	29.59	27.13%	VWS	78.35	71.85%	VWS	0.1	0.09%	VWS
Top of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
109.81	0	0.00%	N/A	0.18	0.16%	MS	19.8	18.03%	VWS	90.25	82.19%	VWS	0.08	0.07%	VWS
Front of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
107.56	0	0.00%	N/A	0.24	0.22%	MS	21.64	20.12%	VWS	85.25	79.26%	VWS	0	0.00%	N/A
Dune and High W	later Mark														
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
111.47	0.65	0.58%	VPS	0.66	0.59%	MS	40.51	36.34%	VWS	69.48	62.33%	VWS	0	0.00%	N/A
Average															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
437.89	0.76	0.17%		1.88	0.43%		111.54	25.47%		323.33	73.84%		0.18	0.04%	

Arecibo

Beach Name:	Mananta														
	Maranto 12/12/2019														
Date:		101100													
Coordinates:	18.497634, -66.6 Arecibo	194499													
Municipality:	Arecido														
Back of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1	: Composition	Fraction #2 (g): % Fraction #2:	Composition	Fraction #3 (g)	% Fraction #3:	: Composition:	Fraction #4 (g)	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
104.53	0	0.00%	N/A	0.87	0.83%	WS	53.36	51.05%	VWS	50.07	47.90%	VWS	0	0.00%	N/A
101100		0.0070	1071	0.0.	010070		00.00	0110070	71.10	00.01	1110070			0.0070	7471
Top of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1	: Composition	: Fraction #2 (g): % Fraction #2:	: Composition:	Fraction #3 (g)	% Fraction #3:	: Composition:	Fraction #4 (g)	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
107.83	0	0.00%	N/A	0	0.00%	N/A	49.52	45.92%	VWS	58.09	53.87%	VWS	0	0.00%	N/A
						•	•								
Front of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1		: Fraction #2 (g): % Fraction #2:	: Composition:		% Fraction #3:		Fraction #4 (g)	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
90.81	0	0.00%	N/A	0.16	0.18%	WS	46.68	51.40%	VWS	43.78	48.21%	VWS	0	0.00%	N/A
Dune and High Wa															
Total weight (g):	Fraction #1 (g):): % Fraction #2:						% Fraction #4:	Composition:	Fraction #5 (g):		
107.11	0.8	0.75%	VPS	0.8	0.75%	WS	35.76	33.39%	VWS	69.62	65.00%	VWS	0	0.00%	N/A
Average															
Total weight (g):	Fraction #1 (g):		: Composition): % Fraction #2:	: Composition:			: Composition:		% Fraction #4:	Composition:		% Fraction #5:	Composition:
410.28	0.8	0.19%		0.8	0.19%		35.76	8.72%		69.62	16.97%		0	0.00%	
					'		'	-					'	'	
Desert Name	1														
Beach Name: Date:	Jarealito 12/12/2019														
	809010 , -67. 6935	144													
Municipality:	Arecbo	,144													
inanio panty.															
Back of Dune															
	Fraction #1 (g):			Fraction #2 (g):			Fraction #3 (g):						Fraction #5 (g):	% Fraction #5:	Composition:
107.14	0	0.00%	N/A	0.18	0.17%	WS	22.01	20.54%	VWS	84.7	79.06%	VWS	0	0.00%	N/A
Top of Dune Total weight (g):	Fraction #1 (q):	0/ F==+ti== #4.	Composition:	Fraction #2 (q):	% Fraction #2:	0	Fraction #3 (q):	0/ 5	0	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	0/ F== -+i=== #F.	Composition:
105.21	0 Praction #1 (g):	0.00%	N/A	0 Praction #2 (g):	0.00%	N/A	10.83	10.29%	VWS	94.13	89.47%	VWS	Praction #5 (g):	% Fraction #5: 0.00%	N/A
105.21	U	0.00%	IN/A	U	0.0076	IN/A	10.03	10.2970	VVVO	34.13	09.4170	VVVO	U	0.00%	IN/A
Front of Dune															
	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
119.85	0	0.00%	N/A	0.58	0.48%	WS	63.94	53.35%	VWS	54.27	45.28%	VWS	0	0.00%	N/A
Dune and High Wa															
	raction #1 (g):	% Fraction #1: 0.24%	Composition:	Fraction #2 (g):	% Fraction #2: 0.99%	Composition:	Fraction #3 (g): 60.44	% Fraction #3: 54.41%	Composition:	Fraction #4 (g):	% Fraction #4: 43.71%	Composition:	Fraction #5 (g):	% Fraction #5: 0.00%	Composition:

