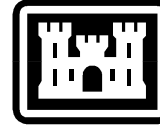


# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-01 @ 1 ft

Analysis Date: 8/31/2015

Easting (ft): <b>877,188</b>	Northing (ft): <b>2,029,329</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-9.9 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/2</b>	Fines (%): <b>#200 - 0.90</b> <b>#230 - 0.89</b>	Organics (%):	Carbonates (%): <b>4.97</b>	Shells (%): <b>7.7</b>
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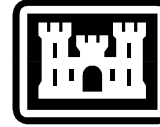
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.61	0.61
#4	-2.25	4.75	0.06	0.67
#5	-2.00	4.00	0.17	0.84
#7	-1.50	2.80	0.16	1.00
#10	-1.00	2.00	0.25	1.25
#14	-0.50	1.40	0.46	1.71
#18	0.00	1.00	0.36	2.07
#25	0.50	0.71	0.54	2.61
#35	1.00	0.50	0.89	3.50
#45	1.50	0.36	2.72	6.22
#60	2.00	0.25	13.01	19.23
#80	2.50	0.18	57.54	76.77
#120	3.00	0.13	20.30	97.07
#170	3.50	0.09	2.01	99.08
#200	3.75	0.08	0.02	99.10
#230	4.00	0.06	0.01	99.11

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.95	2.68	2.48	2.27	2.05	1.88	1.28	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.18	0.22	2.27	0.21	0.71	-3.95	25.19

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-01 @ 3 ft

Analysis Date: 8/31/2015

Easting (ft): <b>877,188</b>	Northing (ft): <b>2,029,329</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-11.9 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/2</b>	Fines (%): <b>#200 - 1.17</b> <b>#230 - 1.15</b>	Organics (%):	Carbonates (%):	Shells (%): <b>8.3</b>
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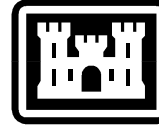
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	1.24	1.24
#3.5	-2.50	5.60	0.61	1.85
#4	-2.25	4.75	0.04	1.89
#5	-2.00	4.00	0.15	2.04
#7	-1.50	2.80	0.43	2.47
#10	-1.00	2.00	0.63	3.10
#14	-0.50	1.40	0.93	4.03
#18	0.00	1.00	1.11	5.14
#25	0.50	0.71	1.53	6.67
#35	1.00	0.50	2.48	9.15
#45	1.50	0.36	5.06	14.21
#60	2.00	0.25	13.71	27.92
#80	2.50	0.18	46.17	74.09
#120	3.00	0.13	21.79	95.88
#170	3.50	0.09	2.85	98.73
#200	3.75	0.08	0.10	98.83
#230	4.00	0.06	0.02	98.85

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.98	2.73	2.52	2.24	1.89	1.57	-0.06	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.99	0.25	2.24	0.21	1.08	-3.11	14.73

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-01 @ 6 ft

Analysis Date: 8/31/2015

Easting (ft): <b>877,188</b>	Northing (ft): <b>2,029,329</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-14.9 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/2</b>	Fines (%): <b>#200 - 2.85</b> <b>#230 - 2.77</b>	Organics (%):	Carbonates (%):	Shells (%): <b>3.1</b>
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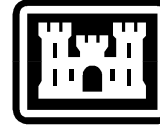
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.02	0.02
#14	-0.50	1.40	0.01	0.03
#18	0.00	1.00	0.02	0.05
#25	0.50	0.71	0.04	0.09
#35	1.00	0.50	0.07	0.16
#45	1.50	0.36	0.25	0.41
#60	2.00	0.25	1.61	2.02
#80	2.50	0.18	54.84	56.86
#120	3.00	0.13	34.24	91.10
#170	3.50	0.09	5.71	96.81
#200	3.75	0.08	0.34	97.15
#230	4.00	0.06	0.08	97.23

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.34	2.90	2.76	2.44	2.21	2.13	2.03	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.48	0.18	2.44	0.18	0.34	-0.06	8.69

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESAJS.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-01 @ 9 ft

Analysis Date: 8/31/2015

Easting (ft): <b>877,188</b>	Northing (ft): <b>2,029,329</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-17.9 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/2</b>	Fines (%): <b>#200 - 1.01</b> <b>#230 - 0.94</b>	Organics (%):	Carbonates (%):	Shells (%): <b>11.4</b>
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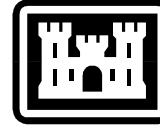
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.51	0.51
#4	-2.25	4.75	0.03	0.54
#5	-2.00	4.00	0.31	0.85
#7	-1.50	2.80	0.31	1.16
#10	-1.00	2.00	1.02	2.18
#14	-0.50	1.40	1.49	3.67
#18	0.00	1.00	1.58	5.25
#25	0.50	0.71	2.07	7.32
#35	1.00	0.50	3.23	10.55
#45	1.50	0.36	7.63	18.18
#60	2.00	0.25	9.82	28.00
#80	2.50	0.18	33.57	61.57
#120	3.00	0.13	30.66	92.23
#170	3.50	0.09	6.40	98.63
#200	3.75	0.08	0.36	98.99
#230	4.00	0.06	0.07	99.06

SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.22	2.87	2.72	2.33	1.85	1.36	-0.08	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.08	0.24	2.33	0.20	1	-2.05	8.28

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-01 @ 11 ft

Analysis Date: 8/31/2015

Easting (ft): <b>877,188</b>	Northing (ft): <b>2,029,329</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-19.9 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/2</b>	Fines (%): <b>#200 - 1.14</b> <b>#230 - 1.04</b>	Organics (%):	Carbonates (%):	Shells (%): <b>8.6</b>
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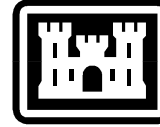
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.47	0.47
#4	-2.25	4.75	0.07	0.54
#5	-2.00	4.00	0.22	0.76
#7	-1.50	2.80	0.27	1.03
#10	-1.00	2.00	0.45	1.48
#14	-0.50	1.40	0.84	2.32
#18	0.00	1.00	0.74	3.06
#25	0.50	0.71	0.91	3.97
#35	1.00	0.50	1.19	5.16
#45	1.50	0.36	2.34	7.50
#60	2.00	0.25	8.75	16.25
#80	2.50	0.18	53.53	69.78
#120	3.00	0.13	23.54	93.32
#170	3.50	0.09	5.23	98.55
#200	3.75	0.08	0.31	98.86
#230	4.00	0.06	0.10	98.96

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.16	2.80	2.61	2.32	2.08	1.99	0.93	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.22	0.21	2.32	0.20	0.8	-3.16	17.08

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESAJS.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-01 @ 13 ft

Analysis Date: 8/31/2015

Easting (ft): <b>877,188</b>	Northing (ft): <b>2,029,329</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-21.9 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/2</b>	Fines (%): <b>#200 - 1.51</b> <b>#230 - 1.43</b>	Organics (%):	Carbonates (%):	Shells (%): <b>14.2</b>
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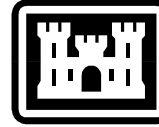
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.22	0.22
#4	-2.25	4.75	0.04	0.26
#5	-2.00	4.00	0.13	0.39
#7	-1.50	2.80	0.36	0.75
#10	-1.00	2.00	0.67	1.42
#14	-0.50	1.40	1.12	2.54
#18	0.00	1.00	1.45	3.99
#25	0.50	0.71	2.33	6.32
#35	1.00	0.50	4.49	10.81
#45	1.50	0.36	10.87	21.68
#60	2.00	0.25	19.27	40.95
#80	2.50	0.18	30.47	71.42
#120	3.00	0.13	20.81	92.23
#170	3.50	0.09	5.93	98.16
#200	3.75	0.08	0.33	98.49
#230	4.00	0.06	0.08	98.57

SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.23	2.80	2.59	2.15	1.59	1.24	0.22	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.97	0.26	2.15	0.23	0.91	-1.56	6.96

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-02 @ 1 ft

Analysis Date: 8/31/2015

Easting (ft): <b>877,012</b>	Northing (ft): <b>2,028,556</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-10.6 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/2</b>	Fines (%): <b>#200 - 0.92</b> <b>#230 - 0.90</b>	Organics (%):	Carbonates (%):	Shells (%): <b>7.6</b>
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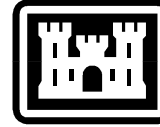
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.16	0.16
#4	-2.25	4.75	0.22	0.38
#5	-2.00	4.00	0.27	0.65
#7	-1.50	2.80	0.40	1.05
#10	-1.00	2.00	0.64	1.69
#14	-0.50	1.40	0.48	2.17
#18	0.00	1.00	0.51	2.68
#25	0.50	0.71	0.49	3.17
#35	1.00	0.50	0.66	3.83
#45	1.50	0.36	1.52	5.35
#60	2.00	0.25	7.15	12.50
#80	2.50	0.18	61.78	74.28
#120	3.00	0.13	21.01	95.29
#170	3.50	0.09	3.61	98.90
#200	3.75	0.08	0.18	99.08
#230	4.00	0.06	0.02	99.10

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.99	2.73	2.52	2.30	2.10	2.03	1.38	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.23	0.21	2.30	0.20	0.72	-3.69	21.19

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESAJS.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-02 @ 3 ft

Analysis Date: 8/31/2015

Easting (ft): <b>877,012</b>	Northing (ft): <b>2,028,556</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-12.6 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/1</b>	Fines (%): <b>#200 - 1.01</b> <b>#230 - 0.85</b>	Organics (%):	Carbonates (%): <b>2.14</b>	Shells (%): <b>1.4</b>
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#25	0.50	0.71	0.00	0.00
#35	1.00	0.50	0.01	0.01
#45	1.50	0.36	0.01	0.02
#60	2.00	0.25	0.16	0.18
#80	2.50	0.18	27.79	27.97
#120	3.00	0.13	57.47	85.44
#170	3.50	0.09	12.56	98.00
#200	3.75	0.08	0.99	98.99
#230	4.00	0.06	0.16	99.15

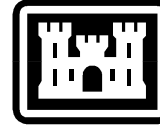
SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.38	2.99	2.91	2.69	2.45	2.28	2.09	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.68	0.16	2.69	0.15	0.33	0.27	3.13

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA3.GDT 9/10/15



# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-02 @ 6 ft

Analysis Date: 8/31/2015

Easting (ft): <b>877,012</b>	Northing (ft): <b>2,028,556</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-15.6 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/1</b>	Fines (%): <b>#200 - 0.98</b> <b>#230 - 0.93</b>	Organics (%):	Carbonates (%):	Shells (%): <b>0</b>
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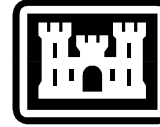
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#10	-1.00	2.00	0.00	0.00
#14	-0.50	1.40	0.02	0.02
#18	0.00	1.00	0.02	0.04
#25	0.50	0.71	0.00	0.04
#35	1.00	0.50	0.01	0.05
#45	1.50	0.36	0.02	0.07
#60	2.00	0.25	0.16	0.23
#80	2.50	0.18	53.45	53.68
#120	3.00	0.13	38.41	92.09
#170	3.50	0.09	6.65	98.74
#200	3.75	0.08	0.28	99.02
#230	4.00	0.06	0.05	99.07

SAND, poorly-graded, mostly fine-grained sand-sized quartz

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.22	2.89	2.78	2.47	2.23	2.15	2.04	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.51	0.18	2.47	0.18	0.32	0.42	5.99

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-02 @ 9 ft

Analysis Date: 8/31/2015

Easting (ft): <b>877,012</b>	Northing (ft): <b>2,028,556</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-18.6 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/1</b>	Fines (%): <b>#200 - 0.70</b> <b>#230 - 0.66</b>	Organics (%):	Carbonates (%):	Shells (%): <b>3.3</b>
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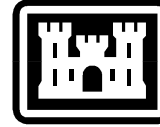
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.02	0.02
#14	-0.50	1.40	0.02	0.04
#18	0.00	1.00	0.00	0.04
#25	0.50	0.71	0.01	0.05
#35	1.00	0.50	0.02	0.07
#45	1.50	0.36	0.02	0.09
#60	2.00	0.25	0.57	0.66
#80	2.50	0.18	63.69	64.35
#120	3.00	0.13	29.11	93.46
#170	3.50	0.09	5.42	98.88
#200	3.75	0.08	0.42	99.30
#230	4.00	0.06	0.04	99.34

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.14	2.84	2.68	2.39	2.19	2.12	2.03	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.45	0.18	2.39	0.19	0.32	0.51	9.5

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESAJS.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-02 @ 12 ft

Analysis Date: 8/31/2015

Easting (ft): <b>877,012</b>	Northing (ft): <b>2,028,556</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-21.6 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/1</b>	Fines (%): <b>#200 - 3.81</b> <b>#230 - 3.47</b>	Organics (%):	Carbonates (%):	Shells (%): <b>9.2</b>
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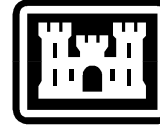
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.54	0.54
#3.5	-2.50	5.60	0.00	0.54
#4	-2.25	4.75	0.12	0.66
#5	-2.00	4.00	0.08	0.74
#7	-1.50	2.80	0.40	1.14
#10	-1.00	2.00	1.12	2.26
#14	-0.50	1.40	1.57	3.83
#18	0.00	1.00	1.88	5.71
#25	0.50	0.71	2.51	8.22
#35	1.00	0.50	3.97	12.19
#45	1.50	0.36	7.51	19.70
#60	2.00	0.25	5.77	25.47
#80	2.50	0.18	41.47	66.94
#120	3.00	0.13	24.61	91.55
#170	3.50	0.09	4.02	95.57
#200	3.75	0.08	0.62	96.19
#230	4.00	0.06	0.34	96.53

SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.43	2.85	2.66	2.30	1.96	1.25	-0.19	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.01	0.25	2.30	0.20	1.04	-2.19	9.53

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-02 @ 13 ft

Analysis Date: 8/31/2015

Easting (ft): <b>877,012</b>	Northing (ft): <b>2,028,556</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-22.6 NAVD88</b>
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USCS:	Munsell: <b>5GY 6/1</b>	Fines (%): <b>#200 - 6.01</b> <b>#230 - 5.86</b>	Organics (%):	Carbonates (%):	Shells (%): <b>0.2</b>
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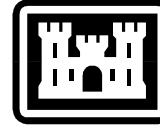
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#10	-1.00	2.00	0.00	0.00
#14	-0.50	1.40	0.02	0.02
#18	0.00	1.00	0.04	0.06
#25	0.50	0.71	0.08	0.14
#35	1.00	0.50	0.26	0.40
#45	1.50	0.36	0.85	1.25
#60	2.00	0.25	5.18	6.43
#80	2.50	0.18	53.92	60.35
#120	3.00	0.13	29.66	90.01
#170	3.50	0.09	3.69	93.70
#200	3.75	0.08	0.29	93.99
#230	4.00	0.06	0.15	94.14

SAND, poorly-graded with clay, mostly fine-grained sand-sized quartz, few clay

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	2.90	2.75	2.40	2.17	2.09	1.86	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.41	0.19	2.40	0.19	0.37	-0.42	7.54

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESAJS.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-03 @ 1 ft

Analysis Date: 9/3/2015

Easting (ft): <b>877,860</b>	Northing (ft): <b>2,028,905</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-4.6 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/2</b>	Fines (%): <b>#200 - 0.49</b> <b>#230 - 0.44</b>	Organics (%):	Carbonates (%):	Shells (%): <b>5.5</b>
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.09	0.09
#5	-2.00	4.00	0.00	0.09
#7	-1.50	2.80	0.08	0.17
#10	-1.00	2.00	0.16	0.33
#14	-0.50	1.40	0.47	0.80
#18	0.00	1.00	0.41	1.21
#25	0.50	0.71	0.55	1.76
#35	1.00	0.50	0.67	2.43
#45	1.50	0.36	1.21	3.64
#60	2.00	0.25	4.08	7.72
#80	2.50	0.18	53.11	60.83
#120	3.00	0.13	34.23	95.06
#170	3.50	0.09	4.24	99.30
#200	3.75	0.08	0.21	99.51
#230	4.00	0.06	0.05	99.56

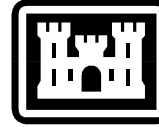
SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.00	2.84	2.71	2.40	2.16	2.08	1.67

Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.38	0.19	2.40	0.19	0.55	-3.13	20.85

