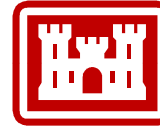


Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-65 #Dune

Analysis Date: 09-04-12

Analyzed By:

Easting (ft):

610,576

Northing (ft):

1,883,070

Coordinate System:

Elevation (ft):

0.0 MLLW

USCS

SP

Munsell:

Moist - 7.5YR 7/2

Comments:

Fines (%):

#230 - 0.03

Organics (%):

Carbonates (%):

Shells (%):

34.50

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	3.99	0.00	0.00
#7	-1.50	2.82	0.06	0.06
#10	-1.00	2.00	0.06	0.12
#14	-0.50	1.41	0.46	0.58
#18	0.00	1.00	1.83	2.41
#25	0.50	0.71	6.34	8.75
#35	1.00	0.50	21.79	30.54
#45	1.50	0.35	31.52	62.06
#60	2.00	0.25	25.32	87.38
#80	2.50	0.18	9.96	97.34
#120	3.00	0.13	2.18	99.52
#170	3.50	0.09	0.44	99.96
#200	3.75	0.07	0.01	99.97
#230	4.00	0.06	0.00	99.97

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.38

1.93

1.75

1.31

0.87

0.67

0.20

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.3

0.41

0.64

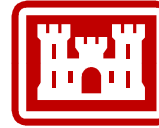
-0.15

3.61

USACE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granulometric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-65 #Berm

Analysis Date: 09-04-12

Analyzed By:

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
610,576	1,883,070		0.0 MLLW

USCS	Munsell:	Comments:
SP	Moist - 7.5YR 7/2	

		Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#230 - 0.04		49.40	55.00

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	3.99	0.00	0.00
#7	-1.50	2.82	0.08	0.08
#10	-1.00	2.00	0.42	0.50
#14	-0.50	1.41	3.53	4.03
#18	0.00	1.00	11.78	15.81
#25	0.50	0.71	16.74	32.55
#35	1.00	0.50	19.20	51.75
#45	1.50	0.35	19.81	71.56
#60	2.00	0.25	19.49	91.05
#80	2.50	0.18	7.68	98.73
#120	3.00	0.13	1.21	99.94
#170	3.50	0.09	0.00	99.94
#200	3.75	0.07	0.02	99.96
#230	4.00	0.06	0.00	99.96

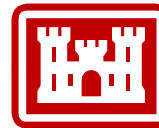
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Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.26	1.82	1.58	0.95	0.27	0.01	-0.46
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	0.92	0.53	0.84	-0.14	2.34	

USAGE GRANULOMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-65 #Berm Post

Analysis Date: 09-04-12

Analyzed By:

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
610,576	1,883,070		0.0 MLLW

USCS	Munsell:	Comments:
SP	Moist - 7.5YR 7/2	

		Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#230 - 0.00			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#14	-0.50	1.41	0.00	0.00
#18	0.00	1.00	1.44	1.44
#25	0.50	0.71	5.08	6.52
#35	1.00	0.50	16.32	22.84
#45	1.50	0.35	27.37	50.21
#60	2.00	0.25	32.30	82.51
#80	2.50	0.18	14.10	96.61
#120	3.00	0.13	3.00	99.61
#170	3.50	0.09	0.37	99.98
#200	3.75	0.07	0.02	100.00
#230	4.00	0.06	0.00	100.00

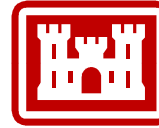
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Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.44	2.05	1.88	1.49	1.04	0.79	0.35
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	1.45	0.37	0.62	-0.19	3.01	

USACE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-65 #Mid-Tide

Analysis Date: 09-04-12

Analyzed By:

Easting (ft): 610,576
Northing (ft): 1,883,070

Coordinate System: Elevation (ft): 0.0 MLLW

USCS: SW
Munsell: Moist - 7.5YR 7/2
Comments:

Fines (%): #230 - 0.06
Organics (%):
Carbonates (%):
Shells (%): 50.70

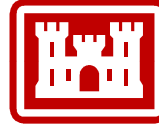
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.00	0.00
#5	-2.00	3.99	0.16	0.16
#7	-1.50	2.82	0.59	0.75
#10	-1.00	2.00	1.85	2.60
#14	-0.50	1.41	8.39	10.99
#18	0.00	1.00	14.03	25.02
#25	0.50	0.71	11.94	36.96
#35	1.00	0.50	9.36	46.32
#45	1.50	0.35	8.42	54.74
#60	2.00	0.25	12.28	67.02
#80	2.50	0.18	21.88	88.90
#120	3.00	0.13	10.56	99.46
#170	3.50	0.09	0.48	99.94
#200	3.75	0.07	0.00	99.94
#230	4.00	0.06	0.00	99.94

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.79	2.39	2.18	1.22	0.00	-0.32	-0.86
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	1.08	0.47	1.21	-0.24	1.83	

USAGE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-65 #-3

Analysis Date: 09-04-12

Analyzed By:

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
610,576	1,883,070		0.0 MLLW

USCS	Munsell:	Comments:
SP	Moist - 10YR 7/1	

	Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
	#230 - 0.69			9.30

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	3.99	0.00	0.00
#7	-1.50	2.82	0.13	0.13
#10	-1.00	2.00	0.17	0.30
#14	-0.50	1.41	0.90	1.20
#18	0.00	1.00	1.82	3.02
#25	0.50	0.71	2.22	5.24
#35	1.00	0.50	2.59	7.83
#45	1.50	0.35	3.99	11.82
#60	2.00	0.25	9.80	21.62
#80	2.50	0.18	33.80	55.42
#120	3.00	0.13	37.81	93.23
#170	3.50	0.09	5.96	99.19
#200	3.75	0.07	0.10	99.29
#230	4.00	0.06	0.02	99.31

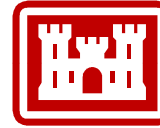
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Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.15	2.88	2.76	2.42	2.05	1.71	0.45
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	2.24	0.21	0.78	-1.86	7.12	

USAGE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-65 #-5

Analysis Date: 09-04-12

Analyzed By:

Easting (ft): 610,576
Northing (ft): 1,883,070

Coordinate System:
Elevation (ft): -0.1 MLLW

USCS: SW
Munsell: Moist - 10YR 7/1
Comments:

Fines (%): #230 - 0.74
Organics (%):
Carbonates (%):
Shells (%): 11.10

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.66	0.00	0.00
#4	-2.25	4.75	0.12	0.12
#5	-2.00	3.99	0.15	0.27
#7	-1.50	2.82	0.21	0.48
#10	-1.00	2.00	0.65	1.13
#14	-0.50	1.41	2.25	3.38
#18	0.00	1.00	2.92	6.30
#25	0.50	0.71	2.19	8.49
#35	1.00	0.50	1.75	10.24
#45	1.50	0.35	2.09	12.33
#60	2.00	0.25	5.39	17.72
#80	2.50	0.18	34.03	51.75
#120	3.00	0.13	41.79	93.54
#170	3.50	0.09	5.60	99.14
#200	3.75	0.07	0.08	99.22
#230	4.00	0.06	0.04	99.26

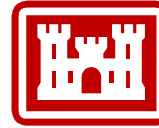
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Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.13	2.89	2.78	2.47	2.10	1.84	-0.22
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	2.21	0.22	0.94	-2.16	7.58	

USACE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granulometric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-65 # -10

Analysis Date: 09-04-12

Analyzed By:

Easting (ft): 610,576
Northing (ft): 1,883,070

Coordinate System:
Elevation (ft): -0.1 MLLW

USCS: SP
Munsell: Moist - 10YR 7/1
Comments:

Fines (%): #230 - 0.71
Organics (%):
Carbonates (%): 4.90
Shells (%): 2.70

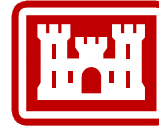
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#7	-1.50	2.82	0.00	0.00
#10	-1.00	2.00	0.14	0.14
#14	-0.50	1.41	0.20	0.34
#18	0.00	1.00	0.51	0.85
#25	0.50	0.71	0.73	1.58
#35	1.00	0.50	0.69	2.27
#45	1.50	0.35	0.98	3.25
#60	2.00	0.25	2.96	6.21
#80	2.50	0.18	22.23	28.44
#120	3.00	0.13	59.44	87.88
#170	3.50	0.09	11.18	99.06
#200	3.75	0.07	0.23	99.29
#230	4.00	0.06	0.00	99.29

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.32	2.97	2.89	2.68	2.42	2.22	1.79
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	2.59	0.17	0.53	-2.85	16.1	

USACE GRANULOMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County
Sample Name: R-65 #-10 post
Analysis Date: 09-04-12
Analyzed By:

Easting (ft): 610,576	Northing (ft): 1,883,070	Coordinate System:	Elevation (ft): -0.1 MLLW
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USCS SP	Munsell: Moist - 10YR 7/1	Comments:
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Fines (%): #230 - 0.00	Organics (%):	Carbonates (%):	Shells (%):
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#18	0.00	1.00	0.00	0.00
#25	0.50	0.71	0.10	0.10
#35	1.00	0.50	0.28	0.38
#45	1.50	0.35	0.41	0.79
#60	2.00	0.25	2.65	3.44
#80	2.50	0.18	21.54	24.98
#120	3.00	0.13	61.52	86.50
#170	3.50	0.09	13.08	99.58
#200	3.75	0.07	0.36	99.94
#230	4.00	0.06	0.06	100.00

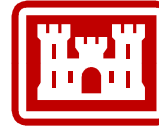
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Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.32	2.98	2.91	2.70	2.50	2.29	2.03
Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
	2.67	0.16	0.37	-1.04	7.11	

USAGE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-65 #-15

Analysis Date: 09-04-12

Analyzed By:

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
610,576	1,883,070		-0.1 MLLW

USCS	Munsell:	Comments:
SP	Moist - 10YR 7/1	

		Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#230 - 1.01			4.10

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.00	0.00
#5	-2.00	3.99	0.19	0.19
#7	-1.50	2.82	0.02	0.21
#10	-1.00	2.00	0.25	0.46
#14	-0.50	1.41	0.84	1.30
#18	0.00	1.00	1.23	2.53
#25	0.50	0.71	1.00	3.53
#35	1.00	0.50	0.60	4.13
#45	1.50	0.35	0.44	4.57
#60	2.00	0.25	0.81	5.38
#80	2.50	0.18	8.77	14.15
#120	3.00	0.13	65.68	79.83
#170	3.50	0.09	18.25	98.08
#200	3.75	0.07	0.88	98.96
#230	4.00	0.06	0.03	98.99

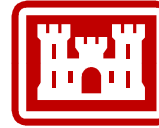
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Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.42	3.11	2.96	2.77	2.58	2.51	1.76
Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
	2.67	0.16	0.69	-3.58	18.29	

USAGE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-65 #-20

Analysis Date: 09-04-12

Analyzed By:

Easting (ft):

610,576

Northing (ft):

1,883,070

Coordinate System:

Elevation (ft):

-0.1 MLLW

USCS

SP

Munsell:

Moist - 10YR 6/1

Comments:

Fines (%):

#230 - 1.19

Organics (%):

Carbonates (%):

Shells (%):

4.30

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.00	0.00
#5	-2.00	3.99	0.01	0.01
#7	-1.50	2.82	0.09	0.10
#10	-1.00	2.00	0.30	0.40
#14	-0.50	1.41	0.99	1.39
#18	0.00	1.00	1.22	2.61
#25	0.50	0.71	0.93	3.54
#35	1.00	0.50	0.72	4.26
#45	1.50	0.35	0.43	4.69
#60	2.00	0.25	1.03	5.72
#80	2.50	0.18	10.77	16.49
#120	3.00	0.13	58.72	75.21
#170	3.50	0.09	21.66	96.87
#200	3.75	0.07	1.65	98.52
#230	4.00	0.06	0.29	98.81

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

3.46

3.20

3.00

2.79

2.57

2.48

1.65

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

2.68

0.16

0.71

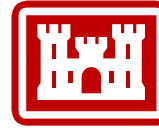
-3.19

15.36

USAGE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granulometric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-69 #Dune

Analysis Date: 09-04-12

Analyzed By:

Easting (ft):

612,040

Northing (ft):

1,879,568

Coordinate System:

Elevation (ft):

0.0 MLLW

USCS

SW

Munsell:

Moist - 7.5YR 8/2

Comments:

Fines (%):

#230 - 0.05

Organics (%):

Carbonates (%):

Shells (%):

47.40

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.48	0.00	0.00
#3.5	-2.50	5.66	0.36	0.36
#4	-2.25	4.75	0.16	0.52
#5	-2.00	3.99	0.22	0.74
#7	-1.50	2.82	0.50	1.24
#10	-1.00	2.00	0.72	1.96
#14	-0.50	1.41	2.87	4.83
#18	0.00	1.00	6.46	11.29
#25	0.50	0.71	11.17	22.46
#35	1.00	0.50	17.27	39.73
#45	1.50	0.35	21.74	61.47
#60	2.00	0.25	22.71	84.18
#80	2.50	0.18	12.97	97.15
#120	3.00	0.13	2.67	99.82
#170	3.50	0.09	0.13	99.95
#200	3.75	0.07	0.00	99.95
#230	4.00	0.06	0.00	99.95

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.42

1.99

1.79

1.23

0.57

0.21

-0.49

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.12

0.46

0.92

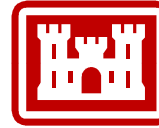
-0.84

4.28

USAGE GRANULOMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-69 #Berm

Analysis Date: 09-04-12

Analyzed By:

Easting (ft):

612,040

Northing (ft):

1,879,568

Coordinate System:

Elevation (ft):

0.0 MLLW

USCS

SP

Munsell:

Moist - 7.5YR 8/1

Comments:

Fines (%):

#230 - 0.04

Organics (%):

Carbonates (%):

15.90

Shells (%):

16.10

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	1.41	0.19	0.19
#18	0.00	1.00	1.14	1.33
#25	0.50	0.71	3.00	4.33
#35	1.00	0.50	5.47	9.80
#45	1.50	0.35	10.79	20.59
#60	2.00	0.25	25.86	46.45
#80	2.50	0.18	41.24	87.69
#120	3.00	0.13	11.88	99.57
#170	3.50	0.09	0.38	99.95
#200	3.75	0.07	0.01	99.96
#230	4.00	0.06	0.00	99.96

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

2.81

2.45

2.34

2.04

1.58

1.28

0.56

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

1.9

0.27

0.64

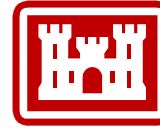
-1.1

4.37

USACE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-69 #Berm Post

Analysis Date: 09-04-12

Analyzed By:

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
612,040	1,879,568		0.0 MLLW

USCS	Munsell:	Comments:
SP	Moist - 7.5YR 8/1	

		Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#230 - 0.00			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#18	0.00	1.00	0.00	0.00
#25	0.50	0.71	0.45	0.45
#35	1.00	0.50	1.96	2.41
#45	1.50	0.35	8.23	10.64
#60	2.00	0.25	27.43	38.07
#80	2.50	0.18	48.51	86.58
#120	3.00	0.13	12.93	99.51
#170	3.50	0.09	0.48	99.99
#200	3.75	0.07	0.01	100.00
#230	4.00	0.06	0.00	100.00

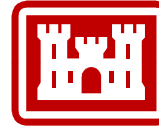
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Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.83	2.47	2.38	2.12	1.76	1.59	1.15
Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
	2.06	0.24	0.46	-0.69	3.97	

USAGE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-69 #Mid-Tide

Analysis Date: 09-04-12

Analyzed By:

Easting (ft): 612,040
Northing (ft): 1,879,568

Coordinate System: Elevation (ft): 0.0 MLLW

USCS: SW
Munsell: Moist - 7.5YR 7/3
Comments:

Fines (%): #230 - 0.28
Organics (%):
Carbonates (%):
Shells (%): 58.40

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.48	0.00	0.00
#3.5	-2.50	5.66	0.11	0.11
#4	-2.25	4.75	0.12	0.23
#5	-2.00	3.99	0.25	0.48
#7	-1.50	2.82	0.58	1.06
#10	-1.00	2.00	1.66	2.72
#14	-0.50	1.41	7.91	10.63
#18	0.00	1.00	15.34	25.97
#25	0.50	0.71	16.56	42.53
#35	1.00	0.50	14.42	56.95
#45	1.50	0.35	10.79	67.74
#60	2.00	0.25	10.17	77.91
#80	2.50	0.18	14.20	92.11
#120	3.00	0.13	7.23	99.34
#170	3.50	0.09	0.35	99.69
#200	3.75	0.07	0.03	99.72
#230	4.00	0.06	0.00	99.72

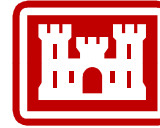
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Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.70	2.21	1.85	0.76	-0.03	-0.32	-0.85
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	0.85	0.55	1.13	0.01	2.21	

USAGE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-69 #-3

Analysis Date: 09-04-12

Analyzed By:

Easting (ft): 612,040	Northing (ft): 1,879,568
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Coordinate System:	Elevation (ft): 0.0 MLLW
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USCS SP	Munsell: Moist - 10YR 7/2	Comments:
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Fines (%): #230 - 0.90	Organics (%):	Carbonates (%):	Shells (%): 7.20
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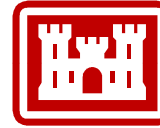
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.00	0.00
#5	-2.00	3.99	0.06	0.06
#7	-1.50	2.82	0.18	0.24
#10	-1.00	2.00	0.32	0.56
#14	-0.50	1.41	0.87	1.43
#18	0.00	1.00	1.49	2.92
#25	0.50	0.71	1.60	4.52
#35	1.00	0.50	1.66	6.18
#45	1.50	0.35	2.71	8.89
#60	2.00	0.25	7.14	16.03
#80	2.50	0.18	39.59	55.62
#120	3.00	0.13	37.99	93.61
#170	3.50	0.09	5.41	99.02
#200	3.75	0.07	0.01	99.03
#230	4.00	0.06	0.07	99.10

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.13	2.87	2.76	2.43	2.11	1.99	0.64
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	2.29	0.20	0.74	-2.34	10.09	

USAGE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granulometric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-69 #-5

Analysis Date: 09-04-12

Analyzed By:

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
612,040	1,879,568		-0.1 MLLW

USCS	Munsell:	Comments:
SW	Moist - 10YR 7/2	

Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
#230 - 1.22			20.10

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.00	0.00
#5	-2.00	3.99	0.17	0.17
#7	-1.50	2.82	0.17	0.34
#10	-1.00	2.00	0.99	1.33
#14	-0.50	1.41	2.78	4.11
#18	0.00	1.00	4.74	8.85
#25	0.50	0.71	4.58	13.43
#35	1.00	0.50	4.27	17.70
#45	1.50	0.35	5.30	23.00
#60	2.00	0.25	11.95	34.95
#80	2.50	0.18	35.58	70.53
#120	3.00	0.13	25.61	96.14
#170	3.50	0.09	2.62	98.76
#200	3.75	0.07	0.01	98.77
#230	4.00	0.06	0.01	98.78

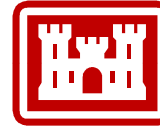
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Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.98	2.76	2.59	2.21	1.58	0.80	-0.41
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	1.88	0.27	1.03	-1.37	4.18	

USACE GRANULOMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-69 #-10

Analysis Date: 09-04-12

Analyzed By:

Easting (ft): 612,040	Northing (ft): 1,879,568
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Coordinate System:	Elevation (ft): -0.1 MLLW
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USCS SP	Munsell: Moist - 10YR 6/1	Comments:
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	Fines (%): #230 - 1.14	Organics (%):	Carbonates (%): 11.80	Shells (%): 8.50
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.00	0.00
#5	-2.00	3.99	0.02	0.02
#7	-1.50	2.82	0.06	0.08
#10	-1.00	2.00	0.15	0.23
#14	-0.50	1.41	1.17	1.40
#18	0.00	1.00	2.47	3.87
#25	0.50	0.71	2.41	6.28
#35	1.00	0.50	1.95	8.23
#45	1.50	0.35	1.53	9.76
#60	2.00	0.25	1.92	11.68
#80	2.50	0.18	13.35	25.03
#120	3.00	0.13	61.75	86.78
#170	3.50	0.09	10.25	97.03
#200	3.75	0.07	1.47	98.50
#230	4.00	0.06	0.36	98.86

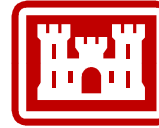
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Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.40	2.98	2.90	2.70	2.50	2.16	0.23
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	2.48	0.18	0.84	-2.34	8.47	

USAGE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-69 #-10 post

Analysis Date: 09-04-12

Analyzed By:

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
612,040	1,879,568		-0.1 MLLW

USCS	Munsell:	Comments:
SP	Moist - 10YR 6/1	

		Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#230 - 0.00			

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#18	0.00	1.00	0.00	0.00
#25	0.50	0.71	0.30	0.30
#35	1.00	0.50	0.67	0.97
#45	1.50	0.35	1.04	2.01
#60	2.00	0.25	1.92	3.93
#80	2.50	0.18	17.30	21.23
#120	3.00	0.13	63.68	84.91
#170	3.50	0.09	13.06	97.97
#200	3.75	0.07	1.57	99.54
#230	4.00	0.06	0.46	100.00

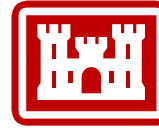
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Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.39	2.99	2.92	2.73	2.53	2.35	2.03
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	2.69	0.15	0.42	-1.48	9.45	

USAGE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-69 #-15

Analysis Date: 09-04-12

Analyzed By:

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
612,040	1,879,568		-0.1 MLLW

USCS	Munsell:	Comments:
SP	Moist - 10YR 6/1	

		Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#230 - 1.19			1.00

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.00	0.00
#5	-2.00	3.99	0.15	0.15
#7	-1.50	2.82	0.02	0.17
#10	-1.00	2.00	0.14	0.31
#14	-0.50	1.41	0.16	0.47
#18	0.00	1.00	0.23	0.70
#25	0.50	0.71	0.16	0.86
#35	1.00	0.50	0.22	1.08
#45	1.50	0.35	0.32	1.40
#60	2.00	0.25	0.71	2.11
#80	2.50	0.18	9.55	11.66
#120	3.00	0.13	74.91	86.57
#170	3.50	0.09	11.58	98.15
#200	3.75	0.07	0.64	98.79
#230	4.00	0.06	0.02	98.81

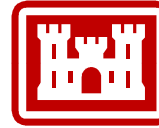
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Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.36	2.98	2.92	2.76	2.59	2.53	2.15
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	2.72	0.15	0.44	-5.26	47.69	

USAGE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-69 #-20

Analysis Date: 09-04-12

Analyzed By:

Easting (ft): 612,040
Northing (ft): 1,879,568

Coordinate System:
Elevation (ft): -0.1 MLLW

USCS: SW
Munsell: Moist - 10YR 6/1
Comments:

Fines (%): #230 - 1.20
Organics (%):
Carbonates (%):
Shells (%): 7.90

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.48	0.00	0.00
#3.5	-2.50	5.66	0.11	0.11
#4	-2.25	4.75	0.13	0.24
#5	-2.00	3.99	0.11	0.35
#7	-1.50	2.82	0.32	0.67
#10	-1.00	2.00	0.83	1.50
#14	-0.50	1.41	2.19	3.69
#18	0.00	1.00	2.00	5.69
#25	0.50	0.71	1.55	7.24
#35	1.00	0.50	0.98	8.22
#45	1.50	0.35	0.54	8.76
#60	2.00	0.25	1.25	10.01
#80	2.50	0.18	8.74	18.75
#120	3.00	0.13	61.22	79.97
#170	3.50	0.09	16.63	96.60
#200	3.75	0.07	1.82	98.42
#230	4.00	0.06	0.38	98.80

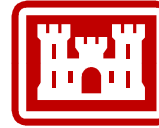
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Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.45	3.12	2.96	2.76	2.55	2.34	-0.17
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	2.53	0.17	0.97	-2.73	10.5	

USACE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-73 #Dune

Analysis Date: 09-04-12

Analyzed By:

Easting (ft): 613,623 Northing (ft): 1,875,986

Coordinate System: Elevation (ft): 0.0 MLLW

USCS: SW Munsell: Moist - 7.5YR 7/3 Comments:

Fines (%): #230 - 0.02 Organics (%): Carbonates (%): Shells (%): 39.80

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.48	0.00	0.00
#3.5	-2.50	5.66	0.57	0.57
#4	-2.25	4.75	0.18	0.75
#5	-2.00	3.99	0.15	0.90
#7	-1.50	2.82	0.19	1.09
#10	-1.00	2.00	0.51	1.60
#14	-0.50	1.41	1.92	3.52
#18	0.00	1.00	6.06	9.58
#25	0.50	0.71	10.89	20.47
#35	1.00	0.50	16.71	37.18
#45	1.50	0.35	22.32	59.50
#60	2.00	0.25	25.08	84.58
#80	2.50	0.18	12.70	97.28
#120	3.00	0.13	2.42	99.70
#170	3.50	0.09	0.24	99.94
#200	3.75	0.07	0.01	99.95
#230	4.00	0.06	0.03	99.98

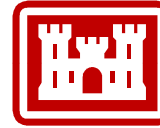
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Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.41	1.98	1.80	1.28	0.63	0.29	-0.38
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	1.17	0.44	0.89	-0.98	5.16	

USACE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granulometric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County
Sample Name: R-73 #Berm
Analysis Date: 09-04-12
Analyzed By:

Easting (ft): 613,623	Northing (ft): 1,875,986	Coordinate System:	Elevation (ft): 0.0 MLLW
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USCS SP	Munsell: Moist - 7.5YR 7/3	Comments:
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Fines (%): #230 - 0.01	Organics (%):	Carbonates (%): 60.30	Shells (%): 64.50
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	3.99	0.00	0.00
#7	-1.50	2.82	0.13	0.13
#10	-1.00	2.00	0.51	0.64
#14	-0.50	1.41	5.29	5.93
#18	0.00	1.00	16.59	22.52
#25	0.50	0.71	22.48	45.00
#35	1.00	0.50	20.41	65.41
#45	1.50	0.35	17.69	83.10
#60	2.00	0.25	12.27	95.37
#80	2.50	0.18	4.10	99.47
#120	3.00	0.13	0.50	99.97
#170	3.50	0.09	0.01	99.98
#200	3.75	0.07	0.01	99.99
#230	4.00	0.06	0.00	99.99

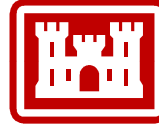
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Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
1.98	1.53	1.27	0.62	0.06	-0.20	-0.59
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	0.66	0.63	0.8	0.12	2.44	

USAGE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-73 #Berm Post

Analysis Date: 09-04-12

Analyzed By:

Easting (ft): 613,623 Northing (ft): 1,875,986

Coordinate System: Elevation (ft): 0.0 MLLW

USCS: SP Munsell: Moist - 7.5YR 7/3 Comments:

Fines (%): #230 - 0.00 Organics (%): Carbonates (%): Shells (%):

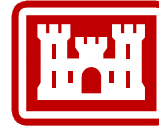
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#18	0.00	1.00	0.00	0.00
#25	0.50	0.71	10.90	10.90
#35	1.00	0.50	23.56	34.46
#45	1.50	0.35	27.01	61.47
#60	2.00	0.25	26.26	87.73
#80	2.50	0.18	10.32	98.05
#120	3.00	0.13	1.53	99.58
#170	3.50	0.09	0.42	100.00
#200	3.75	0.07	0.00	100.00
#230	4.00	0.06	0.00	100.00

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.35	1.93	1.75	1.28	0.80	0.61	0.23
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	1.29	0.41	0.62	0.16	2.54	

USAGE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-73 #Mid-Tide

Analysis Date: 09-04-12

Analyzed By:

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
613,623	1,875,986		0.0 MLLW

USCS	Munsell:	Comments:
SW	Moist - 7.5YR 7/3	

Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
#230 - 0.19			46.90

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.00	0.00
#5	-2.00	3.99	0.01	0.01
#7	-1.50	2.82	0.15	0.16
#10	-1.00	2.00	0.87	1.03
#14	-0.50	1.41	7.10	8.13
#18	0.00	1.00	14.32	22.45
#25	0.50	0.71	14.04	36.49
#35	1.00	0.50	10.68	47.17
#45	1.50	0.35	9.19	56.36
#60	2.00	0.25	11.80	68.16
#80	2.50	0.18	20.63	88.79
#120	3.00	0.13	10.65	99.44
#170	3.50	0.09	0.36	99.80
#200	3.75	0.07	0.00	99.80
#230	4.00	0.06	0.01	99.81

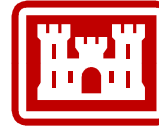
Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.79	2.38	2.16	1.15	0.09	-0.23	-0.72

Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.1	0.47	1.15	-0.13	1.75

USAGE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-73 #-3

Analysis Date: 09-04-12

Analyzed By:

Easting (ft):

613,623

Northing (ft):

1,875,986

Coordinate System:

Elevation (ft):

0.0 MLLW

USCS

SP

Munsell:

Moist - 7.5YR 7/1

Comments:

Fines (%):

#230 - 1.03

Organics (%):

Carbonates (%):

Shells (%):

5.80

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.00	0.00
#5	-2.00	3.99	0.04	0.04
#7	-1.50	2.82	0.12	0.16
#10	-1.00	2.00	0.30	0.46
#14	-0.50	1.41	0.77	1.23
#18	0.00	1.00	1.04	2.27
#25	0.50	0.71	1.05	3.32
#35	1.00	0.50	0.98	4.30
#45	1.50	0.35	1.77	6.07
#60	2.00	0.25	5.85	11.92
#80	2.50	0.18	37.68	49.60
#120	3.00	0.13	43.19	92.79
#170	3.50	0.09	6.08	98.87
#200	3.75	0.07	0.10	98.97
#230	4.00	0.06	0.00	98.97

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

3.18

2.90

2.79

2.50

2.17

2.05

1.19

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

2.38

0.19

0.67

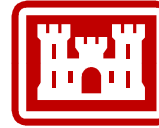
-2.68

12.97

USAGE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-73 #-5

Analysis Date: 09-04-12

Analyzed By:

Easting (ft): 613,623 Northing (ft): 1,875,986

Coordinate System: Elevation (ft): -0.1 MLLW

USCS: SW Munsell: Moist - 7.5YR 7/2 Comments:

Fines (%): #230 - 0.84 Organics (%): Carbonates (%): Shells (%): 13.80

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#3.5	-2.50	5.66	0.00	0.00
#4	-2.25	4.75	0.05	0.05
#5	-2.00	3.99	0.07	0.12
#7	-1.50	2.82	0.18	0.30
#10	-1.00	2.00	0.64	0.94
#14	-0.50	1.41	2.02	2.96
#18	0.00	1.00	3.06	6.02
#25	0.50	0.71	2.74	8.76
#35	1.00	0.50	2.73	11.49
#45	1.50	0.35	3.88	15.37
#60	2.00	0.25	10.83	26.20
#80	2.50	0.18	47.79	73.99
#120	3.00	0.13	22.56	96.55
#170	3.50	0.09	2.55	99.10
#200	3.75	0.07	0.03	99.13
#230	4.00	0.06	0.03	99.16