 Average
 Total weight (g):
 Fraction #1 (g):
 % Fraction #2 (g):
 % Fraction #2 (g):
 % Fraction #2 (g):
 % Fraction #3 (g):
 % Fraction #3 (g):
 % Fraction #3 (g):
 % Fraction #4 (g):
 % Fraction #4 (g):
 % Fraction #5 (g):
 % Fraction #5:
 Composition:

 443.28
 0.27
 0.06%
 0.76
 0.17%
 96.78
 21.83%
 233.1
 52.59%
 0
 0.00%

Camuy

	\ D														
Beach Name:	Villa Pesquera de Cami	uy													
Date:	12/12/2019														
Coordinates:	18.4908085 , -66.86539	950													
Munnicipality:	Camuy														
Back of Dune															
Total weight (g):				Fraction #2 (g):									Fraction #5 (g):		Composition:
87.4	1.35	1.54%	WS	32.7	37.41%	WS	47.91	54.82%	VWS	5.39	6.17%	VWS	0	0.00%	N/A
Top of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g)	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
91.58	1.24	1.35%	MS	28.06	30.64%	WS	57.83	63.15%	VWS	4.23	4.62%	VWS	0	0.00%	N/A
Front of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2	Composition:	Fraction #3 (a):	% Fraction #3:	Composition:	Fraction #4 (g)	% Fraction #4:	Composition:	Fraction #5 (a):	% Fraction #5	Composition:
83.87	31.81	37.93%	MS	31.01	36.97%	WS	21.02	25.06%	VWS	0.24	0.29%	VWS	0	0.00%	N/A
ո Dune and High Wa	ator Mark														
Total weight (g):		9/ Fraction #1:	Composition	Fraction #2 (g):	9/ Fraction #2:	Composition	Fraction #2 (a):	9/ Fraction #2:	Composition:	Eraction #4 (a)	0/ Fraction #4:	Composition	Fraction #5 (a):	9/ Fraction #5:	Composition
87.4	8.41	9.62%	MS	58.19	66.58%	WS	20.63	23.60%	VWS	0.12	0.14%	VWS	0	0.00%	N/A
07.4	0.41	9.02%	IVIS	56.19	00.56%	VVS	20.63	23.00%	V V V S	0.12	0.14%	V V V S	U	0.00%	N/A
Average															_
Total weight (g):			Composition:	Fraction #2 (g):		Composition:			Composition:			Composition:			Composition:
350.25	34.4	9.82%		91.77	26.20%		126.76	36.19%		9.86	2.82%		0	0.00%	
Beach Name:	Finca Nolla														
Beach Name: Date:	Finca Nolla 12/12/2019														
Date:	12/12/2019														
Date: Coordinates:	12/12/2019 18.488777 , -66.845308														
Date: Coordinates: Municipality:	12/12/2019 18.488777 , -66.845308		: Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g)	% Fraction #3:	Composition:	Fraction #4 (g)	: % Fraction #4:	Composition:	Fraction #5 (g):	: % Fraction #5:	Composition:
Date: Coordinates: Municipality: Back of Dune	12/12/2019 18.488777 , -66.845308 Camuy		: Composition:	Fraction #2 (g):	% Fraction #2: 0.00%	Composition:	Fraction #3 (g) 18.47	% Fraction #3: 21.16%	Composition:	Fraction #4 (g) 68.28	% Fraction #4: 78.23%	Composition: VWS	Fraction #5 (g): 0.36	: % Fraction #5: 0.41%	Composition: VWS