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-03 @ 3.5 ft

Analysis Date: 9/3/2015

Easting (ft): <b>877,860</b>	Northing (ft): <b>2,028,905</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-7.1 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/2</b>	Fines (%): <b>#200 - 1.42</b> <b>#230 - 1.37</b>	Organics (%):	Carbonates (%):	Shells (%): <b>13.3</b>
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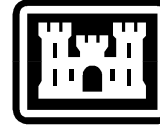
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.58	0.58
#4	-2.25	4.75	0.20	0.78
#5	-2.00	4.00	0.22	1.00
#7	-1.50	2.80	0.91	1.91
#10	-1.00	2.00	0.60	2.51
#14	-0.50	1.40	1.65	4.16
#18	0.00	1.00	1.95	6.11
#25	0.50	0.71	2.45	8.56
#35	1.00	0.50	2.94	11.50
#45	1.50	0.36	3.72	15.22
#60	2.00	0.25	4.33	19.55
#80	2.50	0.18	42.04	61.59
#120	3.00	0.13	32.39	93.98
#170	3.50	0.09	4.43	98.41
#200	3.75	0.08	0.17	98.58
#230	4.00	0.06	0.05	98.63

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.12	2.85	2.71	2.36	2.06	1.59	-0.28	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.10	0.23	2.36	0.19	1.03	-2.34	9.05

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-03 @ 7 ft

Analysis Date: 9/3/2015

Easting (ft): <b>877,860</b>	Northing (ft): <b>2,028,905</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-10.6 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/2</b>	Fines (%): <b>#200 - 1.34</b> <b>#230 - 1.28</b>	Organics (%):	Carbonates (%): <b>6.93</b>	Shells (%): <b>8</b>
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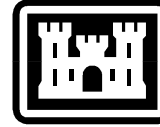
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.33	0.33
#4	-2.25	4.75	0.02	0.35
#5	-2.00	4.00	0.12	0.47
#7	-1.50	2.80	0.26	0.73
#10	-1.00	2.00	0.21	0.94
#14	-0.50	1.40	0.28	1.22
#18	0.00	1.00	0.38	1.60
#25	0.50	0.71	0.66	2.26
#35	1.00	0.50	1.31	3.57
#45	1.50	0.36	4.58	8.15
#60	2.00	0.25	15.85	24.00
#80	2.50	0.18	47.64	71.64
#120	3.00	0.13	23.67	95.31
#170	3.50	0.09	3.24	98.55
#200	3.75	0.08	0.11	98.66
#230	4.00	0.06	0.06	98.72

SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.99	2.76	2.57	2.27	2.01	1.75	1.16	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.19	0.22	2.27	0.21	0.68	-3.04	19.31

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA\J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-03 @ 10.5 ft

Analysis Date: 9/3/2015

Easting (ft): <b>877,860</b>	Northing (ft): <b>2,028,905</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-14.1 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/2</b>	Fines (%): <b>#200 - 2.11</b> <b>#230 - 2.02</b>	Organics (%):	Carbonates (%):	Shells (%): <b>2.8</b>
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.01	0.01
#10	-1.00	2.00	0.01	0.02
#14	-0.50	1.40	0.01	0.03
#18	0.00	1.00	0.05	0.08
#25	0.50	0.71	0.08	0.16
#35	1.00	0.50	0.22	0.38
#45	1.50	0.36	0.42	0.80
#60	2.00	0.25	2.68	3.48
#80	2.50	0.18	42.97	46.45
#120	3.00	0.13	42.63	89.08
#170	3.50	0.09	8.41	97.49
#200	3.75	0.08	0.40	97.89
#230	4.00	0.06	0.09	97.98

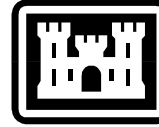
SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.35	2.94	2.83	2.54	2.25	2.15	2.02	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.54	0.17	2.54	0.17	0.39	-0.69	8.91

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA\J3.GDT 9/10/15



# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-03 @ 14 ft

Analysis Date: 9/3/2015

Easting (ft): <b>877,860</b>	Northing (ft): <b>2,028,905</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-17.6 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/2</b>	Fines (%): <b>#200 - 0.69</b> <b>#230 - 0.56</b>	Organics (%):	Carbonates (%):	Shells (%): <b>5.4</b>
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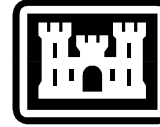
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.17	0.17
#5	-2.00	4.00	0.15	0.32
#7	-1.50	2.80	0.14	0.46
#10	-1.00	2.00	0.27	0.73
#14	-0.50	1.40	0.34	1.07
#18	0.00	1.00	0.34	1.41
#25	0.50	0.71	0.46	1.87
#35	1.00	0.50	0.72	2.59
#45	1.50	0.36	1.34	3.93
#60	2.00	0.25	5.14	9.07
#80	2.50	0.18	48.41	57.48
#120	3.00	0.13	32.87	90.35
#170	3.50	0.09	8.47	98.82
#200	3.75	0.08	0.49	99.31
#230	4.00	0.06	0.13	99.44

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.27	2.90	2.77	2.42	2.16	2.07	1.60	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.40	0.19	2.42	0.19	0.63	-3.12	20.69

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-03 @ 15.5 ft

Analysis Date: 9/3/2015

Easting (ft): <b>877,860</b>	Northing (ft): <b>2,028,905</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-19.1 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/2</b>	Fines (%): <b>#200 - 0.88</b> <b>#230 - 0.83</b>	Organics (%):	Carbonates (%):	Shells (%): <b>5.5</b>
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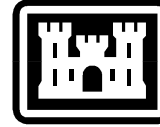
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.12	0.12
#4	-2.25	4.75	0.00	0.12
#5	-2.00	4.00	0.26	0.38
#7	-1.50	2.80	0.23	0.61
#10	-1.00	2.00	0.25	0.86
#14	-0.50	1.40	0.32	1.18
#18	0.00	1.00	0.44	1.62
#25	0.50	0.71	0.59	2.21
#35	1.00	0.50	0.94	3.15
#45	1.50	0.36	6.45	9.60
#60	2.00	0.25	57.31	66.91
#80	2.50	0.18	27.03	93.94
#120	3.00	0.13	4.93	98.87
#170	3.50	0.09	0.20	99.07
#200	3.75	0.08	0.05	99.12
#230	4.00	0.06	0.05	99.17

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.61	2.32	2.15	1.85	1.63	1.56	1.14	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.84	0.28	1.85	0.28	0.56	-3.17	22.87

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-04 @ 1 ft

Analysis Date: 9/3/2015

Easting (ft): <b>877,203</b>	Northing (ft): <b>2,027,886</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-12.8 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/2</b>	Fines (%): <b>#200 - 2.75</b> <b>#230 - 2.74</b>	Organics (%):	Carbonates (%):	Shells (%): <b>23.1</b>
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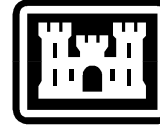
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	1.89	1.89
#4	-2.25	4.75	0.88	2.77
#5	-2.00	4.00	0.70	3.47
#7	-1.50	2.80	2.60	6.07
#10	-1.00	2.00	2.87	8.94
#14	-0.50	1.40	3.58	12.52
#18	0.00	1.00	3.09	15.61
#25	0.50	0.71	2.95	18.56
#35	1.00	0.50	2.90	21.46
#45	1.50	0.36	3.76	25.22
#60	2.00	0.25	5.58	30.80
#80	2.50	0.18	38.34	69.14
#120	3.00	0.13	23.54	92.68
#170	3.50	0.09	4.55	97.23
#200	3.75	0.08	0.02	97.25
#230	4.00	0.06	0.01	97.26

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium to coarse-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.25	2.82	2.62	2.25	1.47	0.07	-1.71	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.67	0.31	2.25	0.21	1.48	-1.53	4.34

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-04 @ 3 ft

Analysis Date: 9/3/2015

Easting (ft): <b>877,203</b>	Northing (ft): <b>2,027,886</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-14.8 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/2</b>	Fines (%): <b>#200 - 0.51</b> <b>#230 - 0.50</b>	Organics (%):	Carbonates (%):	Shells (%): <b>4</b>
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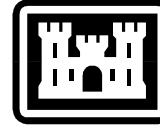
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.02	0.02
#14	-0.50	1.40	0.03	0.05
#18	0.00	1.00	0.05	0.10
#25	0.50	0.71	0.07	0.17
#35	1.00	0.50	0.13	0.30
#45	1.50	0.36	0.36	0.66
#60	2.00	0.25	2.85	3.51
#80	2.50	0.18	64.05	67.56
#120	3.00	0.13	26.37	93.93
#170	3.50	0.09	5.39	99.32
#200	3.75	0.08	0.17	99.49
#230	4.00	0.06	0.01	99.50

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.10	2.81	2.64	2.36	2.17	2.10	2.01	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.42	0.19	2.36	0.19	0.35	-0.34	11.1

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESAJS.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-04 @ 6 ft

Analysis Date: 9/3/2015

Easting (ft): <b>877,203</b>	Northing (ft): <b>2,027,886</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-17.8 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/2</b>	Fines (%): <b>#200 - 0.25</b> <b>#230 - 0.23</b>	Organics (%):	Carbonates (%):	Shells (%): <b>20.8</b>
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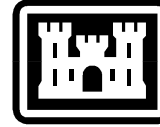
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.39	0.39
#3.5	-2.50	5.60	0.44	0.83
#4	-2.25	4.75	0.27	1.10
#5	-2.00	4.00	0.51	1.61
#7	-1.50	2.80	1.16	2.77
#10	-1.00	2.00	2.13	4.90
#14	-0.50	1.40	2.95	7.85
#18	0.00	1.00	3.01	10.86
#25	0.50	0.71	3.48	14.34
#35	1.00	0.50	3.96	18.30
#45	1.50	0.36	6.15	24.45
#60	2.00	0.25	6.96	31.41
#80	2.50	0.18	45.57	76.98
#120	3.00	0.13	19.15	96.13
#170	3.50	0.09	3.41	99.54
#200	3.75	0.08	0.21	99.75
#230	4.00	0.06	0.02	99.77

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.97	2.68	2.48	2.20	1.54	0.71	-0.98	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.79	0.29	2.20	0.22	1.22	-1.81	6.15

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-04 @ 9 ft

Analysis Date: 9/3/2015

Easting (ft): <b>877,203</b>	Northing (ft): <b>2,027,886</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-20.8 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/1</b>	Fines (%): <b>#200 - 0.99</b> <b>#230 - 0.94</b>	Organics (%):	Carbonates (%): <b>1.14</b>	Shells (%): <b>0.1</b>
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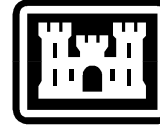
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#10	-1.00	2.00	0.00	0.00
#14	-0.50	1.40	0.01	0.01
#18	0.00	1.00	0.01	0.02
#25	0.50	0.71	0.03	0.05
#35	1.00	0.50	0.04	0.09
#45	1.50	0.36	0.06	0.15
#60	2.00	0.25	0.35	0.50
#80	2.50	0.18	61.05	61.55
#120	3.00	0.13	31.73	93.28
#170	3.50	0.09	5.43	98.71
#200	3.75	0.08	0.30	99.01
#230	4.00	0.06	0.05	99.06

SAND, poorly-graded, mostly fine-grained sand-sized quartz

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.16	2.85	2.71	2.41	2.20	2.13	2.04	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.47	0.18	2.41	0.19	0.32	0.65	6.03

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESAJS.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-04 @ 12 ft

Analysis Date: 9/3/2015

Easting (ft): <b>877,203</b>	Northing (ft): <b>2,027,886</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-23.8 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/1</b>	Fines (%): <b>#200 - 0.75</b> <b>#230 - 0.59</b>	Organics (%):	Carbonates (%):	Shells (%): <b>2.2</b>
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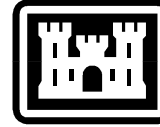
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.15	0.15
#4	-2.25	4.75	0.15	0.30
#5	-2.00	4.00	0.06	0.36
#7	-1.50	2.80	0.18	0.54
#10	-1.00	2.00	0.24	0.78
#14	-0.50	1.40	0.35	1.13
#18	0.00	1.00	0.32	1.45
#25	0.50	0.71	0.33	1.78
#35	1.00	0.50	0.42	2.20
#45	1.50	0.36	0.73	2.93
#60	2.00	0.25	2.85	5.78
#80	2.50	0.18	59.58	65.36
#120	3.00	0.13	28.25	93.61
#170	3.50	0.09	5.39	99.00
#200	3.75	0.08	0.25	99.25
#230	4.00	0.06	0.16	99.41

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.13	2.83	2.67	2.37	2.16	2.09	1.86	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.37	0.19	2.37	0.19	0.59	-4.03	30.09

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-04 @ 13.5 ft

Analysis Date: 9/3/2015

Easting (ft): <b>877,203</b>	Northing (ft): <b>2,027,886</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-25.3 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 6/1</b>	Fines (%): <b>#200 - 4.72</b> <b>#230 - 4.39</b>	Organics (%):	Carbonates (%):	Shells (%): <b>17.8</b>
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	1.87	1.87
#4	-2.25	4.75	0.47	2.34
#5	-2.00	4.00	0.53	2.87
#7	-1.50	2.80	0.85	3.72
#10	-1.00	2.00	1.43	5.15
#14	-0.50	1.40	1.90	7.05
#18	0.00	1.00	1.85	8.90
#25	0.50	0.71	2.36	11.26
#35	1.00	0.50	3.69	14.95
#45	1.50	0.36	8.67	23.62
#60	2.00	0.25	17.82	41.44
#80	2.50	0.18	23.89	65.33
#120	3.00	0.13	20.69	86.02
#170	3.50	0.09	8.41	94.43
#200	3.75	0.08	0.85	95.28
#230	4.00	0.06	0.33	95.61

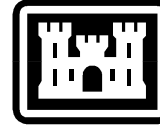
SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little medium to coarse-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.67	2.95	2.73	2.18	1.54	1.06	-1.05	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.83	0.28	2.18	0.22	1.29	-1.75	6.29

GRANULARMETRIC REPORT % S/C\_FLOOD\_SHOAL\_VC2015.GPJ\_CESAJS.GDT 9/10/15



# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-05 @ 3 ft

Analysis Date: 9/3/2015

Easting (ft): <b>877,533</b>	Northing (ft): <b>2,027,998</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-14.7 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/1</b>	Fines (%): <b>#200 - 0.97</b> <b>#230 - 0.89</b>	Organics (%):	Carbonates (%):	Shells (%): <b>16.5</b>
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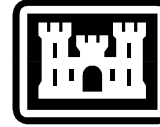
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.69	0.69
#3.5	-2.50	5.60	1.26	1.95
#4	-2.25	4.75	0.87	2.82
#5	-2.00	4.00	0.58	3.40
#7	-1.50	2.80	1.01	4.41
#10	-1.00	2.00	1.73	6.14
#14	-0.50	1.40	2.58	8.72
#18	0.00	1.00	2.43	11.15
#25	0.50	0.71	2.71	13.86
#35	1.00	0.50	2.59	16.45
#45	1.50	0.36	3.09	19.54
#60	2.00	0.25	5.66	25.20
#80	2.50	0.18	35.35	60.55
#120	3.00	0.13	32.35	92.90
#170	3.50	0.09	5.91	98.81
#200	3.75	0.08	0.22	99.03
#230	4.00	0.06	0.08	99.11

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium to coarse-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.18	2.86	2.72	2.35	1.98	0.91	-1.33	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.91	0.27	2.35	0.20	1.38	-2.04	6.79

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-05 @ 6 ft

Analysis Date: 9/3/2015

Easting (ft): <b>877,533</b>	Northing (ft): <b>2,027,998</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-17.7 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/1</b>	Fines (%): <b>#200 - 0.99</b> <b>#230 - 0.95</b>	Organics (%):	Carbonates (%):	Shells (%): <b>8.5</b>
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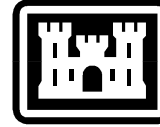
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.07	0.07
#4	-2.25	4.75	0.01	0.08
#5	-2.00	4.00	0.00	0.08
#7	-1.50	2.80	0.06	0.14
#10	-1.00	2.00	0.05	0.19
#14	-0.50	1.40	0.19	0.38
#18	0.00	1.00	0.30	0.68
#25	0.50	0.71	0.45	1.13
#35	1.00	0.50	1.15	2.28
#45	1.50	0.36	4.46	6.74
#60	2.00	0.25	26.50	33.24
#80	2.50	0.18	44.10	77.34
#120	3.00	0.13	17.92	95.26
#170	3.50	0.09	3.59	98.85
#200	3.75	0.08	0.16	99.01
#230	4.00	0.06	0.04	99.05

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.99	2.69	2.47	2.19	1.84	1.67	1.30	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.15	0.23	2.19	0.22	0.55	-1.57	12.54