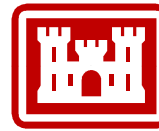
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Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.97	2.72	2.52	2.25	1.94	1.52	-0.17
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	2.03	0.24	0.88	-1.89	6.6	

USACE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-73 #-10

Analysis Date: 09-04-12

Analyzed By:

Easting (ft):

613,623

Northing (ft):

1,875,986

Coordinate System:

Elevation (ft):

-0.1 MLLW

USCS

SW

Munsell:

Moist - 7.5YR 7/1

Comments:

Fines (%):

#230 - 1.07

Organics (%):

Carbonates (%):

14.20

Shells (%):

11.80

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	3.99	0.00	0.00
#7	-1.50	2.82	0.06	0.06
#10	-1.00	2.00	0.26	0.32
#14	-0.50	1.41	1.25	1.57
#18	0.00	1.00	3.15	4.72
#25	0.50	0.71	3.55	8.27
#35	1.00	0.50	2.94	11.21
#45	1.50	0.35	2.14	13.35
#60	2.00	0.25	2.66	16.01
#80	2.50	0.18	13.49	29.50
#120	3.00	0.13	54.66	84.16
#170	3.50	0.09	13.26	97.42
#200	3.75	0.07	1.23	98.65
#230	4.00	0.06	0.28	98.93

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

3.41

3.00

2.92

2.69

2.33

1.99

0.04

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

2.4

0.19

0.93

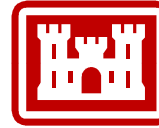
-1.9

6.04

USAGE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-73 #-10 post

Analysis Date: 09-04-12

Analyzed By:

Easting (ft):

613,623

Northing (ft):

1,875,986

Coordinate System:

Elevation (ft):

-0.1 MLLW

USCS

SP

Munsell:

Moist - 7.5YR 7/1

Comments:

Fines (%):

#230 - 0.00

Organics (%):

Carbonates (%):

Shells (%):

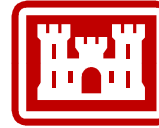
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#18	0.00	1.00	0.00	0.00
#25	0.50	0.71	0.67	0.67
#35	1.00	0.50	2.41	3.08
#45	1.50	0.35	1.14	4.22
#60	2.00	0.25	2.93	7.15
#80	2.50	0.18	18.80	25.95
#120	3.00	0.13	57.21	83.16
#170	3.50	0.09	15.30	98.46
#200	3.75	0.07	1.23	99.69
#230	4.00	0.06	0.31	100.00

USAGE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.39	3.03	2.93	2.71	2.47	2.23	1.63
Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
	2.63	0.16	0.53	-1.76	8.04	

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-73 #-15

Analysis Date: 09-04-12

Analyzed By:

Easting (ft):

613,623

Northing (ft):

1,875,986

Coordinate System:

Elevation (ft):

-0.1 MLLW

USCS

SP

Munsell:

Moist - 10YR 6/1

Comments:

Fines (%):

#230 - 1.47

Organics (%):

Carbonates (%):

Shells (%):

3.80

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.48	0.00	0.00
#3.5	-2.50	5.66	0.10	0.10
#4	-2.25	4.75	0.11	0.21
#5	-2.00	3.99	0.22	0.43
#7	-1.50	2.82	0.10	0.53
#10	-1.00	2.00	0.12	0.65
#14	-0.50	1.41	0.52	1.17
#18	0.00	1.00	0.96	2.13
#25	0.50	0.71	1.11	3.24
#35	1.00	0.50	0.84	4.08
#45	1.50	0.35	0.32	4.40
#60	2.00	0.25	1.48	5.88
#80	2.50	0.18	8.90	14.78
#120	3.00	0.13	68.39	83.17
#170	3.50	0.09	14.35	97.52
#200	3.75	0.07	0.89	98.41
#230	4.00	0.06	0.12	98.53

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

3.41

3.03

2.94

2.76

2.57

2.51

1.70

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

2.64

0.16

0.7

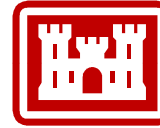
-3.92

22.37

USACE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-73 #-20

Analysis Date: 09-04-12

Analyzed By:

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
613,623	1,875,986		-0.1 MLLW

USCS	Munsell:	Comments:
SP	Moist - 10YR 6/1	

Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
#230 - 2.76			2.80

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.00	0.00
#5	-2.00	3.99	0.12	0.12
#7	-1.50	2.82	0.03	0.15
#10	-1.00	2.00	0.15	0.30
#14	-0.50	1.41	0.69	0.99
#18	0.00	1.00	0.79	1.78
#25	0.50	0.71	0.66	2.44
#35	1.00	0.50	0.50	2.94
#45	1.50	0.35	0.46	3.40
#60	2.00	0.25	0.91	4.31
#80	2.50	0.18	9.56	13.87
#120	3.00	0.13	61.49	75.36
#170	3.50	0.09	10.78	86.14
#200	3.75	0.07	10.87	97.01
#230	4.00	0.06	0.23	97.24

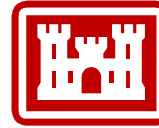
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Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.70	3.40	3.00	2.79	2.59	2.52	2.03
Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
	2.75	0.15	0.67	-2.99	17.23	

USAGE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granulometric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-93 #Dune

Analysis Date: 09-05-12

Analyzed By:

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
620,770	1,858,673		0.0 MLLW

USCS	Munsell:	Comments:
SP	Moist - 7.5YR 7/2	

Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
#230 - 0.03			71.80

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	3.99	0.00	0.00
#7	-1.50	2.82	0.09	0.09
#10	-1.00	2.00	0.24	0.33
#14	-0.50	1.41	4.19	4.52
#18	0.00	1.00	14.76	19.28
#25	0.50	0.71	23.40	42.68
#35	1.00	0.50	20.46	63.14
#45	1.50	0.35	15.41	78.55
#60	2.00	0.25	12.93	91.48
#80	2.50	0.18	6.47	97.95
#120	3.00	0.13	1.82	99.77
#170	3.50	0.09	0.18	99.95
#200	3.75	0.07	0.02	99.97
#230	4.00	0.06	0.00	99.97

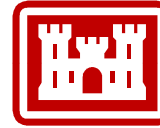
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Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.27	1.71	1.38	0.68	0.12	-0.11	-0.48
Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
	0.76	0.59	0.84	0.29	2.52	

USAGE GRANULOMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-93 #Berm

Analysis Date: 09-05-12

Analyzed By:

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
620,770	1,858,673		0.0 MLLW

USCS	Munsell:	Comments:
SW	Moist - 7.5YR 7/3	

		Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#230 - 0.14		64.50	76.50

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.00	0.00
#5	-2.00	3.99	0.12	0.12
#7	-1.50	2.82	0.26	0.38
#10	-1.00	2.00	0.76	1.14
#14	-0.50	1.41	7.72	8.86
#18	0.00	1.00	19.71	28.57
#25	0.50	0.71	22.38	50.95
#35	1.00	0.50	15.09	66.04
#45	1.50	0.35	11.55	77.59
#60	2.00	0.25	11.89	89.48
#80	2.50	0.18	8.57	98.05
#120	3.00	0.13	1.41	99.46
#170	3.50	0.09	0.33	99.79
#200	3.75	0.07	0.06	99.85
#230	4.00	0.06	0.01	99.86

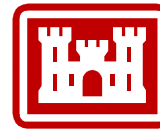
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Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.32	1.77	1.38	0.48	-0.09	-0.32	-0.75
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	0.64	0.64	0.95	0.33	2.41	