Date: Coordinates: Municipality: Back of Dune Total weight (g):	12/12/2019 18.488777 , -66.845308 Camuy Fraction #1 (g):	% Fraction #1 0.00%	N/A	0	0.00%	N/A	18.47	21.16%	VWS	68.28	78.23%	VWS	0.36	0.41%	VWS
Date: Coordinates: Municipality: Back of Dune Total weight (g): 87.28	12/12/2019 18.488777 , -66.845308 Camuy Fraction #1 (g):	% Fraction #1 0.00%	N/A		0.00%	N/A	18.47	21.16%	VWS	68.28	78.23%	VWS	0.36	0.41%	VWS
Date: Coordinates: Municipality: Back of Dune Total weight (g): 87.28 Top of Dune	12/12/2019 18.488777 , -66.845308 Camuy Fraction #1 (g):	% Fraction #1 0.00%	N/A	0	0.00%	N/A	18.47	21.16%	VWS	68.28	78.23%	VWS	0.36	0.41%	VWS
Date: Coordinates: Municipality: Back of Dune Total weight (g): 87.28 Top of Dune Total weight (g):	12/12/2019 18.488777 , -66.845308 Camuy Fraction #1 (g): 0 Fraction #1 (g):	% Fraction #1 0.00%	N/A : Composition:	0 Fraction #2 (g):	0.00% % Fraction #2:	N/A Composition:	18.47 Fraction #3 (g)	21.16% : % Fraction #3:	VWS Composition:	68.28 Fraction #4 (g)	78.23% : % Fraction #4:	VWS Composition:	0.36 Fraction #5 (g):	0.41% : % Fraction #5:	VWS Composition:
Date: Coordinates: Municipality: Back of Dune Total weight (g): 87.28 Top of Dune Total weight (g): 106.77 Front of Dune	12/12/2019 18.488777 , -66.845308 Camuy Fraction #1 (g): 0 Fraction #1 (g):	% Fraction #1 0.00% % Fraction #1 0.00%	N/A : Composition:	0 Fraction #2 (g):	0.00% % Fraction #2: 0.00%	N/A Composition:	18.47 Fraction #3 (g) 0.24	21.16% % Fraction #3: 0.22%	Composition:	68.28 Fraction #4 (g) 106.29	78.23% : % Fraction #4: 99.55%	Composition:	0.36 Fraction #5 (g): 0.12	0.41% : % Fraction #5:	Composition:
Date: Coordinates: Municipality: Back of Dune Total weight (g): 87.28 Top of Dune Total weight (g): 106.77	12/12/2019 18.488777 , -66.845308 Camuy Fraction #1 (g): 0 Fraction #1 (g): 0	% Fraction #1 0.00% % Fraction #1 0.00%	N/A : Composition: N/A	0 Fraction #2 (g):	0.00% % Fraction #2:	N/A Composition:	18.47 Fraction #3 (g) 0.24	21.16% % Fraction #3: 0.22%	Composition:	68.28 Fraction #4 (g) 106.29	78.23% : % Fraction #4: 99.55%	Composition:	0.36 Fraction #5 (g): 0.12	0.41% : % Fraction #5: 0.11%	Composition:
Date: Coordinates: Municipality: Back of Dune Total weight (g): 87.28 Top of Dune Total weight (g): 106.77 Front of Dune Total weight (g): 107.21	12/12/2019 18.488777 , -66.845308	% Fraction #1 0.00% % Fraction #1 0.00% % Fraction #1	N/A Composition: N/A Composition:	0 Fraction #2 (g): 0 Fraction #2 (g):	0.00% % Fraction #2: 0.00% % Fraction #2:	N/A Composition: N/A Composition:	18.47 Fraction #3 (g) 0.24 Fraction #3 (g)	21.16% % Fraction #3: 0.22% % Fraction #3:	Composition: WS Composition:	68.28 Fraction #4 (g) 106.29 Fraction #4 (g)	78.23% % Fraction #4: 99.55% % Fraction #4:	Composition: VWS Composition:	0.36 Fraction #5 (g): 0.12 Fraction #5 (g):	0.41% : % Fraction #5: 0.11% : % Fraction #5:	Composition: VWS Composition:
Date: Coordinates: Municipality: Back of Dune Total weight (g): 87.28 Top of Dune Total weight (g): 106.77 Front of Dune Total weight (g): 107.21	12/12/2019 18.488777 , -66.845308	% Fraction #1 0.00% % Fraction #1 0.00% % Fraction #1 0.00%	N/A : Composition: N/A : Composition: N/A	Fraction #2 (g): 0 Fraction #2 (g): 0.47	0.00% % Fraction #2: 0.00% % Fraction #2: 0.44%	N/A Composition: N/A Composition: WS	18.47 Fraction #3 (g) 0.24 Fraction #3 (g) 2.42	21.16% % Fraction #3: 0.22% % Fraction #3: 2.26%	Composition: WS Composition: VWS	68.28 Fraction #4 (g) 106.29 Fraction #4 (g) 103.53	78.23% % Fraction #4: 99.55% % Fraction #4: 96.57%	Composition: VWS Composition: VWS	0.36 Fraction #5 (g): 0.12 Fraction #5 (g): 0.54	0.41% % Fraction #5: 0.11% % Fraction #5: 0.50%	Composition: VWS Composition: VWS
Date: Coordinates: Municipality: Back of Dune Total weight (g): 87.28 Top of Dune Total weight (g): 106.77 Front of Dune Total weight (g): 107.21	12/12/2019 18.488777 , -66.845308	% Fraction #1 0.00% % Fraction #1 0.00% % Fraction #1 0.00%	N/A : Composition: N/A : Composition: N/A	0 Fraction #2 (g): 0 Fraction #2 (g):	0.00% % Fraction #2: 0.00% % Fraction #2: 0.44%	N/A Composition: N/A Composition: WS	18.47 Fraction #3 (g) 0.24 Fraction #3 (g) 2.42	21.16% % Fraction #3: 0.22% % Fraction #3: 2.26%	Composition: WS Composition: VWS	68.28 Fraction #4 (g) 106.29 Fraction #4 (g) 103.53	78.23% % Fraction #4: 99.55% % Fraction #4: 96.57%	Composition: VWS Composition: VWS	0.36 Fraction #5 (g): 0.12 Fraction #5 (g): 0.54	0.41% % Fraction #5: 0.11% % Fraction #5: 0.50%	Composition: VWS Composition: VWS
Date: Coordinates: Municipality: Back of Dune Total weight (g): 87.28 Top of Dune Total weight (g): 106.77 Front of Dune Total weight (g): 107.21 Dune and High Wa Total weight (g): 98.41	12/12/2019 18.488777 , -66.845308	% Fraction #1 0.00% % Fraction #1 0.00% % Fraction #1 0.00%	N/A : Composition: N/A : Composition: N/A	Fraction #2 (g): 0 Fraction #2 (g): 0.47 Fraction #2 (g):	0.00% % Fraction #2: 0.00% % Fraction #2: 0.44%	N/A Composition: N/A Composition: WS	18.47 Fraction #3 (g) 0.24 Fraction #3 (g) 2.42 Fraction #3 (g)	21.16% Which Fraction #3: 0.22% Which Fraction #3: 2.26%	Composition: WS Composition: VWS Composition:	68.28 Fraction #4 (g) 106.29 Fraction #4 (g) 103.53 Fraction #4 (g)	78.23% % Fraction #4: 99.55% % Fraction #4: 96.57%	Composition: VWS Composition: VWS Composition:	0.36 Fraction #5 (g): 0.12 Fraction #5 (g): 0.54 Fraction #5 (g):	0.41% % Fraction #5: 0.11% % Fraction #5: 0.50%	Composition: VWS Composition: VWS Composition:
Date: Coordinates: Municipality: Back of Dune Total weight (g): 87.28 Top of Dune Total weight (g): 106.77 Front of Dune Total weight (g): 107.21 Dune and High Wa Total weight (g): 98.41 Average	12/12/2019 18.488777 , -66.845308	% Fraction #1 0.00% % Fraction #1 0.00% % Fraction #1 0.00% % Fraction #1 0.00%	N/A : Composition: N/A : Composition: N/A : Composition: N/A	Fraction #2 (g): 0 Fraction #2 (g): 0.47 Fraction #2 (g): 0.14	0.00% % Fraction #2: 0.00% % Fraction #2: 0.44% % Fraction #2: 0.14%	N/A Composition: N/A Composition: WS Composition: MS	18.47 Fraction #3 (g) 0.24 Fraction #3 (g) 2.42 Fraction #3 (g) 6.07	21.16% % Fraction #3: 0.22% % Fraction #3: 2.26% % Fraction #3: 6.17%	Composition: WS Composition: VWS Composition: VWS Composition: VWS	68.28 Fraction #4 (g) 106.29 Fraction #4 (g) 103.53 Fraction #4 (g) 91.41	78.23% % Fraction #4: 99.55% % Fraction #4: 96.57% % Fraction #4: 92.89%	Composition: VWS Composition: VWS Composition: VWS	0.36 Fraction #5 (g): 0.12 Fraction #5 (g): 0.54 Fraction #5 (g): 0.11	0.41% % Fraction #5: 0.11% % Fraction #5: 0.50% % Fraction #5: 0.11%	Composition: VWS Composition: VWS Composition: VWS Composition: VWS
Date: Coordinates: Municipality: Back of Dune Total weight (g): 87.28 Top of Dune Total weight (g): 106.77 Front of Dune Total weight (g): 107.21 Dune and High Wa Total weight (g): 98.41	12/12/2019 18.488777 , -66.845308	% Fraction #1 0.00% % Fraction #1 0.00% % Fraction #1 0.00% % Fraction #1 0.00%	N/A : Composition: N/A : Composition: N/A : Composition: N/A	Fraction #2 (g): 0 Fraction #2 (g): 0.47 Fraction #2 (g):	0.00% % Fraction #2: 0.00% % Fraction #2: 0.44% % Fraction #2: 0.14%	N/A Composition: N/A Composition: WS Composition: MS	18.47 Fraction #3 (g) 0.24 Fraction #3 (g) 2.42 Fraction #3 (g) 6.07	21.16% % Fraction #3: 0.22% % Fraction #3: 2.26% % Fraction #3: 6.17%	Composition: WS Composition: VWS Composition: VWS Composition: VWS	68.28 Fraction #4 (g) 106.29 Fraction #4 (g) 103.53 Fraction #4 (g) 91.41	78.23% % Fraction #4: 99.55% % Fraction #4: 96.57% % Fraction #4: 92.89%	Composition: VWS Composition: VWS Composition: VWS	0.36 Fraction #5 (g): 0.12 Fraction #5 (g): 0.54 Fraction #5 (g): 0.11	0.41% % Fraction #5: 0.11% % Fraction #5: 0.50% % Fraction #5: 0.11%	Composition: VWS Composition: VWS Composition: VWS Composition: VWS