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-05 @ 9 ft

Analysis Date: 9/3/2015

Easting (ft): <b>877,533</b>	Northing (ft): <b>2,027,998</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-20.7 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/1</b>	Fines (%): <b>#200 - 1.54</b> <b>#230 - 1.54</b>	Organics (%):	Carbonates (%):	Shells (%): <b>6</b>
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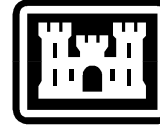
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.16	0.16
#3.5	-2.50	5.60	0.21	0.37
#4	-2.25	4.75	0.10	0.47
#5	-2.00	4.00	0.07	0.54
#7	-1.50	2.80	0.36	0.90
#10	-1.00	2.00	0.39	1.29
#14	-0.50	1.40	0.81	2.10
#18	0.00	1.00	0.80	2.90
#25	0.50	0.71	1.01	3.91
#35	1.00	0.50	1.51	5.42
#45	1.50	0.36	3.26	8.68
#60	2.00	0.25	7.92	16.60
#80	2.50	0.18	49.11	65.71
#120	3.00	0.13	28.19	93.90
#170	3.50	0.09	4.33	98.23
#200	3.75	0.08	0.23	98.46
#230	4.00	0.06	0.00	98.46

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.13	2.82	2.66	2.34	2.09	1.96	0.86	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.22	0.21	2.34	0.20	0.79	-3.18	17.62

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-05 @ 12 ft

Analysis Date: 9/3/2015

Easting (ft): <b>877,533</b>	Northing (ft): <b>2,027,998</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-23.7 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/2</b>	Fines (%): <b>#200 - 0.60</b> <b>#230 - 0.55</b>	Organics (%):	Carbonates (%):	Shells (%): <b>50.1</b>
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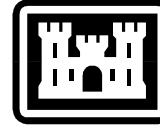
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	3.09	3.09
#3.5	-2.50	5.60	6.09	9.18
#4	-2.25	4.75	2.13	11.31
#5	-2.00	4.00	2.36	13.67
#7	-1.50	2.80	3.86	17.53
#10	-1.00	2.00	6.05	23.58
#14	-0.50	1.40	7.04	30.62
#18	0.00	1.00	6.50	37.12
#25	0.50	0.71	6.39	43.51
#35	1.00	0.50	6.42	49.93
#45	1.50	0.36	7.12	57.05
#60	2.00	0.25	9.33	66.38
#80	2.50	0.18	20.33	86.71
#120	3.00	0.13	10.85	97.56
#170	3.50	0.09	1.70	99.26
#200	3.75	0.08	0.14	99.40
#230	4.00	0.06	0.05	99.45

SAND, poorly-graded, mostly sand to gravel-sized shell, some fine to medium-grained sand-sized quartz

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.88	2.43	2.21	1.00	-0.90	-1.70	-3.01	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	0.53	0.69	1.00	0.50	1.91	-0.57	2.18

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-05 @ 14 ft

Analysis Date: 9/3/2015

Easting (ft): <b>877,533</b>	Northing (ft): <b>2,027,998</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-25.7 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 6/1</b>	Fines (%): <b>#200 - 1.40</b> <b>#230 - 1.28</b>	Organics (%):	Carbonates (%): <b>2.98</b>	Shells (%): <b>2.5</b>
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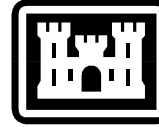
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.04	0.04
#10	-1.00	2.00	0.11	0.15
#14	-0.50	1.40	0.39	0.54
#18	0.00	1.00	0.32	0.86
#25	0.50	0.71	0.40	1.26
#35	1.00	0.50	0.52	1.78
#45	1.50	0.36	1.18	2.96
#60	2.00	0.25	3.60	6.56
#80	2.50	0.18	50.32	56.88
#120	3.00	0.13	33.60	90.48
#170	3.50	0.09	7.62	98.10
#200	3.75	0.08	0.50	98.60
#230	4.00	0.06	0.12	98.72

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.30	2.90	2.77	2.43	2.18	2.09	1.78	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.43	0.19	2.43	0.19	0.52	-2.28	15.88

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA\J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-06 @ 1 ft

Analysis Date: 9/3/2015

Easting (ft): <b>877,517</b>	Northing (ft): <b>2,027,367</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-13.7 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 6/1</b>	Fines (%): <b>#200 - 1.56</b> <b>#230 - 1.53</b>	Organics (%):	Carbonates (%):	Shells (%): <b>9.1</b>
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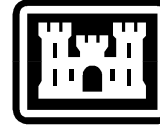
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.16	0.16
#5	-2.00	4.00	0.17	0.33
#7	-1.50	2.80	0.45	0.78
#10	-1.00	2.00	0.49	1.27
#14	-0.50	1.40	0.92	2.19
#18	0.00	1.00	0.90	3.09
#25	0.50	0.71	1.03	4.12
#35	1.00	0.50	1.39	5.51
#45	1.50	0.36	2.75	8.26
#60	2.00	0.25	9.29	17.55
#80	2.50	0.18	56.43	73.98
#120	3.00	0.13	20.39	94.37
#170	3.50	0.09	3.88	98.25
#200	3.75	0.08	0.19	98.44
#230	4.00	0.06	0.03	98.47

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.08	2.75	2.53	2.29	2.07	1.92	0.82	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.18	0.22	2.29	0.20	0.75	-2.83	14.03

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-06 @ 3 ft

Analysis Date: 9/3/2015

Easting (ft): <b>877,517</b>	Northing (ft): <b>2,027,367</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-15.7 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 6/1</b>	Fines (%): <b>#200 - 1.79</b> <b>#230 - 1.79</b>	Organics (%):	Carbonates (%):	Shells (%): <b>26.6</b>
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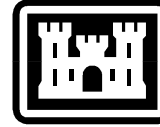
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	1.29	1.29
#3.5	-2.50	5.60	2.69	3.98
#4	-2.25	4.75	0.77	4.75
#5	-2.00	4.00	2.07	6.82
#7	-1.50	2.80	3.41	10.23
#10	-1.00	2.00	3.86	14.09
#14	-0.50	1.40	4.23	18.32
#18	0.00	1.00	3.27	21.59
#25	0.50	0.71	2.65	24.24
#35	1.00	0.50	2.22	26.46
#45	1.50	0.36	3.32	29.78
#60	2.00	0.25	6.94	36.72
#80	2.50	0.18	38.19	74.91
#120	3.00	0.13	19.63	94.54
#170	3.50	0.09	3.54	98.08
#200	3.75	0.08	0.13	98.21
#230	4.00	0.06	0.00	98.21

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium to coarse-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.06	2.73	2.50	2.17	0.67	-0.77	-2.22	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.39	0.38	2.17	0.22	1.72	-1.31	3.53

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-06 @ 6 ft

Analysis Date: 9/3/2015

Easting (ft): <b>877,517</b>	Northing (ft): <b>2,027,367</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-18.7 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 6/1</b>	Fines (%): <b>#200 - 0.81</b> <b>#230 - 0.75</b>	Organics (%):	Carbonates (%):	Shells (%): <b>22</b>
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.12	0.12
#3.5	-2.50	5.60	2.33	2.45
#4	-2.25	4.75	0.49	2.94
#5	-2.00	4.00	0.91	3.85
#7	-1.50	2.80	1.25	5.10
#10	-1.00	2.00	2.47	7.57
#14	-0.50	1.40	2.75	10.32
#18	0.00	1.00	2.40	12.72
#25	0.50	0.71	2.75	15.47
#35	1.00	0.50	3.20	18.67
#45	1.50	0.36	6.67	25.34
#60	2.00	0.25	19.08	44.42
#80	2.50	0.18	33.49	77.91
#120	3.00	0.13	17.66	95.57
#170	3.50	0.09	3.48	99.05
#200	3.75	0.08	0.14	99.19
#230	4.00	0.06	0.06	99.25

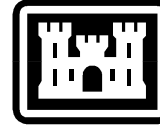
SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium to coarse-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.98	2.67	2.46	2.08	1.47	0.58	-1.54	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.64	0.32	2.08	0.24	1.36	-1.74	5.57

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15



# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-06 @ 8 ft

Analysis Date: 9/3/2015

Easting (ft): <b>877,517</b>	Northing (ft): <b>2,027,367</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-20.7 NAVD88</b>
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USCS: <b>SW</b>	Munsell: <b>2.5Y 6/1</b>	Fines (%): <b>#200 - 0.98</b> <b>#230 - 0.94</b>	Organics (%):	Carbonates (%):	Shells (%): <b>41.6</b>
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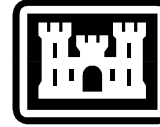
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	3.31	3.31
#3.5	-2.50	5.60	3.41	6.72
#4	-2.25	4.75	1.41	8.13
#5	-2.00	4.00	1.77	9.90
#7	-1.50	2.80	3.83	13.73
#10	-1.00	2.00	5.84	19.57
#14	-0.50	1.40	6.57	26.14
#18	0.00	1.00	5.62	31.76
#25	0.50	0.71	5.23	36.99
#35	1.00	0.50	5.65	42.64
#45	1.50	0.36	8.93	51.57
#60	2.00	0.25	13.39	64.96
#80	2.50	0.18	19.78	84.74
#120	3.00	0.13	11.72	96.46
#170	3.50	0.09	2.38	98.84
#200	3.75	0.08	0.18	99.02
#230	4.00	0.06	0.04	99.06

SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, some sand to gravel-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.94	2.48	2.25	1.41	-0.59	-1.31	-2.88	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	0.76	0.59	1.41	0.38	1.83	-0.79	2.61

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-06 @ 9 ft

Analysis Date: 9/3/2015

Easting (ft): <b>877,517</b>	Northing (ft): <b>2,027,367</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-21.7 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/1</b>	Fines (%): <b>#200 - 2.09</b> <b>#230 - 2.07</b>	Organics (%):	Carbonates (%):	Shells (%): <b>1.2</b>
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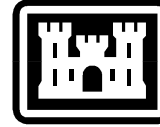
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.06	0.06
#14	-0.50	1.40	0.10	0.16
#18	0.00	1.00	0.16	0.32
#25	0.50	0.71	0.25	0.57
#35	1.00	0.50	0.33	0.90
#45	1.50	0.36	0.75	1.65
#60	2.00	0.25	3.25	4.90
#80	2.50	0.18	60.44	65.34
#120	3.00	0.13	26.95	92.29
#170	3.50	0.09	5.27	97.56
#200	3.75	0.08	0.35	97.91
#230	4.00	0.06	0.02	97.93

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt, trace shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.26	2.85	2.68	2.37	2.17	2.09	2.00	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.40	0.19	2.37	0.19	0.41	-1.53	15.44

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESAJS.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-06 @ 11.5 ft

Analysis Date: 9/3/2015

Easting (ft): <b>877,517</b>	Northing (ft): <b>2,027,367</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-24.2 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/1</b>	Fines (%): <b>#200 - 0.54</b> <b>#230 - 0.52</b>	Organics (%):	Carbonates (%): <b>10.73</b>	Shells (%): <b>11.9</b>
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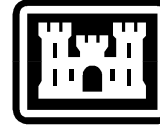
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.25	0.25
#4	-2.25	4.75	0.18	0.43
#5	-2.00	4.00	0.29	0.72
#7	-1.50	2.80	0.25	0.97
#10	-1.00	2.00	1.28	2.25
#14	-0.50	1.40	1.18	3.43
#18	0.00	1.00	1.21	4.64
#25	0.50	0.71	1.48	6.12
#35	1.00	0.50	2.23	8.35
#45	1.50	0.36	4.69	13.04
#60	2.00	0.25	12.64	25.68
#80	2.50	0.18	49.63	75.31
#120	3.00	0.13	20.72	96.03
#170	3.50	0.09	3.27	99.30
#200	3.75	0.08	0.16	99.46
#230	4.00	0.06	0.02	99.48

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.98	2.71	2.50	2.25	1.97	1.62	0.12	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.06	0.24	2.25	0.21	0.88	-2.49	10.81

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESAJS.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-06 @ 14 ft

Analysis Date: 9/3/2015

Easting (ft): <b>877,517</b>	Northing (ft): <b>2,027,367</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-26.7 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/1</b>	Fines (%): <b>#200 - 1.62</b> <b>#230 - 1.49</b>	Organics (%):	Carbonates (%):	Shells (%): <b>9.9</b>
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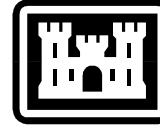
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.23	0.23
#3.5	-2.50	5.60	0.09	0.32
#4	-2.25	4.75	0.54	0.86
#5	-2.00	4.00	0.44	1.30
#7	-1.50	2.80	0.58	1.88
#10	-1.00	2.00	1.30	3.18
#14	-0.50	1.40	1.40	4.58
#18	0.00	1.00	1.03	5.61
#25	0.50	0.71	0.96	6.57
#35	1.00	0.50	0.89	7.46
#45	1.50	0.36	1.27	8.73
#60	2.00	0.25	4.08	12.81
#80	2.50	0.18	43.29	56.10
#120	3.00	0.13	33.36	89.46
#170	3.50	0.09	8.24	97.70
#200	3.75	0.08	0.68	98.38
#230	4.00	0.06	0.13	98.51

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.34	2.92	2.78	2.43	2.14	2.04	-0.30	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.25	0.21	2.43	0.19	1.01	-2.88	12.46

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-07 @ 1 ft

Analysis Date: 9/3/2015

Easting (ft): <b>878,327</b>	Northing (ft): <b>2,027,407</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-15.7 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/2</b>	Fines (%): <b>#200 - 1.44</b> <b>#230 - 1.35</b>	Organics (%):	Carbonates (%): <b>14.83</b>	Shells (%): <b>16.5</b>
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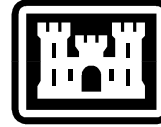
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.65	0.65
#4	-2.25	4.75	0.18	0.83
#5	-2.00	4.00	0.18	1.01
#7	-1.50	2.80	0.78	1.79
#10	-1.00	2.00	1.43	3.22
#14	-0.50	1.40	2.12	5.34
#18	0.00	1.00	2.27	7.61
#25	0.50	0.71	2.74	10.35
#35	1.00	0.50	2.98	13.33
#45	1.50	0.36	4.77	18.10
#60	2.00	0.25	14.51	32.61
#80	2.50	0.18	40.55	73.16
#120	3.00	0.13	21.60	94.76
#170	3.50	0.09	3.65	98.41
#200	3.75	0.08	0.15	98.56
#230	4.00	0.06	0.09	98.65

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.03	2.75	2.54	2.21	1.74	1.28	-0.58	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.92	0.26	2.21	0.22	1.07	-2.01	7.4

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-07 @ 3 ft

Analysis Date: 9/3/2015

Easting (ft): <b>878,327</b>	Northing (ft): <b>2,027,407</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-17.7 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/2</b>	Fines (%): <b>#200 - 0.59</b> <b>#230 - 0.51</b>	Organics (%):	Carbonates (%):	Shells (%): <b>19.3</b>
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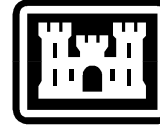
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	1.41	1.41
#4	-2.25	4.75	0.84	2.25
#5	-2.00	4.00	0.90	3.15
#7	-1.50	2.80	1.30	4.45
#10	-1.00	2.00	1.76	6.21
#14	-0.50	1.40	2.59	8.80
#18	0.00	1.00	2.37	11.17
#25	0.50	0.71	2.38	13.55
#35	1.00	0.50	2.53	16.08
#45	1.50	0.36	3.94	20.02
#60	2.00	0.25	13.88	33.90
#80	2.50	0.18	41.28	75.18
#120	3.00	0.13	20.83	96.01
#170	3.50	0.09	3.27	99.28
#200	3.75	0.08	0.13	99.41
#230	4.00	0.06	0.08	99.49

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium to coarse-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.98	2.71	2.50	2.20	1.68	0.98	-1.34	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.79	0.29	2.20	0.22	1.28	-1.94	6.31

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-07 @ 6 ft

Analysis Date: 9/3/2015

Easting (ft): <b>878,327</b>	Northing (ft): <b>2,027,407</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-20.7 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 6/1</b>	Fines (%): <b>#200 - 3.11</b> <b>#230 - 2.69</b>	Organics (%):	Carbonates (%):	Shells (%): <b>1.9</b>
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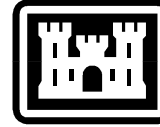
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.01	0.01
#14	-0.50	1.40	0.01	0.02
#18	0.00	1.00	0.01	0.03
#25	0.50	0.71	0.05	0.08
#35	1.00	0.50	0.11	0.19
#45	1.50	0.36	0.24	0.43
#60	2.00	0.25	0.98	1.41
#80	2.50	0.18	29.62	31.03
#120	3.00	0.13	44.72	75.75
#170	3.50	0.09	18.80	94.55
#200	3.75	0.08	2.34	96.89
#230	4.00	0.06	0.42	97.31