USAGE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granulometric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County
Sample Name: R-93 #Berm Post
Analysis Date: 09-05-12
Analyzed By:

Easting (ft): 620,770	Northing (ft): 1,858,673	Coordinate System:	Elevation (ft): 0.0 MLLW
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USCS SP	Munsell: Moist - 7.5YR 7/3	Comments:
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Fines (%): #230 - 0.00	Organics (%):	Carbonates (%):	Shells (%):
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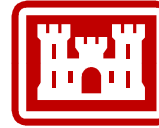
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#14	-0.50	1.41	0.00	0.00
#18	0.00	1.00	2.60	2.60
#25	0.50	0.71	6.67	9.27
#35	1.00	0.50	19.01	28.28
#45	1.50	0.35	13.74	42.02
#60	2.00	0.25	31.58	73.60
#80	2.50	0.18	22.08	95.68
#120	3.00	0.13	4.02	99.70
#170	3.50	0.09	0.29	99.99
#200	3.75	0.07	0.01	100.00
#230	4.00	0.06	0.00	100.00

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.48	2.23	2.03	1.62	0.91	0.68	0.18
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	1.49	0.36	0.72	-0.4	2.49	

USAGE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County
Sample Name: R-93 #Mid-Tide
Analysis Date: 09-05-12
Analyzed By:

Easting (ft): 620,770 Northing (ft): 1,858,673 Coordinate System: Elevation (ft): 0.0 MLLW

USCS: SW Munsell: Moist - 7.5YR 7/3 Comments:

Fines (%): #230 - 0.95 Organics (%): Carbonates (%): Shells (%): 35.30

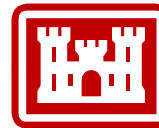
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	3.99	0.00	0.00
#7	-1.50	2.82	0.07	0.07
#10	-1.00	2.00	0.39	0.46
#14	-0.50	1.41	2.77	3.23
#18	0.00	1.00	8.03	11.26
#25	0.50	0.71	9.08	20.34
#35	1.00	0.50	8.21	28.55
#45	1.50	0.35	7.18	35.73
#60	2.00	0.25	9.69	45.42
#80	2.50	0.18	28.68	74.10
#120	3.00	0.13	22.85	96.95
#170	3.50	0.09	2.05	99.00
#200	3.75	0.07	0.05	99.05
#230	4.00	0.06	0.00	99.05

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.96	2.72	2.52	2.08	0.78	0.26	-0.39
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	1.65	0.32	1.09	-0.72	2.32	

USACE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-93 #-3

Analysis Date: 09-05-12

Analyzed By:

Easting (ft):

620,770

Northing (ft):

1,858,673

Coordinate System:

Elevation (ft):

0.0 MLLW

USCS

SP

Munsell:

Moist - 10YR 7/1

Comments:

Fines (%):

#230 - 3.98

Organics (%):

Carbonates (%):

Shells (%):

11.30

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.00	0.00
#5	-2.00	3.99	0.07	0.07
#7	-1.50	2.82	0.05	0.12
#10	-1.00	2.00	0.14	0.26
#14	-0.50	1.41	0.67	0.93
#18	0.00	1.00	2.22	3.15
#25	0.50	0.71	3.01	6.16
#35	1.00	0.50	3.00	9.16
#45	1.50	0.35	4.02	13.18
#60	2.00	0.25	9.99	23.17
#80	2.50	0.18	28.15	51.32
#120	3.00	0.13	37.11	88.43
#170	3.50	0.09	7.28	95.71
#200	3.75	0.07	0.25	95.96
#230	4.00	0.06	0.06	96.02

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

3.45

2.94

2.82

2.48

2.03

1.64

0.31

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

2.23

0.21

0.83

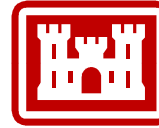
-1.64

5.94

USAGE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-93 #-5

Analysis Date: 09-05-12

Analyzed By:

Easting (ft):

620,770

Northing (ft):

1,858,673

Coordinate System:

Elevation (ft):

-0.1 MLLW

USCS

SP

Munsell:

Moist - 10YR 7/1

Comments:

Fines (%):

#230 - 0.18

Organics (%):

Carbonates (%):

Shells (%):

28.20

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#7	-1.50	2.82	0.00	0.00
#10	-1.00	2.00	0.04	0.04
#14	-0.50	1.41	0.55	0.59
#18	0.00	1.00	1.34	1.93
#25	0.50	0.71	2.14	4.07
#35	1.00	0.50	2.60	6.67
#45	1.50	0.35	1.30	7.97
#60	2.00	0.25	2.85	10.82
#80	2.50	0.18	35.16	45.98
#120	3.00	0.13	43.02	89.00
#170	3.50	0.09	10.48	99.48
#200	3.75	0.07	0.34	99.82
#230	4.00	0.06	0.00	99.82

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

3.29

2.94

2.84

2.55

2.20

2.07

0.68

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

2.41

0.19

0.7

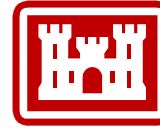
-2.1

8.4

USAGE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-93 #-10

Analysis Date: 09-05-12

Analyzed By:

Easting (ft):

620,770

Northing (ft):

1,858,673

Coordinate System:

Elevation (ft):

-0.1 MLLW

USCS

SP

Munsell:

Moist - 10YR 7/1

Comments:

Fines (%):

#230 - 1.79

Organics (%):

Carbonates (%):

8.40

Shells (%):

6.80

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	3.99	0.00	0.00
#7	-1.50	2.82	0.02	0.02
#10	-1.00	2.00	0.16	0.18
#14	-0.50	1.41	0.59	0.77
#18	0.00	1.00	1.24	2.01
#25	0.50	0.71	1.22	3.23
#35	1.00	0.50	1.07	4.30
#45	1.50	0.35	0.99	5.29
#60	2.00	0.25	1.32	6.61
#80	2.50	0.18	7.25	13.86
#120	3.00	0.13	58.59	72.45
#170	3.50	0.09	23.98	96.43
#200	3.75	0.07	1.23	97.66
#230	4.00	0.06	0.55	98.21

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

3.47

3.24

3.05

2.81

2.60

2.52

1.35

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

2.7

0.15

0.68

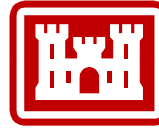
-2.95

13.65

USACE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County
Sample Name: R-93 #-10 post
Analysis Date: 09-05-12
Analyzed By:

Easting (ft): 620,770	Northing (ft): 1,858,673	Coordinate System:	Elevation (ft): -0.1 MLLW
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USCS SP	Munsell: Moist - 10YR 7/1	Comments:
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Fines (%): #230 - 0.00	Organics (%):	Carbonates (%):	Shells (%):
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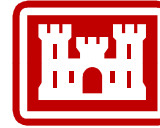
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#14	-0.50	1.41	0.00	0.00
#18	0.00	1.00	0.08	0.08
#25	0.50	0.71	0.17	0.25
#35	1.00	0.50	0.80	1.05
#45	1.50	0.35	0.54	1.59
#60	2.00	0.25	1.62	3.21
#80	2.50	0.18	12.93	16.14
#120	3.00	0.13	62.02	78.16
#170	3.50	0.09	20.48	98.64
#200	3.75	0.07	1.35	99.99
#230	4.00	0.06	0.01	100.00

USACE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.41	3.14	2.97	2.77	2.57	2.49	2.07
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	2.75	0.15	0.42	-1.81	11.21	

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-93 #-15

Analysis Date: 09-05-12

Analyzed By:

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
620,770	1,858,673		-0.1 MLLW