Dorado

Beach Name:	Caracol														
Date:	12/10/2019														
Coordinates:	18.470546 , -66.247021														
Municipality:	Dorado														
Back of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
101.23	0	0.00%	N/A	0	0.00%	N/A	0.3	0.30%	WS	100.41	99.19%	VWS	0.29	0.29%	VWS
							_								
Top of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
104.07	0	0.00%	N/A	0.19	0.18%	WS	5.55	5.33%	VWS	97.1	93.30%	VWS	0.44	0.42%	VWS
							-								
Front of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
117.43	0.12	0.10%	VPS	0	0.00%	N/A	9.86	8.40%	VWS	106.61	90.79%	VWS	0.9	0.77%	VWS
n Dune and High Wa	ter Mark														
Total weight (q):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (q):	% Fraction #3:	Composition:	Fraction #4 (q):	% Fraction #4:	Composition:	Fraction #5 (q):	% Fraction #5:	Composition:
109.74	0	0.00%	N/A	0	0.00%	N/A	5.41	4.93%	VWS	103.51	94.32%	VWS	0	0.00%	N/A
	·														
Average															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
432.47	0.12	0.03%		0.19	0.04%		21.12	4.88%		407.63	94.26%		1.63	0.38%	
		2.3070			2.2170						22070			2.2070	

Beach Name:	Jarialito														
Date:	12/12/2019														
Coordinates:	809010 , -67. 693	5144													
Municipality:	Arecbo														
Back of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition	Fraction #2 (g):	9/ Eraction #2:	Composition	Eraction #2 (a):	0/ Eraction #2:	Composition	Fraction #4 (a):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
107.14	riaction #1 (g).	0.00%	N/A	0.18	0.17%	WS	22.01	20.54%	VWS	84.7	79.06%	VWS	0 n	0.00%	N/A
107.14	U	0.00%	N/A	0.16	0.17%	WS	22.01	20.54%	VWS	04.7	79.06%	V VVS	U	0.00%	IN/A
Top of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:		Fraction #2 (g):							% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
105.21	0	0.00%	N/A	0	0.00%	N/A	10.83	10.29%	VWS	94.13	89.47%	VWS	0	0.00%	N/A
Front of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
119.85	0	0.00%	N/A	0.58	0.48%	WS	63.94	53.35%	VWS	54.27	45.28%	VWS	0	0.00%	N/A
Dune and High Wa															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
111.08	0.27	0.24%	PS	1.1	0.99%	WS	60.44	54.41%	VWS	48.55	43.71%	VWS	0	0.00%	N/A
Average															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition	Fraction #3 (g):	0/ Eraction #2:	Composition	Fraction #4 (a):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
			Composition:			Composition:			Composition:			Composition:			Composition:
443.28	0.27	0.06%		0.76	0.17%		96.78	21.83%		233.1	52.59%		0	0.00%	

San Juan

Beach Name:	El Ultimo Trolley														
Date:	12/09/2019														
Coordinates:	18.452779 , -66.049467														
Municipality:	San Juan														
Back of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
100.12	0	0.00%	N/A	0.24	0.24%	MS	10.48	10.47%	VWS	89	88.89%	VWS	0.29	0.29%	VWS
Top of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
112.51	0	0.00%	N/A	0.16	0.14%	MS	69.32	61.61%	VWS	41.99	37.32%	VWS	0.37	0.33%	VWS
Front of Dune															
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
104.32	0	0.00%	N/A	0.12	0.12%	MS	50.46	48.37%	VWS	53.3	51.09%	VWS	0.16	0.15%	VWS
Dune and High V	Vater Mark														
Total weight (g):	Fraction #1 (g):	% Fraction #1:	Composition:	Fraction #2 (g):	% Fraction #2:	Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):	% Fraction #4:	Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
102.84	0.11	0.11%	PS	2.12	2.06%	MS	43.89	42.68%	VWS	55.82	54.28%	VWS	0.56	0.54%	VWS
Average															
Total weight (g):		% Fraction #1:	Composition:	Fraction #2 (g):		Composition:	Fraction #3 (g):	% Fraction #3:	Composition:	Fraction #4 (g):		Composition:	Fraction #5 (g):	% Fraction #5:	Composition:
419.79	0.11	0.03%		2.64	0.63%		174.15	41.49%		0	0.00%		1.38	0.33%	