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt, trace shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.55	3.22	2.99	2.71	2.40	2.25	2.06	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.70	0.15	2.71	0.15	0.42	-0.22	5.25

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESAJS.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-07 @ 7.5 ft

Analysis Date: 9/3/2015

Easting (ft): <b>878,327</b>	Northing (ft): <b>2,027,407</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-22.2 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/1</b>	Fines (%): <b>#200 - 0.88</b> <b>#230 - 0.81</b>	Organics (%):	Carbonates (%):	Shells (%): <b>5.4</b>
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.01	0.01
#4	-2.25	4.75	0.03	0.04
#5	-2.00	4.00	0.00	0.04
#7	-1.50	2.80	0.05	0.09
#10	-1.00	2.00	0.06	0.15
#14	-0.50	1.40	0.01	0.16
#18	0.00	1.00	0.09	0.25
#25	0.50	0.71	0.16	0.41
#35	1.00	0.50	0.40	0.81
#45	1.50	0.36	1.85	2.66
#60	2.00	0.25	14.42	17.08
#80	2.50	0.18	59.31	76.39
#120	3.00	0.13	19.32	95.71
#170	3.50	0.09	3.27	98.98
#200	3.75	0.08	0.14	99.12
#230	4.00	0.06	0.07	99.19

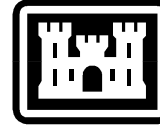
SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.98	2.70	2.49	2.28	2.07	1.96	1.58	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.27	0.21	2.28	0.21	0.43	-1.62	17.46

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15



# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-07 @ 10.5 ft

Analysis Date: 9/3/2015

Easting (ft): <b>878,327</b>	Northing (ft): <b>2,027,407</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-25.2 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/1</b>	Fines (%): <b>#200 - 1.30</b> <b>#230 - 1.21</b>	Organics (%):	Carbonates (%):	Shells (%): <b>5.1</b>
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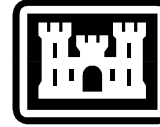
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.14	0.14
#5	-2.00	4.00	0.12	0.26
#7	-1.50	2.80	0.17	0.43
#10	-1.00	2.00	0.19	0.62
#14	-0.50	1.40	0.34	0.96
#18	0.00	1.00	0.25	1.21
#25	0.50	0.71	0.24	1.45
#35	1.00	0.50	0.35	1.80
#45	1.50	0.36	0.84	2.64
#60	2.00	0.25	5.76	8.40
#80	2.50	0.18	54.35	62.75
#120	3.00	0.13	30.82	93.57
#170	3.50	0.09	4.89	98.46
#200	3.75	0.08	0.24	98.70
#230	4.00	0.06	0.09	98.79

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.15	2.84	2.70	2.38	2.15	2.07	1.70	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.37	0.19	2.38	0.19	0.56	-3.61	26.97

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granularmetric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-07 @ 14 ft

Analysis Date: 9/4/2015

Easting (ft): <b>878,327</b>	Northing (ft): <b>2,027,407</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-28.7 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/1</b>	Fines (%): <b>#200 - 1.83</b> <b>#230 - 1.53</b>	Organics (%):	Carbonates (%):	Shells (%): <b>27.9</b>
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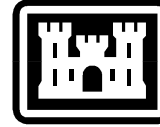
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	1.08	1.08
#3.5	-2.50	5.60	2.69	3.77
#4	-2.25	4.75	0.79	4.56
#5	-2.00	4.00	2.75	7.31
#7	-1.50	2.80	2.88	10.19
#10	-1.00	2.00	3.84	14.03
#14	-0.50	1.40	4.37	18.40
#18	0.00	1.00	3.14	21.54
#25	0.50	0.71	2.70	24.24
#35	1.00	0.50	2.33	26.57
#45	1.50	0.36	3.15	29.72
#60	2.00	0.25	5.58	35.30
#80	2.50	0.18	26.92	62.22
#120	3.00	0.13	28.28	90.50
#170	3.50	0.09	7.15	97.65
#200	3.75	0.08	0.52	98.17
#230	4.00	0.06	0.30	98.47

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some medium to coarse-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.31	2.89	2.73	2.27	0.66	-0.77	-2.21	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.50	0.35	2.27	0.21	1.78	-1.25	3.35

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-08 @ 1 ft

Analysis Date: 9/3/2015

Easting (ft): <b>878,444</b>	Northing (ft): <b>2,027,645</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-8.1 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 8/2</b>	Fines (%): <b>#200 - 1.14</b> <b>#230 - 1.10</b>	Organics (%):	Carbonates (%):	Shells (%): <b>0.3</b>
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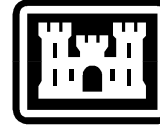
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.02	0.02
#14	-0.50	1.40	0.02	0.04
#18	0.00	1.00	0.02	0.06
#25	0.50	0.71	0.04	0.10
#35	1.00	0.50	0.05	0.15
#45	1.50	0.36	0.17	0.32
#60	2.00	0.25	2.44	2.76
#80	2.50	0.18	62.44	65.20
#120	3.00	0.13	28.51	93.71
#170	3.50	0.09	4.97	98.68
#200	3.75	0.08	0.18	98.86
#230	4.00	0.06	0.04	98.90

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.13	2.83	2.67	2.38	2.18	2.11	2.02	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.43	0.19	2.38	0.19	0.33	0	9.96

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESAJS.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-08 @ 3 ft

Analysis Date: 9/3/2015

Easting (ft): <b>878,444</b>	Northing (ft): <b>2,027,645</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-10.1 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 8/2</b>	Fines (%): <b>#200 - 0.59</b> <b>#230 - 0.54</b>	Organics (%):	Carbonates (%): <b>1.57</b>	Shells (%): <b>3.6</b>
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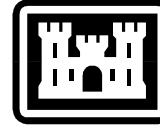
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.01	0.01
#14	-0.50	1.40	0.02	0.03
#18	0.00	1.00	0.01	0.04
#25	0.50	0.71	0.03	0.07
#35	1.00	0.50	0.05	0.12
#45	1.50	0.36	0.17	0.29
#60	2.00	0.25	2.38	2.67
#80	2.50	0.18	61.54	64.21
#120	3.00	0.13	29.71	93.92
#170	3.50	0.09	5.25	99.17
#200	3.75	0.08	0.24	99.41
#230	4.00	0.06	0.05	99.46

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.10	2.83	2.68	2.38	2.18	2.11	2.02	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.44	0.18	2.38	0.19	0.33	0.23	7.95

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESAJS.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-08 @ 6 ft

Analysis Date: 9/3/2015

Easting (ft): <b>878,444</b>	Northing (ft): <b>2,027,645</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-13.1 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 8/2</b>	Fines (%): <b>#200 - 1.76</b> <b>#230 - 1.66</b>	Organics (%):	Carbonates (%):	Shells (%): <b>3</b>
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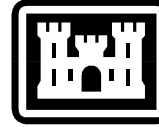
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.01	0.01
#10	-1.00	2.00	0.01	0.02
#14	-0.50	1.40	0.02	0.04
#18	0.00	1.00	0.00	0.04
#25	0.50	0.71	0.03	0.07
#35	1.00	0.50	0.06	0.13
#45	1.50	0.36	0.15	0.28
#60	2.00	0.25	1.32	1.60
#80	2.50	0.18	51.70	53.30
#120	3.00	0.13	36.60	89.90
#170	3.50	0.09	7.88	97.78
#200	3.75	0.08	0.46	98.24
#230	4.00	0.06	0.10	98.34

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.32	2.92	2.80	2.47	2.23	2.14	2.03	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.51	0.18	2.47	0.18	0.36	0	8.43

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-08 @ 9 ft

Analysis Date: 9/3/2015

Easting (ft): <b>878,444</b>	Northing (ft): <b>2,027,645</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-16.1 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/2</b>	Fines (%): <b>#200 - 0.82</b> <b>#230 - 0.77</b>	Organics (%):	Carbonates (%):	Shells (%): <b>11</b>
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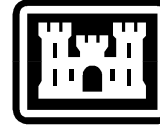
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.07	0.07
#10	-1.00	2.00	0.10	0.17
#14	-0.50	1.40	0.13	0.30
#18	0.00	1.00	0.13	0.43
#25	0.50	0.71	0.36	0.79
#35	1.00	0.50	0.80	1.59
#45	1.50	0.36	2.80	4.39
#60	2.00	0.25	15.05	19.44
#80	2.50	0.18	54.67	74.11
#120	3.00	0.13	20.37	94.48
#170	3.50	0.09	4.42	98.90
#200	3.75	0.08	0.28	99.18
#230	4.00	0.06	0.05	99.23

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.06	2.74	2.52	2.28	2.05	1.89	1.52	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.26	0.21	2.28	0.21	0.49	-1.48	11.81

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-08 @ 12 ft

Analysis Date: 9/3/2015

Easting (ft): <b>878,444</b>	Northing (ft): <b>2,027,645</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-19.1 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 8/2</b>	Fines (%): <b>#200 - 3.13</b> <b>#230 - 3.09</b>	Organics (%):	Carbonates (%):	Shells (%): <b>0.3</b>
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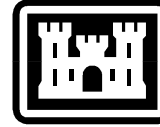
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#10	-1.00	2.00	0.00	0.00
#14	-0.50	1.40	0.01	0.01
#18	0.00	1.00	0.01	0.02
#25	0.50	0.71	0.01	0.03
#35	1.00	0.50	0.05	0.08
#45	1.50	0.36	0.21	0.29
#60	2.00	0.25	4.17	4.46
#80	2.50	0.18	66.09	70.55
#120	3.00	0.13	22.54	93.09
#170	3.50	0.09	3.61	96.70
#200	3.75	0.08	0.17	96.87
#230	4.00	0.06	0.04	96.91

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.26	2.80	2.60	2.34	2.16	2.09	2.00	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.38	0.19	2.34	0.20	0.31	0.55	6.48

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESAJS.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-08 @ 15 ft

Analysis Date: 9/3/2015

Easting (ft): <b>878,444</b>	Northing (ft): <b>2,027,645</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-22.1 NAVD88</b>
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USCS: <b>SW</b>	Munsell: <b>2.5Y 8/2</b>	Fines (%): <b>#200 - 0.83</b> <b>#230 - 0.75</b>	Organics (%):	Carbonates (%):	Shells (%): <b>37.5</b>
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	4.05	4.05
#3.5	-2.50	5.60	3.13	7.18
#4	-2.25	4.75	2.02	9.20
#5	-2.00	4.00	1.63	10.83
#7	-1.50	2.80	4.01	14.84
#10	-1.00	2.00	4.40	19.24
#14	-0.50	1.40	5.20	24.44
#18	0.00	1.00	4.26	28.70
#25	0.50	0.71	3.88	32.58
#35	1.00	0.50	3.36	35.94
#45	1.50	0.36	4.13	40.07
#60	2.00	0.25	8.41	48.48
#80	2.50	0.18	30.95	79.43
#120	3.00	0.13	17.56	96.99
#170	3.50	0.09	2.06	99.05
#200	3.75	0.08	0.12	99.17
#230	4.00	0.06	0.08	99.25

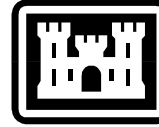
SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.94	2.63	2.43	2.02	-0.43	-1.37	-3.02	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.00	0.50	2.02	0.25	1.94	-1	2.76

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15



# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-09 @ 1 ft

Analysis Date: 9/4/2015

Easting (ft): <b>876,843</b>	Northing (ft): <b>2,027,137</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-9.0 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 6/1</b>	Fines (%): <b>#200 - 1.33</b> <b>#230 - 1.32</b>	Organics (%):	Carbonates (%):	Shells (%): <b>35.8</b>
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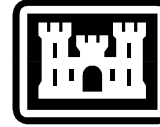
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	5.93	5.93
#3.5	-2.50	5.60	3.15	9.08
#4	-2.25	4.75	1.16	10.24
#5	-2.00	4.00	1.36	11.60
#7	-1.50	2.80	3.32	14.92
#10	-1.00	2.00	4.57	19.49
#14	-0.50	1.40	5.13	24.62
#18	0.00	1.00	4.25	28.87
#25	0.50	0.71	4.05	32.92
#35	1.00	0.50	4.14	37.06
#45	1.50	0.36	4.63	41.69
#60	2.00	0.25	6.06	47.75
#80	2.50	0.18	25.84	73.59
#120	3.00	0.13	21.03	94.62
#170	3.50	0.09	3.90	98.52
#200	3.75	0.08	0.15	98.67
#230	4.00	0.06	0.01	98.68

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.05	2.75	2.53	2.04	-0.46	-1.38	-3.41	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	0.98	0.51	2.04	0.24	2.04	-0.98	2.74

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-09 @ 3.5 ft

Analysis Date: 9/4/2015

Easting (ft): <b>876,843</b>	Northing (ft): <b>2,027,137</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-11.5 NAVD88</b>
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USCS:	Munsell: <b>10GY 4/1</b>	Fines (%): <b>#200 - 18.05</b> <b>#230 - 17.48</b>	Organics (%):	Carbonates (%):	Shells (%): <b>4.8</b>
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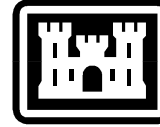
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.09	0.09
#4	-2.25	4.75	0.07	0.16
#5	-2.00	4.00	0.00	0.16
#7	-1.50	2.80	0.21	0.37
#10	-1.00	2.00	0.42	0.79
#14	-0.50	1.40	0.64	1.43
#18	0.00	1.00	0.66	2.09
#25	0.50	0.71	0.75	2.84
#35	1.00	0.50	0.88	3.72
#45	1.50	0.36	1.23	4.95
#60	2.00	0.25	2.34	7.29
#80	2.50	0.18	21.08	28.37
#120	3.00	0.13	40.55	68.92
#170	3.50	0.09	11.29	80.21
#200	3.75	0.08	1.74	81.95
#230	4.00	0.06	0.57	82.52

SAND, silty, mostly fine-grained sand-sized quartz, little silt, trace shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
		3.27	2.77	2.42	2.21	1.51	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.53	0.17	2.77	0.15	0.77	-2.87	14.77

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-09 @ 4.5 ft

Analysis Date: 9/4/2015

Easting (ft): <b>876,843</b>	Northing (ft): <b>2,027,137</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-12.5 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>10GY 4/1</b>	Fines (%): <b>#200 - 4.25</b> <b>#230 - 4.00</b>	Organics (%):	Carbonates (%): <b>25.73</b>	Shells (%): <b>24.5</b>
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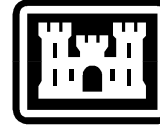
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.60	0.60
#3.5	-2.50	5.60	3.42	4.02
#4	-2.25	4.75	1.20	5.22
#5	-2.00	4.00	1.33	6.55
#7	-1.50	2.80	2.88	9.43
#10	-1.00	2.00	3.44	12.87
#14	-0.50	1.40	3.21	16.08
#18	0.00	1.00	2.49	18.57
#25	0.50	0.71	2.33	20.90
#35	1.00	0.50	2.18	23.08
#45	1.50	0.36	3.28	26.36
#60	2.00	0.25	7.16	33.52
#80	2.50	0.18	22.62	56.14
#120	3.00	0.13	29.92	86.06
#170	3.50	0.09	8.93	94.99
#200	3.75	0.08	0.76	95.75
#230	4.00	0.06	0.25	96.00

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.50	2.97	2.82	2.36	1.29	-0.51	-2.30	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.61	0.33	2.36	0.19	1.75	-1.37	3.69

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-09 @ 6 ft

Analysis Date: 9/4/2015

Easting (ft): <b>876,843</b>	Northing (ft): <b>2,027,137</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-14.0 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/1</b>	Fines (%): <b>#200 - 1.34</b> <b>#230 - 1.23</b>	Organics (%):	Carbonates (%):	Shells (%): <b>21.7</b>
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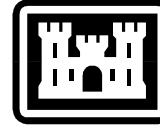
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	4.13	4.13
#3.5	-2.50	5.60	2.80	6.93
#4	-2.25	4.75	0.44	7.37
#5	-2.00	4.00	0.95	8.32
#7	-1.50	2.80	1.71	10.03
#10	-1.00	2.00	1.99	12.02
#14	-0.50	1.40	2.00	14.02
#18	0.00	1.00	1.57	15.59
#25	0.50	0.71	1.57	17.16
#35	1.00	0.50	2.00	19.16
#45	1.50	0.36	3.82	22.98
#60	2.00	0.25	10.75	33.73
#80	2.50	0.18	29.95	63.68
#120	3.00	0.13	27.65	91.33
#170	3.50	0.09	7.00	98.33
#200	3.75	0.08	0.33	98.66
#230	4.00	0.06	0.11	98.77