USCS	Munsell:	Comments:
SW	Moist - 10YR 6/1	

		Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#230 - 1.22			12.70

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.48	0.00	0.00
#3.5	-2.50	5.66	0.06	0.06
#4	-2.25	4.75	0.07	0.13
#5	-2.00	3.99	0.07	0.20
#7	-1.50	2.82	0.11	0.31
#10	-1.00	2.00	0.34	0.65
#14	-0.50	1.41	1.88	2.53
#18	0.00	1.00	3.07	5.60
#25	0.50	0.71	2.71	8.31
#35	1.00	0.50	1.73	10.04
#45	1.50	0.35	1.06	11.10
#60	2.00	0.25	1.41	12.51
#80	2.50	0.18	8.32	20.83
#120	3.00	0.13	48.07	68.90
#170	3.50	0.09	26.96	95.86
#200	3.75	0.07	2.32	98.18
#230	4.00	0.06	0.60	98.78

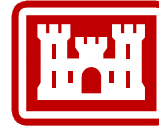
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Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.48	3.28	3.11	2.80	2.54	2.21	-0.10
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	2.55	0.17	1	-2.22	7.64	

USAGE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-93 #-20

Analysis Date: 09-05-12

Analyzed By:

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
620,770	1,858,673		-0.1 MLLW

USCS	Munsell:	Comments:
SP	Moist - 10YR 6/1	

		Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#230 - 1.59			4.80

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.48	0.00	0.00
#3.5	-2.50	5.66	0.09	0.09
#4	-2.25	4.75	0.11	0.20
#5	-2.00	3.99	0.10	0.30
#7	-1.50	2.82	0.08	0.38
#10	-1.00	2.00	0.14	0.52
#14	-0.50	1.41	0.49	1.01
#18	0.00	1.00	0.76	1.77
#25	0.50	0.71	0.55	2.32
#35	1.00	0.50	0.41	2.73
#45	1.50	0.35	0.27	3.00
#60	2.00	0.25	0.74	3.74
#80	2.50	0.18	7.80	11.54
#120	3.00	0.13	60.15	71.69
#170	3.50	0.09	23.58	95.27
#200	3.75	0.07	2.30	97.57
#230	4.00	0.06	0.84	98.41

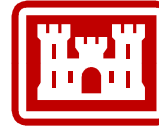
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Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.49	3.26	3.07	2.82	2.61	2.54	2.08
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	2.76	0.15	0.65	-4.03	26.05	

USAGE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granulometric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-97 #Dune

Analysis Date: 09-05-12

Analyzed By:

Easting (ft):

622,027

Northing (ft):

1,855,172

Coordinate System:

Elevation (ft):

0.0 MLLW

USCS

SP

Munsell:

Moist - 7.5YR 7/2

Comments:

Fines (%):

#230 - 0.06

Organics (%):

Carbonates (%):

Shells (%):

49.50

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#7	-1.50	2.82	0.00	0.00
#10	-1.00	2.00	0.02	0.02
#14	-0.50	1.41	0.38	0.40
#18	0.00	1.00	3.05	3.45
#25	0.50	0.71	9.54	12.99
#35	1.00	0.50	16.61	29.60
#45	1.50	0.35	23.78	53.38
#60	2.00	0.25	28.04	81.42
#80	2.50	0.18	14.73	96.15
#120	3.00	0.13	3.32	99.47
#170	3.50	0.09	0.43	99.90
#200	3.75	0.07	0.02	99.92
#230	4.00	0.06	0.02	99.94

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
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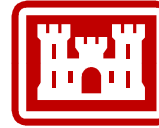
2.46	2.08	1.88	1.42	0.86	0.59	0.08
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Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis
Statistics	1.36	0.39	0.72	-0.26	2.77

USAGE GRANULOMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-97 #Berm

Analysis Date: 09-05-12

Analyzed By:

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
622,027	1,855,172		0.0 MLLW

USCS	Munsell:	Comments:
SW	Moist - 7.5YR 7/3	

		Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#230 - 0.16		67.50	67.40

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.48	0.00	0.00
#3.5	-2.50	5.66	0.12	0.12
#4	-2.25	4.75	0.10	0.22
#5	-2.00	3.99	0.11	0.33
#7	-1.50	2.82	0.42	0.75
#10	-1.00	2.00	1.19	1.94
#14	-0.50	1.41	8.90	10.84
#18	0.00	1.00	20.04	30.88
#25	0.50	0.71	21.62	52.50
#35	1.00	0.50	16.95	69.45
#45	1.50	0.35	13.86	83.31
#60	2.00	0.25	10.91	94.22
#80	2.50	0.18	4.73	98.95
#120	3.00	0.13	0.83	99.78
#170	3.50	0.09	0.06	99.84
#200	3.75	0.07	0.00	99.84
#230	4.00	0.06	0.00	99.84

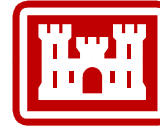
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Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.08	1.53	1.20	0.44	-0.15	-0.37	-0.83
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	0.53	0.69	0.89	0.14	2.74	

USACE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-97 #Berm Post

Analysis Date: 09-05-12

Analyzed By:

Easting (ft): 622,027	Northing (ft): 1,855,172
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Coordinate System:	Elevation (ft): 0.0 MLLW
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USCS SP	Munsell: Moist - 7.5YR 7/3	Comments:
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Fines (%): #230 - 0.00	Organics (%):	Carbonates (%):	Shells (%):
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#14	-0.50	1.41	0.00	0.00
#18	0.00	1.00	3.19	3.19
#25	0.50	0.71	8.32	11.51
#35	1.00	0.50	25.91	37.42
#45	1.50	0.35	18.31	55.73
#60	2.00	0.25	29.12	84.85
#80	2.50	0.18	13.23	98.08
#120	3.00	0.13	1.87	99.95
#170	3.50	0.09	0.02	99.97
#200	3.75	0.07	0.03	100.00
#230	4.00	0.06	0.00	100.00

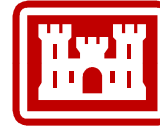
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Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.38	1.98	1.83	1.34	0.76	0.59	0.11
Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
	1.29	0.41	0.68	-0.16	2.4	

USAGE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granulometric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-97 #Mid-Tide

Analysis Date: 09-05-12

Analyzed By:

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
622,027	1,855,172		0.0 MLLW

USCS	Munsell:	Comments:
SP	Moist - 7.5YR 7/3	

		Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#230 - 0.31			28.50

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#7	-1.50	2.82	0.00	0.00
#10	-1.00	2.00	0.08	0.08
#14	-0.50	1.41	0.53	0.61
#18	0.00	1.00	2.78	3.39
#25	0.50	0.71	5.32	8.71
#35	1.00	0.50	6.82	15.53
#45	1.50	0.35	9.55	25.08
#60	2.00	0.25	17.80	42.88
#80	2.50	0.18	36.38	79.26
#120	3.00	0.13	18.84	98.10
#170	3.50	0.09	1.54	99.64
#200	3.75	0.07	0.04	99.68
#230	4.00	0.06	0.01	99.69

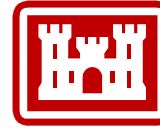
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Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.92	2.63	2.44	2.09	1.49	1.02	0.15
Moment Statistics	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
	1.88	0.27	0.82	-1.02	3.56	

USAGE GRANULOMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-97 #-3

Analysis Date: 09-05-12

Analyzed By:

Easting (ft):

622,027

Northing (ft):

1,855,172

Coordinate System:

Elevation (ft):

0.0 MLLW

USCS

SP

Munsell:

Moist - 10YR 7/1

Comments:

Fines (%):

#230 - 1.40

Organics (%):

Carbonates (%):

Shells (%):

4.90

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.48	0.00	0.00
#3.5	-2.50	5.66	0.10	0.10
#4	-2.25	4.75	0.00	0.10
#5	-2.00	3.99	0.00	0.10
#7	-1.50	2.82	0.00	0.10
#10	-1.00	2.00	0.04	0.14
#14	-0.50	1.41	0.27	0.41
#18	0.00	1.00	0.36	0.77
#25	0.50	0.71	0.44	1.21
#35	1.00	0.50	0.51	1.72
#45	1.50	0.35	0.95	2.67
#60	2.00	0.25	2.12	4.79
#80	2.50	0.18	13.73	18.52
#120	3.00	0.13	61.19	79.71
#170	3.50	0.09	18.31	98.02
#200	3.75	0.07	0.51	98.53
#230	4.00	0.06	0.07	98.60