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.26	2.87	2.70	2.27	1.59	0.13	-3.02	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.61	0.33	2.27	0.21	1.8	-1.79	5.16

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-09 @ 9 ft

Analysis Date: 9/4/2015

Easting (ft): <b>876,843</b>	Northing (ft): <b>2,027,137</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-17.0 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/1</b>	Fines (%): <b>#200 - 1.24</b> <b>#230 - 1.16</b>	Organics (%):	Carbonates (%):	Shells (%): <b>13.8</b>
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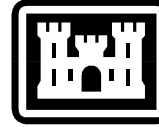
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.35	0.35
#4	-2.25	4.75	0.54	0.89
#5	-2.00	4.00	0.65	1.54
#7	-1.50	2.80	0.90	2.44
#10	-1.00	2.00	1.51	3.95
#14	-0.50	1.40	1.62	5.57
#18	0.00	1.00	1.69	7.26
#25	0.50	0.71	2.11	9.37
#35	1.00	0.50	2.64	12.01
#45	1.50	0.36	4.20	16.21
#60	2.00	0.25	7.11	23.32
#80	2.50	0.18	34.60	57.92
#120	3.00	0.13	33.90	91.82
#170	3.50	0.09	6.52	98.34
#200	3.75	0.08	0.42	98.76
#230	4.00	0.06	0.08	98.84

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.24	2.88	2.75	2.39	2.02	1.48	-0.68	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.08	0.24	2.39	0.19	1.12	-2.15	7.73

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-09 @ 12 ft

Analysis Date: 9/4/2015

Easting (ft): <b>876,843</b>	Northing (ft): <b>2,027,137</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-20.0 NAVD88</b>
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USCS: <b>SW</b>	Munsell: <b>2.5Y 5/1</b>	Fines (%): <b>#200 - 2.33</b> <b>#230 - 2.17</b>	Organics (%):	Carbonates (%):	Shells (%): <b>6.7</b>
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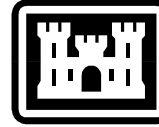
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.97	0.97
#4	-2.25	4.75	0.58	1.55
#5	-2.00	4.00	0.49	2.04
#7	-1.50	2.80	0.51	2.55
#10	-1.00	2.00	0.56	3.11
#14	-0.50	1.40	0.47	3.58
#18	0.00	1.00	0.41	3.99
#25	0.50	0.71	0.46	4.45
#35	1.00	0.50	0.45	4.90
#45	1.50	0.36	1.01	5.91
#60	2.00	0.25	4.26	10.17
#80	2.50	0.18	29.99	40.16
#120	3.00	0.13	46.23	86.39
#170	3.50	0.09	10.58	96.97
#200	3.75	0.08	0.70	97.67
#230	4.00	0.06	0.16	97.83

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.41	2.97	2.88	2.61	2.25	2.10	1.05	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.39	0.19	2.61	0.16	0.99	-3.52	16.91

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-10 @ 3 ft

Analysis Date: 9/4/2015

Easting (ft): <b>877,602</b>	Northing (ft): <b>2,026,201</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-11.2 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 5/1</b>	Fines (%): <b>#200 - 0.37</b> <b>#230 - 0.34</b>	Organics (%):	Carbonates (%):	Shells (%): <b>45.1</b>
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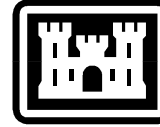
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	2.01	2.01
#3.5	-2.50	5.60	4.67	6.68
#4	-2.25	4.75	1.55	8.23
#5	-2.00	4.00	1.84	10.07
#7	-1.50	2.80	3.38	13.45
#10	-1.00	2.00	4.63	18.08
#14	-0.50	1.40	6.88	24.96
#18	0.00	1.00	6.95	31.91
#25	0.50	0.71	7.71	39.62
#35	1.00	0.50	8.51	48.13
#45	1.50	0.36	10.18	58.31
#60	2.00	0.25	11.05	69.36
#80	2.50	0.18	19.04	88.40
#120	3.00	0.13	9.51	97.91
#170	3.50	0.09	1.64	99.55
#200	3.75	0.08	0.08	99.63
#230	4.00	0.06	0.03	99.66

SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, some sand to gravel-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.85	2.38	2.15	1.09	-0.50	-1.22	-2.77	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	0.68	0.62	1.09	0.47	1.74	-0.71	2.6

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-10 @ 6 ft

Analysis Date: 9/4/2015

Easting (ft): <b>877,602</b>	Northing (ft): <b>2,026,201</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-14.2 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/1</b>	Fines (%): <b>#200 - 1.64</b> <b>#230 - 1.56</b>	Organics (%):	Carbonates (%):	Shells (%): <b>4.4</b>
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.27	0.27
#4	-2.25	4.75	0.00	0.27
#5	-2.00	4.00	0.00	0.27
#7	-1.50	2.80	0.02	0.29
#10	-1.00	2.00	0.05	0.34
#14	-0.50	1.40	0.15	0.49
#18	0.00	1.00	0.23	0.72
#25	0.50	0.71	0.41	1.13
#35	1.00	0.50	0.56	1.69
#45	1.50	0.36	1.64	3.33
#60	2.00	0.25	5.01	8.34
#80	2.50	0.18	42.49	50.83
#120	3.00	0.13	35.18	86.01
#170	3.50	0.09	11.18	97.19
#200	3.75	0.08	1.17	98.36
#230	4.00	0.06	0.08	98.44

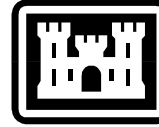
SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.40	2.97	2.84	2.49	2.20	2.09	1.67	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.47	0.18	2.49	0.18	0.59	-2.99	24.82

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15



# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-10 @ 7.5 ft

Analysis Date: 9/4/2015

Easting (ft): <b>877,602</b>	Northing (ft): <b>2,026,201</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-15.7 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/1</b>	Fines (%): <b>#200 - 1.01</b> <b>#230 - 1.01</b>	Organics (%):	Carbonates (%):	Shells (%): <b>6</b>
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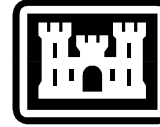
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.05	0.05
#4	-2.25	4.75	0.00	0.05
#5	-2.00	4.00	0.00	0.05
#7	-1.50	2.80	0.06	0.11
#10	-1.00	2.00	0.09	0.20
#14	-0.50	1.40	0.19	0.39
#18	0.00	1.00	0.38	0.77
#25	0.50	0.71	0.56	1.33
#35	1.00	0.50	0.89	2.22
#45	1.50	0.36	2.49	4.71
#60	2.00	0.25	8.88	13.59
#80	2.50	0.18	55.28	68.87
#120	3.00	0.13	25.28	94.15
#170	3.50	0.09	4.63	98.78
#200	3.75	0.08	0.21	98.99
#230	4.00	0.06	0.00	98.99

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.09	2.80	2.62	2.33	2.10	2.02	1.52	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.31	0.20	2.33	0.20	0.53	-2.3	16.37

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESAJS.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-10 @ 9 ft

Analysis Date: 9/4/2015

Easting (ft): <b>877,602</b>	Northing (ft): <b>2,026,201</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-17.2 NAVD88</b>
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USCS:	Munsell: <b>2.5Y 7/1</b>	Fines (%): <b>#200 - 0.89</b> <b>#230 - 0.88</b>	Organics (%):	Carbonates (%): <b>43.65</b>	Shells (%): <b>45.9</b>
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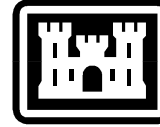
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	9.53	9.53
3/8"	-3.25	9.50	0.80	10.33
#3.5	-2.50	5.60	2.77	13.10
#4	-2.25	4.75	0.88	13.98
#5	-2.00	4.00	1.39	15.37
#7	-1.50	2.80	2.40	17.77
#10	-1.00	2.00	4.60	22.37
#14	-0.50	1.40	5.60	27.97
#18	0.00	1.00	4.74	32.71
#25	0.50	0.71	4.93	37.64
#35	1.00	0.50	5.34	42.98
#45	1.50	0.36	9.14	52.12
#60	2.00	0.25	17.25	69.37
#80	2.50	0.18	21.24	90.61
#120	3.00	0.13	7.45	98.06
#170	3.50	0.09	0.97	99.03
#200	3.75	0.08	0.08	99.11
#230	4.00	0.06	0.01	99.12

SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, some sand to gravel-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.79	2.34	2.13	1.38	-0.77	-1.87		
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	0.42	0.75	1.38	0.38	1.59	0.09	2.15

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-10 @ 12 ft

Analysis Date: 9/4/2015

Easting (ft): <b>877,602</b>	Northing (ft): <b>2,026,201</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-20.2 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/1</b>	Fines (%): <b>#200 - 1.51</b> <b>#230 - 1.26</b>	Organics (%):	Carbonates (%):	Shells (%): <b>2.4</b>
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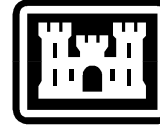
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#10	-1.00	2.00	0.00	0.00
#14	-0.50	1.40	0.01	0.01
#18	0.00	1.00	0.02	0.03
#25	0.50	0.71	0.01	0.04
#35	1.00	0.50	0.02	0.06
#45	1.50	0.36	0.06	0.12
#60	2.00	0.25	0.55	0.67
#80	2.50	0.18	46.35	47.02
#120	3.00	0.13	42.41	89.43
#170	3.50	0.09	8.25	97.68
#200	3.75	0.08	0.81	98.49
#230	4.00	0.06	0.25	98.74

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.34	2.94	2.83	2.54	2.26	2.17	2.05	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.56	0.17	2.54	0.17	0.35	0.41	5.05

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESAJS.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-11 @ 1 ft

Analysis Date: 9/4/2015

Easting (ft): <b>877,270</b>	Northing (ft): <b>2,025,679</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-7.9 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 6/2</b>	Fines (%): <b>#200 - 2.91</b> <b>#230 - 2.66</b>	Organics (%):	Carbonates (%):	Shells (%): <b>15.4</b>
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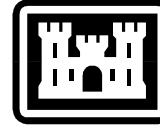
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	2.07	2.07
#3.5	-2.50	5.60	2.16	4.23
#4	-2.25	4.75	1.11	5.34
#5	-2.00	4.00	0.68	6.02
#7	-1.50	2.80	1.49	7.51
#10	-1.00	2.00	1.77	9.28
#14	-0.50	1.40	1.60	10.88
#18	0.00	1.00	1.08	11.96
#25	0.50	0.71	0.94	12.90
#35	1.00	0.50	1.04	13.94
#45	1.50	0.36	1.58	15.52
#60	2.00	0.25	3.15	18.67
#80	2.50	0.18	26.54	45.21
#120	3.00	0.13	39.52	84.73
#170	3.50	0.09	11.37	96.10
#200	3.75	0.08	0.99	97.09
#230	4.00	0.06	0.25	97.34

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.45	2.99	2.88	2.56	2.12	1.58	-2.33	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.99	0.25	2.56	0.17	1.64	-2.17	6.79

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-11 @ 3 ft

Analysis Date: 9/4/2015

Easting (ft): <b>877,270</b>	Northing (ft): <b>2,025,679</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-9.9 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 6/2</b>	Fines (%): <b>#200 - 1.74</b> <b>#230 - 1.55</b>	Organics (%):	Carbonates (%):	Shells (%): <b>5.1</b>
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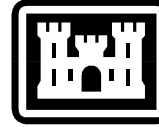
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.30	0.30
#3.5	-2.50	5.60	0.53	0.83
#4	-2.25	4.75	0.05	0.88
#5	-2.00	4.00	0.02	0.90
#7	-1.50	2.80	0.10	1.00
#10	-1.00	2.00	0.21	1.21
#14	-0.50	1.40	0.31	1.52
#18	0.00	1.00	0.32	1.84
#25	0.50	0.71	0.35	2.19
#35	1.00	0.50	0.49	2.68
#45	1.50	0.36	1.00	3.68
#60	2.00	0.25	3.68	7.36
#80	2.50	0.18	42.83	50.19
#120	3.00	0.13	38.78	88.97
#170	3.50	0.09	8.69	97.66
#200	3.75	0.08	0.60	98.26
#230	4.00	0.06	0.19	98.45

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.35	2.94	2.82	2.50	2.21	2.10	1.68	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.43	0.19	2.50	0.18	0.76	-4.47	31.61

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-11 @ 6 ft

Analysis Date: 9/4/2015

Easting (ft): <b>877,270</b>	Northing (ft): <b>2,025,679</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-12.9 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/1</b>	Fines (%): <b>#200 - 0.99</b> <b>#230 - 0.95</b>	Organics (%):	Carbonates (%):	Shells (%): <b>39.9</b>
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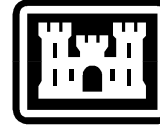
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	3.23	3.23
#3.5	-2.50	5.60	5.02	8.25
#4	-2.25	4.75	1.28	9.53
#5	-2.00	4.00	1.88	11.41
#7	-1.50	2.80	2.37	13.78
#10	-1.00	2.00	4.23	18.01
#14	-0.50	1.40	5.38	23.39
#18	0.00	1.00	4.98	28.37
#25	0.50	0.71	5.10	33.47
#35	1.00	0.50	5.36	38.83
#45	1.50	0.36	7.69	46.52
#60	2.00	0.25	10.60	57.12
#80	2.50	0.18	23.01	80.13
#120	3.00	0.13	15.18	95.31
#170	3.50	0.09	3.46	98.77
#200	3.75	0.08	0.24	99.01
#230	4.00	0.06	0.04	99.05

SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, some sand to gravel-sized shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.99	2.63	2.39	1.66	-0.34	-1.24	-2.99	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	0.92	0.53	1.66	0.32	1.9	-0.92	2.75

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-11 @ 9 ft

Analysis Date: 9/4/2015

Easting (ft): <b>877,270</b>	Northing (ft): <b>2,025,679</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-15.9 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/2</b>	Fines (%): <b>#200 - 1.21</b> <b>#230 - 1.17</b>	Organics (%):	Carbonates (%):	Shells (%): <b>31.9</b>
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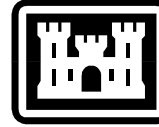
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	2.73	2.73
#3.5	-2.50	5.60	3.32	6.05
#4	-2.25	4.75	0.84	6.89
#5	-2.00	4.00	0.96	7.85
#7	-1.50	2.80	1.76	9.61
#10	-1.00	2.00	3.62	13.23
#14	-0.50	1.40	4.51	17.74
#18	0.00	1.00	4.15	21.89
#25	0.50	0.71	4.25	26.14
#35	1.00	0.50	4.20	30.34
#45	1.50	0.36	5.31	35.65
#60	2.00	0.25	10.77	46.42
#80	2.50	0.18	30.56	76.98
#120	3.00	0.13	18.73	95.71
#170	3.50	0.09	2.99	98.70
#200	3.75	0.08	0.09	98.79
#230	4.00	0.06	0.04	98.83

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.98	2.69	2.47	2.06	0.37	-0.69	-2.74	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.26	0.42	2.06	0.24	1.76	-1.29	3.71

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-11 @ 12 ft

Analysis Date: 9/4/2015

Easting (ft): <b>877,270</b>	Northing (ft): <b>2,025,679</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-18.9 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/2</b>	Fines (%): <b>#200 - 1.27</b> <b>#230 - 1.24</b>	Organics (%):	Carbonates (%): <b>48.66</b>	Shells (%): <b>48.8</b>
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.37	0.37
#3.5	-2.50	5.60	1.40	1.77
#4	-2.25	4.75	0.82	2.59
#5	-2.00	4.00	0.86	3.45
#7	-1.50	2.80	2.63	6.08
#10	-1.00	2.00	5.46	11.54
#14	-0.50	1.40	8.72	20.26
#18	0.00	1.00	9.03	29.29
#25	0.50	0.71	9.87	39.16
#35	1.00	0.50	9.92	49.08
#45	1.50	0.36	11.30	60.38
#60	2.00	0.25	10.57	70.95
#80	2.50	0.18	15.90	86.85
#120	3.00	0.13	10.17	97.02
#170	3.50	0.09	1.61	98.63
#200	3.75	0.08	0.10	98.73
#230	4.00	0.06	0.03	98.76

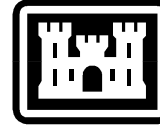
SAND, poorly-graded, some fine to medium-grained sand-sized quartz, some medium to coarse-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.90	2.41	2.13	1.04	-0.24	-0.74	-1.71	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	0.84	0.56	1.04	0.49	1.46	-0.49	2.54

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15



# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-11 @ 13.5 ft

Analysis Date: 9/4/2015

Easting (ft): <b>877,270</b>	Northing (ft): <b>2,025,679</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-20.4 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 6/1</b>	Fines (%): <b>#200 - 2.01</b> <b>#230 - 1.85</b>	Organics (%):	Carbonates (%):	Shells (%): <b>23.3</b>
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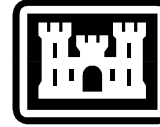
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.44	0.44
#3.5	-2.50	5.60	2.06	2.50
#4	-2.25	4.75	0.85	3.35
#5	-2.00	4.00	1.06	4.41
#7	-1.50	2.80	2.11	6.52
#10	-1.00	2.00	3.28	9.80
#14	-0.50	1.40	4.32	14.12
#18	0.00	1.00	3.60	17.72
#25	0.50	0.71	3.10	20.82
#35	1.00	0.50	2.48	23.30
#45	1.50	0.36	1.73	25.03
#60	2.00	0.25	1.09	26.12
#80	2.50	0.18	20.65	46.77
#120	3.00	0.13	40.98	87.75
#170	3.50	0.09	9.58	97.33
#200	3.75	0.08	0.66	97.99
#230	4.00	0.06	0.16	98.15

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium to coarse-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.38	2.95	2.84	2.54	1.49	-0.24	-1.86	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.80	0.29	2.54	0.17	1.64	-1.47	4.02

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-12 @ 1 ft

Analysis Date: 9/4/2015

Easting (ft): <b>877,388</b>	Northing (ft): <b>2,025,584</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-8.0 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 6/2</b>	Fines (%): <b>#200 - 1.24</b> <b>#230 - 1.23</b>	Organics (%):	Carbonates (%):	Shells (%): <b>43</b>
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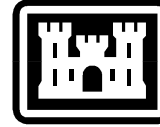
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.74	0.74
#3.5	-2.50	5.60	4.32	5.06
#4	-2.25	4.75	2.99	8.05
#5	-2.00	4.00	1.65	9.70
#7	-1.50	2.80	3.90	13.60
#10	-1.00	2.00	5.24	18.84
#14	-0.50	1.40	6.45	25.29
#18	0.00	1.00	5.67	30.96
#25	0.50	0.71	5.56	36.52
#35	1.00	0.50	5.84	42.36
#45	1.50	0.36	7.53	49.89
#60	2.00	0.25	9.68	59.57
#80	2.50	0.18	22.07	81.64
#120	3.00	0.13	13.88	95.52
#170	3.50	0.09	2.98	98.50
#200	3.75	0.08	0.26	98.76
#230	4.00	0.06	0.01	98.77

SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, some sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.98	2.59	2.35	1.51	-0.52	-1.27	-2.51	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	0.86	0.55	1.51	0.35	1.79	-0.69	2.3

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-12 @ 3 ft

Analysis Date: 9/4/2015

Easting (ft): <b>877,388</b>	Northing (ft): <b>2,025,584</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-10.0 NAVD88</b>
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USCS: <b>SW</b>	Munsell: <b>2.5Y 6/2</b>	Fines (%): <b>#200 - 1.11</b> <b>#230 - 1.06</b>	Organics (%):	Carbonates (%):	Shells (%): <b>17.7</b>
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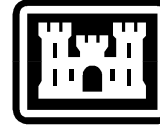
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.75	0.75
#3.5	-2.50	5.60	2.24	2.99
#4	-2.25	4.75	0.77	3.76
#5	-2.00	4.00	0.65	4.41
#7	-1.50	2.80	1.20	5.61
#10	-1.00	2.00	2.09	7.70
#14	-0.50	1.40	1.88	9.58
#18	0.00	1.00	1.66	11.24
#25	0.50	0.71	1.63	12.87
#35	1.00	0.50	1.84	14.71
#45	1.50	0.36	2.92	17.63
#60	2.00	0.25	7.83	25.46
#80	2.50	0.18	51.70	77.16
#120	3.00	0.13	17.61	94.77
#170	3.50	0.09	3.82	98.59
#200	3.75	0.08	0.30	98.89
#230	4.00	0.06	0.05	98.94

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium to coarse-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.03	2.69	2.48	2.24	1.97	1.22	-1.75	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.81	0.29	2.24	0.21	1.39	-2.21	7.3

GRANULARMETRIC REPORT % S/C\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-12 @ 6 ft

Analysis Date: 9/4/2015

Easting (ft): <b>877,388</b>	Northing (ft): <b>2,025,584</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-13.0 NAVD88</b>
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USCS:	Munsell: <b>2.5Y 6/2</b>	Fines (%): <b>#200 - 0.91</b> <b>#230 - 0.87</b>	Organics (%):	Carbonates (%):	Shells (%): <b>65.7</b>
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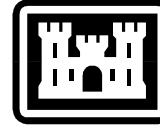
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	13.27	13.27
3/8"	-3.25	9.50	3.59	16.86
#3.5	-2.50	5.60	4.24	21.10
#4	-2.25	4.75	1.65	22.75
#5	-2.00	4.00	2.00	24.75
#7	-1.50	2.80	4.59	29.34
#10	-1.00	2.00	6.61	35.95
#14	-0.50	1.40	8.71	44.66
#18	0.00	1.00	7.70	52.36
#25	0.50	0.71	7.05	59.41
#35	1.00	0.50	6.79	66.20
#45	1.50	0.36	7.60	73.80
#60	2.00	0.25	6.47	80.27
#80	2.50	0.18	7.72	87.99
#120	3.00	0.13	8.42	96.41
#170	3.50	0.09	2.54	98.95
#200	3.75	0.08	0.14	99.09
#230	4.00	0.06	0.04	99.13

SAND, poorly-graded, mostly sand to gravel-sized shell, some fine to medium-grained sand-sized quartz

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.92	2.24	1.59	-0.15	-1.97	-3.49		
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	-0.45	1.37			1.84	0.75	2.36

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-12 @ 9 ft

Analysis Date: 9/4/2015

Easting (ft): <b>877,388</b>	Northing (ft): <b>2,025,584</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-16.0 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 6/2</b>	Fines (%): <b>#200 - 1.10</b> <b>#230 - 1.08</b>	Organics (%):	Carbonates (%):	Shells (%): <b>66.3</b>
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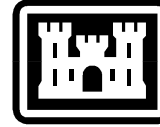
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	2.77	2.77
#3.5	-2.50	5.60	6.08	8.85
#4	-2.25	4.75	2.90	11.75
#5	-2.00	4.00	2.51	14.26
#7	-1.50	2.80	4.34	18.60
#10	-1.00	2.00	8.39	26.99
#14	-0.50	1.40	11.42	38.41
#18	0.00	1.00	10.74	49.15
#25	0.50	0.71	10.69	59.84
#35	1.00	0.50	9.55	69.39
#45	1.50	0.36	8.45	77.84
#60	2.00	0.25	5.36	83.20
#80	2.50	0.18	7.08	90.28
#120	3.00	0.13	7.37	97.65
#170	3.50	0.09	1.19	98.84
#200	3.75	0.08	0.06	98.90
#230	4.00	0.06	0.02	98.92

SAND, poorly-graded, mostly sand to gravel-sized shell, some fine to medium-grained sand-sized quartz, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.82	2.06	1.33	0.04	-1.12	-1.80	-2.97	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	0.01	0.99	0.04	0.97	1.72	-0.15	2.33

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-12 @ 11 ft

Analysis Date: 9/4/2015

Easting (ft): <b>877,388</b>	Northing (ft): <b>2,025,584</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-18.0 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 5/1</b>	Fines (%): <b>#200 - 4.67</b> <b>#230 - 4.14</b>	Organics (%):	Carbonates (%):	Shells (%): <b>2.6</b>
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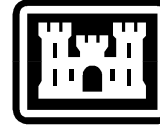
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.14	0.14
#4	-2.25	4.75	0.11	0.25
#5	-2.00	4.00	0.02	0.27
#7	-1.50	2.80	0.04	0.31
#10	-1.00	2.00	0.11	0.42
#14	-0.50	1.40	0.38	0.80
#18	0.00	1.00	0.57	1.37
#25	0.50	0.71	0.70	2.07
#35	1.00	0.50	0.81	2.88
#45	1.50	0.36	1.07	3.95
#60	2.00	0.25	1.50	5.45
#80	2.50	0.18	14.59	20.04
#120	3.00	0.13	58.45	78.49
#170	3.50	0.09	15.05	93.54
#200	3.75	0.08	1.79	95.33
#230	4.00	0.06	0.53	95.86

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt, trace shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.70	3.18	2.97	2.76	2.54	2.36	1.85	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.65	0.16	2.76	0.15	0.65	-3.58	22.97

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESAJS.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-12 @ 13 ft

Analysis Date: 9/4/2015

Easting (ft): <b>877,388</b>	Northing (ft): <b>2,025,584</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-20.0 NAVD88</b>
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USCS:	Munsell: <b>2.5Y 4/1</b>	Fines (%): <b>#200 - 10.94</b> <b>#230 - 10.37</b>	Organics (%):	Carbonates (%): <b>2.02</b>	Shells (%): <b>2.2</b>
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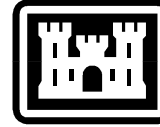
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.08	0.08
#10	-1.00	2.00	0.02	0.10
#14	-0.50	1.40	0.04	0.14
#18	0.00	1.00	0.04	0.18
#25	0.50	0.71	0.06	0.24
#35	1.00	0.50	0.05	0.29
#45	1.50	0.36	0.41	0.70
#60	2.00	0.25	3.87	4.57
#80	2.50	0.18	28.73	33.30
#120	3.00	0.13	41.22	74.52
#170	3.50	0.09	12.79	87.31
#200	3.75	0.08	1.75	89.06
#230	4.00	0.06	0.57	89.63

SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt, trace shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	3.37	3.02	2.70	2.36	2.20	2.01	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.62	0.16	2.70	0.15	0.46	-1.19	13.06

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-13 @ 1 ft

Analysis Date: 9/4/2015

Easting (ft): <b>876,466</b>	Northing (ft): <b>2,025,092</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-7.9 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 6/1</b>	Fines (%): <b>#200 - 2.99</b> <b>#230 - 2.86</b>	Organics (%):	Carbonates (%): <b>30.93</b>	Shells (%): <b>30.7</b>
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.78	0.78
#3.5	-2.50	5.60	2.37	3.15
#4	-2.25	4.75	1.56	4.71
#5	-2.00	4.00	1.43	6.14
#7	-1.50	2.80	3.34	9.48
#10	-1.00	2.00	4.83	14.31
#14	-0.50	1.40	5.66	19.97
#18	0.00	1.00	4.07	24.04
#25	0.50	0.71	3.17	27.21
#35	1.00	0.50	2.67	29.88
#45	1.50	0.36	3.47	33.35
#60	2.00	0.25	5.52	38.87
#80	2.50	0.18	18.74	57.61
#120	3.00	0.13	29.45	87.06
#170	3.50	0.09	9.25	96.31
#200	3.75	0.08	0.70	97.01
#230	4.00	0.06	0.13	97.14

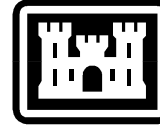
SAND, poorly-graded, mostly fine-grained sand-sized quartz, some medium to coarse-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.43	2.95	2.80	2.30	0.15	-0.85	-2.20	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.44	0.37	2.30	0.20	1.81	-1.03	2.82

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15



# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-13 @ 3 ft

Analysis Date: 9/4/2015

Easting (ft): <b>876,466</b>	Northing (ft): <b>2,025,092</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-9.9 NAVD88</b>
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USCS: <b>SW</b>	Munsell: <b>2.5Y 6/1</b>	Fines (%): <b>#200 - 1.27</b> <b>#230 - 1.23</b>	Organics (%):	Carbonates (%):	Shells (%): <b>25.8</b>
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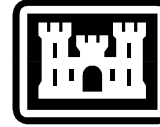
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.40	0.40
#3.5	-2.50	5.60	1.03	1.43
#4	-2.25	4.75	0.62	2.05
#5	-2.00	4.00	0.88	2.93
#7	-1.50	2.80	2.13	5.06
#10	-1.00	2.00	2.00	7.06
#14	-0.50	1.40	3.56	10.62
#18	0.00	1.00	3.53	14.15
#25	0.50	0.71	4.12	18.27
#35	1.00	0.50	5.04	23.31
#45	1.50	0.36	7.92	31.23
#60	2.00	0.25	13.68	44.91
#80	2.50	0.18	33.12	78.03
#120	3.00	0.13	17.13	95.16
#170	3.50	0.09	3.42	98.58
#200	3.75	0.08	0.15	98.73
#230	4.00	0.06	0.04	98.77

SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, little medium to coarse-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.00	2.67	2.45	2.08	1.11	0.22	-1.51	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.56	0.34	2.08	0.24	1.37	-1.48	4.73

GRANULARMETRIC REPORT % S/C\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-13 @ 5.5 ft

Analysis Date: 9/4/2015

Easting (ft): <b>876,466</b>	Northing (ft): <b>2,025,092</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-12.4 NAVD88</b>
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USCS:	Munsell: <b>2.5Y 7/2</b>	Fines (%): <b>#200 - 1.26</b> <b>#230 - 1.26</b>	Organics (%):	Carbonates (%):	Shells (%): <b>48.1</b>
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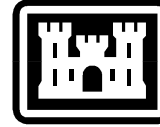
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	6.01	6.01
3/8"	-3.25	9.50	8.52	14.53
#3.5	-2.50	5.60	2.33	16.86
#4	-2.25	4.75	1.83	18.69
#5	-2.00	4.00	2.20	20.89
#7	-1.50	2.80	3.66	24.55
#10	-1.00	2.00	5.96	30.51
#14	-0.50	1.40	6.02	36.53
#18	0.00	1.00	4.34	40.87
#25	0.50	0.71	3.69	44.56
#35	1.00	0.50	3.71	48.27
#45	1.50	0.36	4.70	52.97
#60	2.00	0.25	7.83	60.80
#80	2.50	0.18	24.57	85.37
#120	3.00	0.13	11.57	96.94
#170	3.50	0.09	1.72	98.66
#200	3.75	0.08	0.08	98.74
#230	4.00	0.06	0.00	98.74

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.92	2.47	2.29	1.18	-1.46	-2.78		
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	0.21	0.86	1.18	0.44	2.09	-0.25	1.93

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-13 @ 8.5 ft

Analysis Date: 9/4/2015

Easting (ft): <b>876,466</b>	Northing (ft): <b>2,025,092</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-15.4 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/2</b>	Fines (%): <b>#200 - 1.48</b> <b>#230 - 1.43</b>	Organics (%):	Carbonates (%):	Shells (%): <b>14.8</b>
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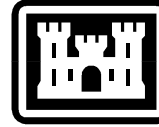
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.88	0.88
#4	-2.25	4.75	0.31	1.19
#5	-2.00	4.00	0.42	1.61
#7	-1.50	2.80	0.85	2.46
#10	-1.00	2.00	1.09	3.55
#14	-0.50	1.40	1.23	4.78
#18	0.00	1.00	1.36	6.14
#25	0.50	0.71	1.97	8.11
#35	1.00	0.50	3.41	11.52
#45	1.50	0.36	7.35	18.87
#60	2.00	0.25	11.54	30.41
#80	2.50	0.18	39.87	70.28
#120	3.00	0.13	23.41	93.69
#170	3.50	0.09	4.63	98.32
#200	3.75	0.08	0.20	98.52
#230	4.00	0.06	0.05	98.57

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.14	2.79	2.60	2.25	1.77	1.30	-0.42	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.97	0.26	2.25	0.21	1.07	-2.22	8.78

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-13 @ 10 ft

Analysis Date: 9/4/2015

Easting (ft): <b>876,466</b>	Northing (ft): <b>2,025,092</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-16.9 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 6/1</b>	Fines (%): <b>#200 - 2.35</b> <b>#230 - 2.34</b>	Organics (%):	Carbonates (%):	Shells (%): <b>9.2</b>
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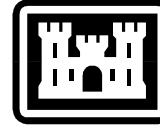
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.11	0.11
#4	-2.25	4.75	0.12	0.23
#5	-2.00	4.00	0.15	0.38
#7	-1.50	2.80	0.54	0.92
#10	-1.00	2.00	0.60	1.52
#14	-0.50	1.40	0.83	2.35
#18	0.00	1.00	0.99	3.34
#25	0.50	0.71	1.13	4.47
#35	1.00	0.50	1.39	5.86
#45	1.50	0.36	2.57	8.43
#60	2.00	0.25	7.70	16.13
#80	2.50	0.18	52.81	68.94
#120	3.00	0.13	24.08	93.02
#170	3.50	0.09	4.35	97.37
#200	3.75	0.08	0.28	97.65
#230	4.00	0.06	0.01	97.66