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

3.42

3.12

2.96

2.76

2.55

2.41

2.00

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

2.69

0.15

0.53

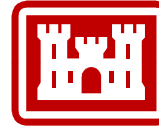
-3.57

26.14

USACE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-97 #-5

Analysis Date: 09-05-12

Analyzed By:

Easting (ft):	Northing (ft):	Coordinate System:	Elevation (ft):
622,027	1,855,172		-0.1 MLLW

USCS	Munsell:	Comments:
SP	Moist - 10YR 7/1	

		Fines (%):	Organics (%):	Carbonates (%):	Shells (%):
		#230 - 1.04			14.40

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#5	-2.00	3.99	0.00	0.00
#7	-1.50	2.82	0.01	0.01
#10	-1.00	2.00	0.12	0.13
#14	-0.50	1.41	0.88	1.01
#18	0.00	1.00	2.36	3.37
#25	0.50	0.71	3.06	6.43
#35	1.00	0.50	3.23	9.66
#45	1.50	0.35	3.74	13.40
#60	2.00	0.25	6.17	19.57
#80	2.50	0.18	23.45	43.02
#120	3.00	0.13	47.39	90.41
#170	3.50	0.09	8.42	98.83
#200	3.75	0.07	0.12	98.95
#230	4.00	0.06	0.01	98.96

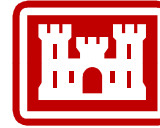
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Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.27	2.93	2.84	2.57	2.11	1.71	0.27
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	2.3	0.20	0.84	-1.77	5.9	

USACE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-97 #-10

Analysis Date: 09-05-12

Analyzed By:

Easting (ft): 622,027	Northing (ft): 1,855,172
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Coordinate System:	Elevation (ft): -0.1 MLLW
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USCS SP	Munsell: Moist - 10YR 7/2	Comments:
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Fines (%): #230 - 1.27	Organics (%):	Carbonates (%): 9.00	Shells (%): 9.80
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.48	0.00	0.00
#3.5	-2.50	5.66	0.05	0.05
#4	-2.25	4.75	0.00	0.05
#5	-2.00	3.99	0.05	0.10
#7	-1.50	2.82	0.02	0.12
#10	-1.00	2.00	0.13	0.25
#14	-0.50	1.41	0.75	1.00
#18	0.00	1.00	1.54	2.54
#25	0.50	0.71	1.65	4.19
#35	1.00	0.50	1.36	5.55
#45	1.50	0.35	3.43	8.98
#60	2.00	0.25	11.29	20.27
#80	2.50	0.18	16.85	37.12
#120	3.00	0.13	59.64	96.76
#170	3.50	0.09	1.54	98.30
#200	3.75	0.07	0.43	98.73
#230	4.00	0.06	0.00	98.73

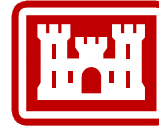
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Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
2.99	2.89	2.82	2.61	2.14	1.81	0.80
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	2.35	0.20	0.73	-2.37	9.85	

USACE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-97 #-10 post

Analysis Date: 09-05-12

Analyzed By:

Easting (ft):
622,027

Northing (ft):
1,855,172

Coordinate System:

Elevation (ft):
-0.1 MLLW

USCS

SP

Munsell:

Moist - 10YR 7/2

Comments:

Fines (%):
#230 - 0.00

Organics (%):

Carbonates (%):

Shells (%):

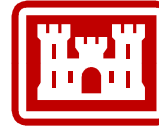
Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#14	-0.50	1.41	0.00	0.00
#18	0.00	1.00	0.03	0.03
#25	0.50	0.71	0.13	0.16
#35	1.00	0.50	1.45	1.61
#45	1.50	0.35	0.34	1.95
#60	2.00	0.25	3.57	5.52
#80	2.50	0.18	29.70	35.22
#120	3.00	0.13	21.13	56.35
#170	3.50	0.09	42.17	98.52
#200	3.75	0.07	1.46	99.98
#230	4.00	0.06	0.02	100.00

USAGE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.46	3.33	3.22	2.85	2.33	2.17	1.92
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	2.75	0.15	0.55	-1	4.49	

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-97 #-15

Analysis Date: 09-05-12

Analyzed By:

Easting (ft):

622,027

Northing (ft):

1,855,172

Coordinate System:

Elevation (ft):

-0.1 MLLW

USCS

SP

Munsell:

Moist - 10YR 7/2

Comments:

Fines (%):

#230 - 1.05

Organics (%):

Carbonates (%):

Shells (%):

8.50

Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
#4	-2.25	4.75	0.00	0.00
#5	-2.00	3.99	0.04	0.04
#7	-1.50	2.82	0.08	0.12
#10	-1.00	2.00	0.23	0.35
#14	-0.50	1.41	1.09	1.44
#18	0.00	1.00	1.91	3.35
#25	0.50	0.71	1.81	5.16
#35	1.00	0.50	1.48	6.64
#45	1.50	0.35	1.45	8.09
#60	2.00	0.25	2.10	10.19
#80	2.50	0.18	10.74	20.93
#120	3.00	0.13	52.35	73.28
#170	3.50	0.09	23.69	96.97
#200	3.75	0.07	1.62	98.59
#230	4.00	0.06	0.36	98.95

Phi 5

Phi 16

Phi 25

Phi 50

Phi 75

Phi 84

Phi 95

3.46

3.23

3.04

2.78

2.54

2.27

0.46

Moment

Mean Phi

Mean mm

Sorting

Skewness

Kurtosis

Statistics

2.6

0.16

0.83

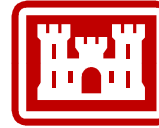
-2.48

9.73

USAGE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12

Granularmetric Report

Depths and elevations based on measured values



US Army Corps of Engineers
701 San Marco Blvd
Jacksonville, Florida 32207
phone (904)396-7121

Project Name: Flagler County

Sample Name: R-97 #-20

Analysis Date: 09-05-12

Analyzed By:

Easting (ft): 622,027	Northing (ft): 1,855,172
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Coordinate System:	Elevation (ft): -0.1 MLLW
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USCS SW	Munsell: Moist - 10YR 7/2	Comments:
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Fines (%): #230 - 1.02	Organics (%):	Carbonates (%):	Shells (%): 12.40
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Sieve Number	Sieve Size (Phi)	Sieve Size (Millimeters)	% Weight Retained	C. % Weight Retained
3/8"	-3.25	9.48	0.00	0.00
#3.5	-2.50	5.66	0.62	0.62
#4	-2.25	4.75	0.06	0.68
#5	-2.00	3.99	0.25	0.93
#7	-1.50	2.82	0.45	1.38
#10	-1.00	2.00	0.79	2.17
#14	-0.50	1.41	1.68	3.85
#18	0.00	1.00	1.81	5.66
#25	0.50	0.71	1.23	6.89
#35	1.00	0.50	0.49	7.38
#45	1.50	0.35	0.23	7.61
#60	2.00	0.25	3.40	11.01
#80	2.50	0.18	4.16	15.17
#120	3.00	0.13	47.72	62.89
#170	3.50	0.09	32.32	95.21
#200	3.75	0.07	2.81	98.02
#230	4.00	0.06	0.96	98.98

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Phi 5	Phi 16	Phi 25	Phi 50	Phi 75	Phi 84	Phi 95
3.50	3.33	3.19	2.86	2.60	2.51	-0.18
Moment	Mean Phi	Mean mm	Sorting	Skewness	Kurtosis	
Statistics	2.63	0.16	1.06	-2.92	12.03	

USACE GRANULARMETRIC REPORT FDEP_GINT_IMPORT_FLAGLER.GPJ FL DEP ROSS.GDT 11/14/12