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.23	2.81	2.63	2.32	2.08	1.99	0.69	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.20	0.22	2.32	0.20	0.79	-2.86	13.9

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-13 @ 12 ft

Analysis Date: 9/4/2015

Easting (ft): <b>876,466</b>	Northing (ft): <b>2,025,092</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-18.9 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 5/1</b>	Fines (%): <b>#200 - 3.19</b> <b>#230 - 2.95</b>	Organics (%):	Carbonates (%):	Shells (%): <b>6.9</b>
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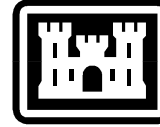
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.60	0.00	0.00
#4	-2.25	4.75	0.03	0.03
#5	-2.00	4.00	0.00	0.03
#7	-1.50	2.80	0.04	0.07
#10	-1.00	2.00	0.03	0.10
#14	-0.50	1.40	0.10	0.20
#18	0.00	1.00	0.08	0.28
#25	0.50	0.71	0.10	0.38
#35	1.00	0.50	0.16	0.54
#45	1.50	0.36	0.31	0.85
#60	2.00	0.25	0.81	1.66
#80	2.50	0.18	40.21	41.87
#120	3.00	0.13	45.81	87.68
#170	3.50	0.09	8.29	95.97
#200	3.75	0.08	0.84	96.81
#230	4.00	0.06	0.24	97.05

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.44	2.96	2.86	2.59	2.29	2.18	2.04	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.57	0.17	2.59	0.17	0.41	-2.05	23

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-14 @ 1 ft

Analysis Date: 9/4/2015

Easting (ft): <b>876,019</b>	Northing (ft): <b>2,024,781</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-8.3 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 6/2</b>	Fines (%): <b>#200 - 1.70</b> <b>#230 - 1.66</b>	Organics (%):	Carbonates (%):	Shells (%): <b>40</b>
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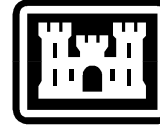
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	1.97	1.97
#3.5	-2.50	5.60	5.66	7.63
#4	-2.25	4.75	1.84	9.47
#5	-2.00	4.00	2.92	12.39
#7	-1.50	2.80	4.39	16.78
#10	-1.00	2.00	5.47	22.25
#14	-0.50	1.40	5.15	27.40
#18	0.00	1.00	4.01	31.41
#25	0.50	0.71	3.60	35.01
#35	1.00	0.50	3.65	38.66
#45	1.50	0.36	5.74	44.40
#60	2.00	0.25	9.97	54.37
#80	2.50	0.18	21.21	75.58
#120	3.00	0.13	18.70	94.28
#170	3.50	0.09	3.84	98.12
#200	3.75	0.08	0.18	98.30
#230	4.00	0.06	0.04	98.34

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.09	2.73	2.49	1.78	-0.73	-1.59	-2.85	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	0.89	0.54	1.78	0.29	1.97	-0.76	2.24

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-14 @ 3 ft

Analysis Date: 9/4/2015

Easting (ft): <b>876,019</b>	Northing (ft): <b>2,024,781</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-10.3 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 6/1</b>	Fines (%): <b>#200 - 1.39</b> <b>#230 - 1.28</b>	Organics (%):	Carbonates (%): <b>19.02</b>	Shells (%): <b>19.2</b>
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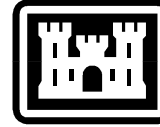
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	2.95	2.95
#3.5	-2.50	5.60	1.16	4.11
#4	-2.25	4.75	0.26	4.37
#5	-2.00	4.00	0.53	4.90
#7	-1.50	2.80	1.02	5.92
#10	-1.00	2.00	1.71	7.63
#14	-0.50	1.40	1.84	9.47
#18	0.00	1.00	1.68	11.15
#25	0.50	0.71	2.12	13.27
#35	1.00	0.50	3.04	16.31
#45	1.50	0.36	6.76	23.07
#60	2.00	0.25	15.28	38.35
#80	2.50	0.18	31.46	69.81
#120	3.00	0.13	23.10	92.91
#170	3.50	0.09	5.39	98.30
#200	3.75	0.08	0.31	98.61
#230	4.00	0.06	0.11	98.72

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium to coarse-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.19	2.81	2.61	2.19	1.56	0.95	-1.95	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.72	0.30	2.19	0.22	1.52	-2.12	7.29

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-14 @ 6.5 ft

Analysis Date: 9/4/2015

Easting (ft): <b>876,019</b>	Northing (ft): <b>2,024,781</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-13.8 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/2</b>	Fines (%): <b>#200 - 1.03</b> <b>#230 - 1.01</b>	Organics (%):	Carbonates (%):	Shells (%): <b>44.5</b>
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	3.65	3.65
#3.5	-2.50	5.60	6.41	10.06
#4	-2.25	4.75	2.43	12.49
#5	-2.00	4.00	2.79	15.28
#7	-1.50	2.80	3.85	19.13
#10	-1.00	2.00	5.28	24.41
#14	-0.50	1.40	5.25	29.66
#18	0.00	1.00	4.30	33.96
#25	0.50	0.71	4.01	37.97
#35	1.00	0.50	4.29	42.26
#45	1.50	0.36	7.11	49.37
#60	2.00	0.25	15.85	65.22
#80	2.50	0.18	20.79	86.01
#120	3.00	0.13	10.58	96.59
#170	3.50	0.09	2.23	98.82
#200	3.75	0.08	0.15	98.97
#230	4.00	0.06	0.02	98.99

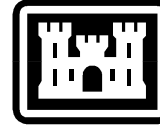
SAND, poorly-graded, mostly fine-grained sand-sized quartz, some sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.92	2.45	2.24	1.52	-0.94	-1.91	-3.09	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	0.63	0.65	1.52	0.35	1.98	-0.72	2.23

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15



# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-14 @ 9 ft

Analysis Date: 9/4/2015

Easting (ft): <b>876,019</b>	Northing (ft): <b>2,024,781</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-16.3 NAVD88</b>
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USCS:	Munsell: <b>2.5Y 6/1</b>	Fines (%): <b>#200 - 1.32</b> <b>#230 - 1.28</b>	Organics (%):	Carbonates (%):	Shells (%): <b>22</b>
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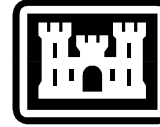
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	1.96	1.96
3/8"	-3.25	9.50	0.45	2.41
#3.5	-2.50	5.60	2.02	4.43
#4	-2.25	4.75	0.42	4.85
#5	-2.00	4.00	0.65	5.50
#7	-1.50	2.80	1.04	6.54
#10	-1.00	2.00	1.70	8.24
#14	-0.50	1.40	2.05	10.29
#18	0.00	1.00	1.92	12.21
#25	0.50	0.71	2.72	14.93
#35	1.00	0.50	3.72	18.65
#45	1.50	0.36	7.96	26.61
#60	2.00	0.25	17.34	43.95
#80	2.50	0.18	29.69	73.64
#120	3.00	0.13	20.32	93.96
#170	3.50	0.09	4.56	98.52
#200	3.75	0.08	0.16	98.68
#230	4.00	0.06	0.04	98.72

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium to coarse-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.11	2.75	2.53	2.10	1.40	0.64	-2.19	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.59	0.33	2.10	0.23	1.33	-1.59	5.88

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-14 @ 10.5 ft

Analysis Date: 9/4/2015

Easting (ft): <b>876,019</b>	Northing (ft): <b>2,024,781</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-17.8 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 6/1</b>	Fines (%): <b>#200 - 2.48</b> <b>#230 - 2.30</b>	Organics (%):	Carbonates (%):	Shells (%): <b>2.9</b>
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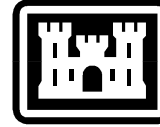
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.02	0.02
#10	-1.00	2.00	0.05	0.07
#14	-0.50	1.40	0.15	0.22
#18	0.00	1.00	0.12	0.34
#25	0.50	0.71	0.20	0.54
#35	1.00	0.50	0.31	0.85
#45	1.50	0.36	0.73	1.58
#60	2.00	0.25	1.93	3.51
#80	2.50	0.18	38.65	42.16
#120	3.00	0.13	45.97	88.13
#170	3.50	0.09	8.73	96.86
#200	3.75	0.08	0.66	97.52
#230	4.00	0.06	0.18	97.70

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.39	2.96	2.86	2.59	2.28	2.16	2.02	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.55	0.17	2.59	0.17	0.44	-1.89	15.94

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-14 @ 12 ft

Analysis Date: 9/4/2015

Easting (ft): <b>876,019</b>	Northing (ft): <b>2,024,781</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-19.3 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 6/1</b>	Fines (%): <b>#200 - 1.35</b> <b>#230 - 1.19</b>	Organics (%):	Carbonates (%):	Shells (%): <b>1.7</b>
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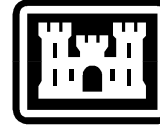
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.01	0.01
#14	-0.50	1.40	0.01	0.02
#18	0.00	1.00	0.04	0.06
#25	0.50	0.71	0.02	0.08
#35	1.00	0.50	0.04	0.12
#45	1.50	0.36	0.13	0.25
#60	2.00	0.25	0.59	0.84
#80	2.50	0.18	28.95	29.79
#120	3.00	0.13	57.00	86.79
#170	3.50	0.09	11.11	97.90
#200	3.75	0.08	0.75	98.65
#230	4.00	0.06	0.16	98.81

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.37	2.98	2.90	2.68	2.42	2.26	2.07	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.66	0.16	2.68	0.16	0.34	-0.48	8.47

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESAJS.GDT 9/10/15

# Granularmetric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-14 @ 14 ft

Analysis Date: 9/4/2015

Easting (ft): <b>876,019</b>	Northing (ft): <b>2,024,781</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-21.3 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 6/1</b>	Fines (%): <b>#200 - 1.80</b> <b>#230 - 1.68</b>	Organics (%):	Carbonates (%):	Shells (%): <b>14.3</b>
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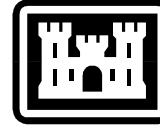
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.85	0.85
#3.5	-2.50	5.60	1.41	2.26
#4	-2.25	4.75	0.28	2.54
#5	-2.00	4.00	0.62	3.16
#7	-1.50	2.80	0.73	3.89
#10	-1.00	2.00	1.68	5.57
#14	-0.50	1.40	1.91	7.48
#18	0.00	1.00	1.46	8.94
#25	0.50	0.71	1.58	10.52
#35	1.00	0.50	2.06	12.58
#45	1.50	0.36	2.74	15.32
#60	2.00	0.25	4.26	19.58
#80	2.50	0.18	36.25	55.83
#120	3.00	0.13	35.14	90.97
#170	3.50	0.09	6.89	97.86
#200	3.75	0.08	0.34	98.20
#230	4.00	0.06	0.12	98.32

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium to coarse-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.29	2.90	2.77	2.42	2.07	1.58	-1.17	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.04	0.24	2.42	0.19	1.32	-2.43	8.82

GRANULARMETRIC REPORT % S/C\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-15 @ 1 ft

Analysis Date: 9/4/2015

Easting (ft): <b>878,076</b>	Northing (ft): <b>2,025,103</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-7.7 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 6/1</b>	Fines (%): <b>#200 - 2.05</b> <b>#230 - 1.87</b>	Organics (%):	Carbonates (%):	Shells (%): <b>9.2</b>
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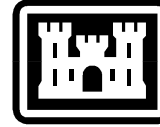
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.28	0.28
#3.5	-2.50	5.60	0.00	0.28
#4	-2.25	4.75	0.08	0.36
#5	-2.00	4.00	0.18	0.54
#7	-1.50	2.80	0.20	0.74
#10	-1.00	2.00	0.39	1.13
#14	-0.50	1.40	0.89	2.02
#18	0.00	1.00	1.15	3.17
#25	0.50	0.71	1.59	4.76
#35	1.00	0.50	2.16	6.92
#45	1.50	0.36	3.81	10.73
#60	2.00	0.25	9.13	19.86
#80	2.50	0.18	30.81	50.67
#120	3.00	0.13	36.80	87.47
#170	3.50	0.09	9.67	97.14
#200	3.75	0.08	0.81	97.95
#230	4.00	0.06	0.18	98.13

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.39	2.95	2.83	2.49	2.08	1.79	0.56	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.29	0.20	2.49	0.18	0.88	-2.56	13.06

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-15 @ 3 ft

Analysis Date: 9/4/2015

Easting (ft): <b>878,076</b>	Northing (ft): <b>2,025,103</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-9.7 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 6/1</b>	Fines (%): <b>#200 - 2.46</b> <b>#230 - 2.15</b>	Organics (%):	Carbonates (%):	Shells (%): <b>2.37</b>
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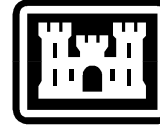
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.10	0.10
#10	-1.00	2.00	0.07	0.17
#14	-0.50	1.40	0.09	0.26
#18	0.00	1.00	0.22	0.48
#25	0.50	0.71	0.20	0.68
#35	1.00	0.50	0.21	0.89
#45	1.50	0.36	0.30	1.19
#60	2.00	0.25	10.26	11.45
#80	2.50	0.18	10.38	21.83
#120	3.00	0.13	59.10	80.93
#170	3.50	0.09	15.21	96.14
#200	3.75	0.08	1.40	97.54
#230	4.00	0.06	0.31	97.85

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace silt, trace shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.46	3.10	2.95	2.74	2.53	2.22	1.69	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.65	0.16	2.74	0.15	0.52	-2.2	14.69

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA\J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-15 @ 6 ft

Analysis Date: 9/4/2015

Easting (ft): <b>878,076</b>	Northing (ft): <b>2,025,103</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-12.7 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 6/1</b>	Fines (%): <b>#200 - 1.86</b> <b>#230 - 1.73</b>	Organics (%):	Carbonates (%): <b>6.17</b>	Shells (%): <b>7</b>
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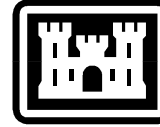
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.06	0.06
#4	-2.25	4.75	0.06	0.12
#5	-2.00	4.00	0.09	0.21
#7	-1.50	2.80	0.41	0.62
#10	-1.00	2.00	0.59	1.21
#14	-0.50	1.40	0.83	2.04
#18	0.00	1.00	0.77	2.81
#25	0.50	0.71	0.93	3.74
#35	1.00	0.50	1.22	4.96
#45	1.50	0.36	1.84	6.80
#60	2.00	0.25	4.37	11.17
#80	2.50	0.18	37.43	48.60
#120	3.00	0.13	40.87	89.47
#170	3.50	0.09	8.26	97.73
#200	3.75	0.08	0.41	98.14
#230	4.00	0.06	0.13	98.27

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.33	2.93	2.82	2.52	2.18	2.06	1.01	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.38	0.19	2.52	0.17	0.77	-2.9	14.3

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-15 @ 9 ft

Analysis Date: 9/4/2015

Easting (ft): <b>878,076</b>	Northing (ft): <b>2,025,103</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-15.7 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/2</b>	Fines (%): <b>#200 - 1.71</b> <b>#230 - 1.70</b>	Organics (%):	Carbonates (%):	Shells (%): <b>12.4</b>
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.49	0.49
#4	-2.25	4.75	0.40	0.89
#5	-2.00	4.00	0.32	1.21
#7	-1.50	2.80	0.50	1.71
#10	-1.00	2.00	0.73	2.44
#14	-0.50	1.40	1.05	3.49
#18	0.00	1.00	1.16	4.65
#25	0.50	0.71	1.42	6.07
#35	1.00	0.50	2.01	8.08
#45	1.50	0.36	4.23	12.31
#60	2.00	0.25	18.28	30.59
#80	2.50	0.18	53.60	84.19
#120	3.00	0.13	11.55	95.74
#170	3.50	0.09	2.39	98.13
#200	3.75	0.08	0.16	98.29
#230	4.00	0.06	0.01	98.30

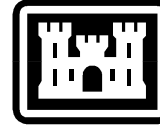
SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.97	2.50	2.41	2.18	1.85	1.60	0.12	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.97	0.26	2.18	0.22	0.89	-2.8	12.76

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15



# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-15 @ 12 ft

Analysis Date: 9/4/2015

Easting (ft): <b>878,076</b>	Northing (ft): <b>2,025,103</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-18.7 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 6/1</b>	Fines (%): <b>#200 - 1.27</b> <b>#230 - 1.21</b>	Organics (%):	Carbonates (%):	Shells (%): <b>15.2</b>
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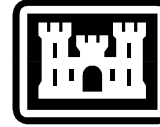
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	1.18	1.18
#4	-2.25	4.75	0.48	1.66
#5	-2.00	4.00	0.28	1.94
#7	-1.50	2.80	0.76	2.70
#10	-1.00	2.00	0.92	3.62
#14	-0.50	1.40	1.28	4.90
#18	0.00	1.00	1.35	6.25
#25	0.50	0.71	1.71	7.96
#35	1.00	0.50	2.73	10.69
#45	1.50	0.36	7.51	18.20
#60	2.00	0.25	19.53	37.73
#80	2.50	0.18	41.68	79.41
#120	3.00	0.13	15.99	95.40
#170	3.50	0.09	3.16	98.56
#200	3.75	0.08	0.17	98.73
#230	4.00	0.06	0.06	98.79

SAND, poorly-graded, mostly fine-grained sand-sized quartz, little medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.99	2.64	2.45	2.15	1.67	1.35	-0.46	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.88	0.27	2.15	0.23	1.05	-2.38	9.74

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-15 @ 15 ft

Analysis Date: 9/4/2015

Easting (ft): <b>878,076</b>	Northing (ft): <b>2,025,103</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-21.7 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/2</b>	Fines (%): <b>#200 - 2.44</b> <b>#230 - 2.32</b>	Organics (%):	Carbonates (%):	Shells (%): <b>6.2</b>
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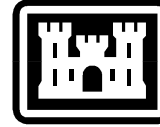
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.02	0.02
#10	-1.00	2.00	0.01	0.03
#14	-0.50	1.40	0.05	0.08
#18	0.00	1.00	0.12	0.20
#25	0.50	0.71	0.30	0.50
#35	1.00	0.50	0.57	1.07
#45	1.50	0.36	2.25	3.32
#60	2.00	0.25	12.28	15.60
#80	2.50	0.18	56.82	72.42
#120	3.00	0.13	20.59	93.01
#170	3.50	0.09	4.21	97.22
#200	3.75	0.08	0.34	97.56
#230	4.00	0.06	0.12	97.68

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few fine-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.24	2.78	2.56	2.30	2.08	2.00	1.57	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.30	0.20	2.30	0.20	0.45	-0.88	8.92

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA\J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-16 @ 2 ft

Analysis Date: 9/4/2015

Easting (ft): <b>878,748</b>	Northing (ft): <b>2,025,465</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-9.0 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/1</b>	Fines (%): <b>#200 - 2.01</b> <b>#230 - 1.95</b>	Organics (%):	Carbonates (%):	Shells (%): <b>2.2</b>
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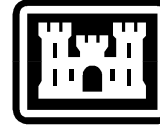
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.04	0.04
#14	-0.50	1.40	0.07	0.11
#18	0.00	1.00	0.05	0.16
#25	0.50	0.71	0.05	0.21
#35	1.00	0.50	0.12	0.33
#45	1.50	0.36	0.24	0.57
#60	2.00	0.25	1.15	1.72
#80	2.50	0.18	35.88	37.60
#120	3.00	0.13	48.79	86.39
#170	3.50	0.09	10.80	97.19
#200	3.75	0.08	0.80	97.99
#230	4.00	0.06	0.06	98.05

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.40	2.98	2.88	2.63	2.32	2.20	2.05	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.61	0.16	2.63	0.16	0.39	-1.13	13.05

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESAJS.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-16 @ 4 ft

Analysis Date: 9/4/2015

Easting (ft): <b>878,748</b>	Northing (ft): <b>2,025,465</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-11.0 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 6/1</b>	Fines (%): <b>#200 - 2.39</b> <b>#230 - 2.19</b>	Organics (%):	Carbonates (%):	Shells (%): <b>6.9</b>
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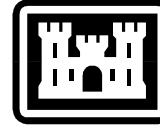
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.43	0.43
#4	-2.25	4.75	0.04	0.47
#5	-2.00	4.00	0.03	0.50
#7	-1.50	2.80	0.24	0.74
#10	-1.00	2.00	0.58	1.32
#14	-0.50	1.40	0.91	2.23
#18	0.00	1.00	0.95	3.18
#25	0.50	0.71	0.99	4.17
#35	1.00	0.50	1.14	5.31
#45	1.50	0.36	1.81	7.12
#60	2.00	0.25	3.53	10.65
#80	2.50	0.18	37.69	48.34
#120	3.00	0.13	37.59	85.93
#170	3.50	0.09	10.63	96.56
#200	3.75	0.08	1.05	97.61
#230	4.00	0.06	0.20	97.81

SAND, poorly-graded, mostly fine-grained sand-sized quartz, few medium-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.43	2.97	2.85	2.52	2.19	2.07	0.86	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.39	0.19	2.52	0.17	0.83	-2.96	15.14

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-16 @ 7 ft

Analysis Date: 9/4/2015

Easting (ft): <b>878,748</b>	Northing (ft): <b>2,025,465</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-14.0 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 6/2</b>	Fines (%): <b>#200 - 1.26</b> <b>#230 - 1.22</b>	Organics (%):	Carbonates (%):	Shells (%): <b>46.8</b>
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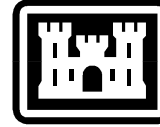
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	4.77	4.77
#3.5	-2.50	5.60	3.42	8.19
#4	-2.25	4.75	1.77	9.96
#5	-2.00	4.00	2.23	12.19
#7	-1.50	2.80	3.84	16.03
#10	-1.00	2.00	5.78	21.81
#14	-0.50	1.40	7.03	28.84
#18	0.00	1.00	5.95	34.79
#25	0.50	0.71	5.50	40.29
#35	1.00	0.50	5.47	45.76
#45	1.50	0.36	8.34	54.10
#60	2.00	0.25	12.42	66.52
#80	2.50	0.18	17.28	83.80
#120	3.00	0.13	11.74	95.54
#170	3.50	0.09	3.03	98.57
#200	3.75	0.08	0.17	98.74
#230	4.00	0.06	0.04	98.78

SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, some sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.98	2.51	2.25	1.25	-0.77	-1.50	-3.20	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	0.63	0.65	1.25	0.42	1.93	-0.69	2.42

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granularmetric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-16 @ 9.5 ft

Analysis Date: 9/4/2015

Easting (ft): <b>878,748</b>	Northing (ft): <b>2,025,465</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-16.5 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 4/1</b>	Fines (%): <b>#200 - 4.58</b> <b>#230 - 4.15</b>	Organics (%):	Carbonates (%): <b>28.90</b>	Shells (%): <b>27.54</b>
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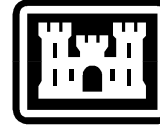
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	0.59	0.59
#3.5	-2.50	5.60	2.51	3.10
#4	-2.25	4.75	1.41	4.51
#5	-2.00	4.00	1.34	5.85
#7	-1.50	2.80	2.62	8.47
#10	-1.00	2.00	3.74	12.21
#14	-0.50	1.40	3.88	16.09
#18	0.00	1.00	3.29	19.38
#25	0.50	0.71	3.39	22.77
#35	1.00	0.50	3.55	26.32
#45	1.50	0.36	5.25	31.57
#60	2.00	0.25	8.28	39.85
#80	2.50	0.18	17.16	57.01
#120	3.00	0.13	25.34	82.35
#170	3.50	0.09	11.73	94.08
#200	3.75	0.08	1.34	95.42
#230	4.00	0.06	0.43	95.85

SAND, poorly-graded, mostly fine-grained sand-sized quartz, some medium to coarse-grained sand-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.67	3.07	2.85	2.30	0.81	-0.51	-2.16	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.55	0.34	2.30	0.20	1.74	-1.16	3.3

GRANULARMETRIC REPORT % S/C\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granularmetric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-16 @ 12.5 ft

Analysis Date: 9/4/2015

Easting (ft): <b>878,748</b>	Northing (ft): <b>2,025,465</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-19.5 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 7/1</b>	Fines (%): <b>#200 - 1.06</b> <b>#230 - 1.05</b>	Organics (%):	Carbonates (%):	Shells (%): <b>37</b>
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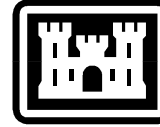
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/4"	-4.25	19.00	0.00	0.00
3/8"	-3.25	9.50	1.40	1.40
#3.5	-2.50	5.60	3.35	4.75
#4	-2.25	4.75	1.22	5.97
#5	-2.00	4.00	1.23	7.20
#7	-1.50	2.80	2.46	9.66
#10	-1.00	2.00	4.05	13.71
#14	-0.50	1.40	5.53	19.24
#18	0.00	1.00	5.03	24.27
#25	0.50	0.71	5.41	29.68
#35	1.00	0.50	5.66	35.34
#45	1.50	0.36	8.44	43.78
#60	2.00	0.25	9.98	53.76
#80	2.50	0.18	28.29	82.05
#120	3.00	0.13	14.49	96.54
#170	3.50	0.09	2.31	98.85
#200	3.75	0.08	0.09	98.94
#230	4.00	0.06	0.01	98.95

SAND, poorly-graded, mostly fine to medium-grained sand-sized quartz, some sand to gravel-sized shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
2.95	2.57	2.38	1.81	0.07	-0.79	-2.45	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	1.11	0.46	1.81	0.29	1.69	-1.05	3.16

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-17 @ 2 ft

Analysis Date: 9/4/2015

Easting (ft): <b>879,622</b>	Northing (ft): <b>2,025,763</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-8.3 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 6/2</b>	Fines (%): <b>#200 - 2.44</b> <b>#230 - 2.09</b>	Organics (%):	Carbonates (%):	Shells (%): <b>2.5</b>
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#7	-1.50	2.80	0.00	0.00
#10	-1.00	2.00	0.03	0.03
#14	-0.50	1.40	0.02	0.05
#18	0.00	1.00	0.02	0.07
#25	0.50	0.71	0.04	0.11
#35	1.00	0.50	0.04	0.15
#45	1.50	0.36	0.11	0.26
#60	2.00	0.25	0.55	0.81
#80	2.50	0.18	44.36	45.17
#120	3.00	0.13	41.03	86.20
#170	3.50	0.09	10.39	96.59
#200	3.75	0.08	0.97	97.56
#230	4.00	0.06	0.35	97.91

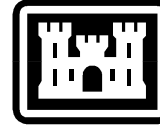
SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.42	2.97	2.86	2.56	2.27	2.17	2.05	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.58	0.17	2.56	0.17	0.38	-0.09	8.51

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESAJS.GDT 9/10/15



# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-17 @ 4 ft

Analysis Date: 9/4/2015

Easting (ft): <b>879,622</b>	Northing (ft): <b>2,025,763</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-10.3 NAVD88</b>
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USCS:	Munsell: <b>2.5Y 5/1</b>	Fines (%): <b>#200 - 6.07</b> <b>#230 - 6.07</b>	Organics (%):	Carbonates (%):	Shells (%): <b>1.1</b>
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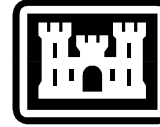
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.08	0.08
#4	-2.25	4.75	0.01	0.09
#5	-2.00	4.00	0.00	0.09
#7	-1.50	2.80	0.02	0.11
#10	-1.00	2.00	0.02	0.13
#14	-0.50	1.40	0.03	0.16
#18	0.00	1.00	0.06	0.22
#25	0.50	0.71	0.09	0.31
#35	1.00	0.50	0.13	0.44
#45	1.50	0.36	0.34	0.78
#60	2.00	0.25	16.98	17.76
#80	2.50	0.18	56.71	74.47
#120	3.00	0.13	16.23	90.70
#170	3.50	0.09	2.57	93.27
#200	3.75	0.08	0.66	93.93
#230	4.00	0.06	0.00	93.93

SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt, trace shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	2.79	2.52	2.28	2.06	1.95	1.62	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.27	0.21	2.28	0.21	0.42	-1.97	28.24

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-17 @ 6 ft

Analysis Date: 9/4/2015

Easting (ft): <b>879,622</b>	Northing (ft): <b>2,025,763</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-12.3 NAVD88</b>
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USCS: <b>SP</b>	Munsell: <b>2.5Y 6/2</b>	Fines (%): <b>#200 - 1.67</b> <b>#230 - 1.56</b>	Organics (%):	Carbonates (%):	Shells (%): <b>2.4</b>
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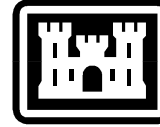
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#14	-0.50	1.40	0.00	0.00
#18	0.00	1.00	0.04	0.04
#25	0.50	0.71	0.04	0.08
#35	1.00	0.50	0.03	0.11
#45	1.50	0.36	0.08	0.19
#60	2.00	0.25	0.49	0.68
#80	2.50	0.18	43.01	43.69
#120	3.00	0.13	44.00	87.69
#170	3.50	0.09	9.79	97.48
#200	3.75	0.08	0.85	98.33
#230	4.00	0.06	0.11	98.44

SAND, poorly-graded, mostly fine-grained sand-sized quartz, trace shell, trace silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
3.37	2.96	2.86	2.57	2.28	2.18	2.05	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.58	0.17	2.57	0.17	0.36	0.16	5.23

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESAJS.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-17 @ 8 ft

Analysis Date: 9/4/2015

Easting (ft): <b>879,622</b>	Northing (ft): <b>2,025,763</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-14.3 NAVD88</b>
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USCS:	Munsell: <b>2.5Y 6/2</b>	Fines (%): <b>#200 - 7.61</b> <b>#230 - 6.78</b>	Organics (%):	Carbonates (%):	Shells (%): <b>0.9</b>
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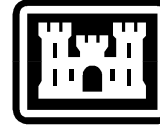
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	4.00	0.00	0.00
#7	-1.50	2.80	0.08	0.08
#10	-1.00	2.00	0.05	0.13
#14	-0.50	1.40	0.13	0.26
#18	0.00	1.00	0.15	0.41
#25	0.50	0.71	0.33	0.74
#35	1.00	0.50	0.50	1.24
#45	1.50	0.36	0.75	1.99
#60	2.00	0.25	1.25	3.24
#80	2.50	0.18	10.20	13.44
#120	3.00	0.13	56.66	70.10
#170	3.50	0.09	19.63	89.73
#200	3.75	0.08	2.66	92.39
#230	4.00	0.06	0.83	93.22

SAND, poorly-graded with silt, mostly fine-grained sand-sized quartz, few silt

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
	3.35	3.12	2.82	2.60	2.52	2.09	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.77	0.15	2.82	0.14	0.5	-2.71	19.8

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15

# Granulometric Report



US Army Corps of Engineers  
Jacksonville District

Project Name: St Augustine Inlet Flood Shoal

Sample Name: VB-SAFS15-17 @ 9 ft

Analysis Date: 9/4/2015

Easting (ft): <b>879,622</b>	Northing (ft): <b>2,025,763</b>	Coordinate System: <b>State Plane, FLW (U.S. Ft.)</b>	Elevation (ft): <b>-15.3 NAVD88</b>
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USCS:	Munsell: <b>N 4/</b>	Fines (%): <b>#200 - 23.71</b> <b>#230 - 22.81</b>	Organics (%):	Carbonates (%): <b>4.45</b>	Shells (%): <b>2</b>
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.50	0.00	0.00
#3.5	-2.50	5.60	0.20	0.20
#4	-2.25	4.75	0.08	0.28
#5	-2.00	4.00	0.10	0.38
#7	-1.50	2.80	0.18	0.56
#10	-1.00	2.00	0.19	0.75
#14	-0.50	1.40	0.20	0.95
#18	0.00	1.00	0.22	1.17
#25	0.50	0.71	0.17	1.34
#35	1.00	0.50	0.25	1.59
#45	1.50	0.36	0.24	1.83
#60	2.00	0.25	0.71	2.54
#80	2.50	0.18	8.50	11.04
#120	3.00	0.13	42.48	53.52
#170	3.50	0.09	20.05	73.57
#200	3.75	0.08	2.72	76.29
#230	4.00	0.06	0.90	77.19

SAND, silty, mostly fine-grained sand-sized quartz, little silt, trace shell

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95	
		3.63	2.96	2.66	2.56	2.14	
Moment Statistics	Mean Phi	Mean mm	Median Phi	Median mm	Sorting	Skewness	Kurtosis
	2.78	0.15	2.96	0.13	0.68	-4.39	31.28

GRANULARMETRIC REPORT % SJC\_FLOOD\_SHOAL\_VC2015.GPJ\_CESA.J3.GDT 9/10/15