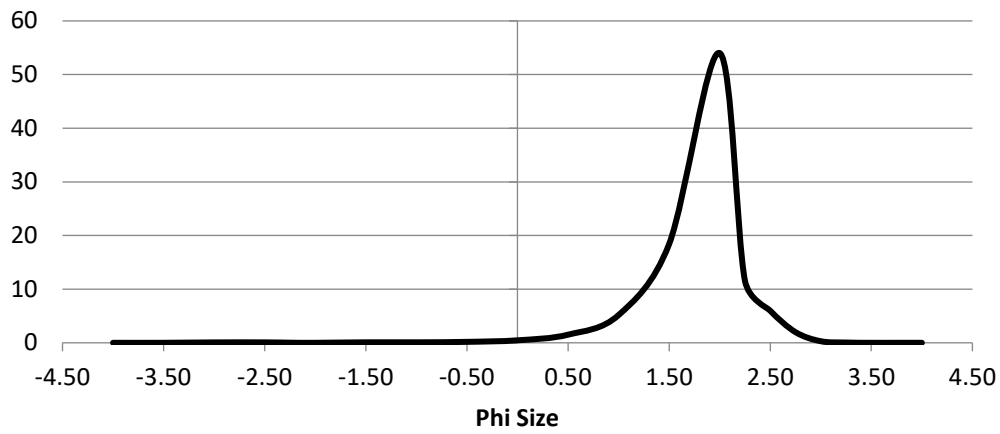
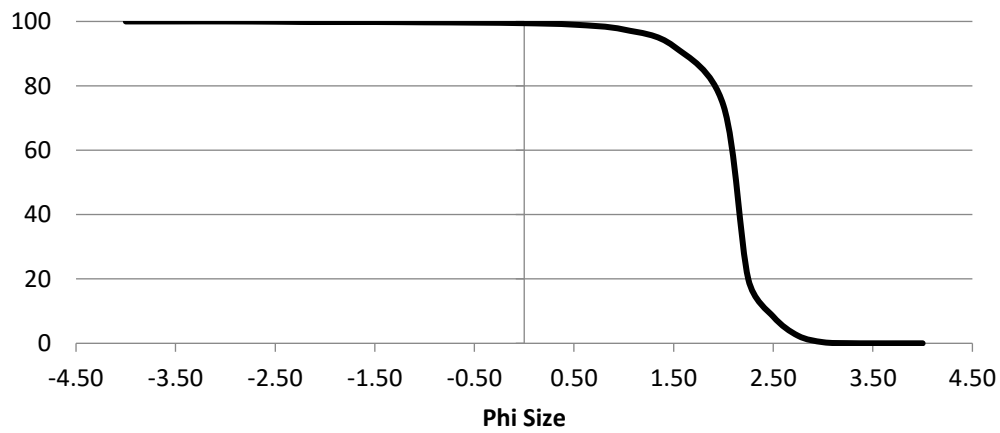


| Granulometric Analysis<br>Sediment Data Sheet |                |                   |             | Florida Atlantic University<br>Department of Geosciences<br>Coastal Studies Laboratory |               |
|---|----------------|-------------------|-------------|--|---------------|
| Project: Sediment Analysis                    |                |                   |             | 777 Glades Road<br>Boca Raton, FL 33431<br>561-297-4669                                |               |
| Sample: R215 Dune 7/28/17                     |                |                   |             |  |               |
| Analysis Date: 2/1/2018                       |                |                   |             |  |               |
| Processed By: AB                              |                |                   |             |  |               |
| Comments:                                     |                |                   |             |  |               |
| Sieve No.                                     | Sieve Size (φ) | Sieve Size (mm)   | Weight (g)  | % Weight   | Cum. Weight % |
| 3/4   | -4.25          | 19.03             | 0           | 0.00   | 100.00        |
| 5/8   | -4.00          | 16.00             | 0           | 0.00   | 100.00        |
| 11/16   | -3.50          | 11.31             | 0           | 0.00   | 100.00        |
| 5/16  | -3.00          | 8.00              | 0.26        | 0.08   | 100.00        |
| 3.5   | -2.50          | 5.66              | 0.27        | 0.08   | 99.92         |
| 4   | -2.25          | 4.76              | 0.07        | 0.02   | 99.84         |
| 5   | -2.00          | 4.00              | 0           | 0.00   | 99.82         |
| 7   | -1.50          | 2.83              | 0.31        | 0.09   | 99.82         |
| 10  | -1.00          | 2.00              | 0.31        | 0.09   | 99.73         |
| 14  | -0.50          | 1.41              | 0.59        | 0.18   | 99.64         |
| 18  | 0.00           | 1.00              | 1.55        | 0.46   | 99.46         |
| 25  | 0.50           | 0.71              | 5.06        | 1.51   | 99.00         |
| 35  | 1.00           | 0.50              | 17.3        | 5.17   | 97.48         |
| 45  | 1.50           | 0.35              | 61.53       | 18.40  | 92.31         |
| 60  | 2.00           | 0.25              | 180.62      | 54.01  | 73.91         |
| 70  | 2.25           | 0.21              | 38.71       | 11.58  | 19.90         |
| 80  | 2.50           | 0.18              | 20          | 5.98   | 8.32          |
| 100   | 2.75           | 0.15              | 6.66        | 1.99   | 2.34          |
| 120   | 3.00           | 0.13              | 0.99        | 0.30   | 0.35          |
| 140   | 3.25           | 0.11              | 0.17        | 0.05   | 0.05          |
| 170   | 3.50           | 0.09              | 0           | 0.00   | 0.00          |
| 200   | 3.75           | 0.07              | 0           | 0.00   | 0.00          |
| 230   | 4.00           | 0.06              | 0           | 0.00   | 0.00          |
| Pan   | >4.00          | <0.06             | 0           | 0.00   | 0.00          |
| Pre-Sieve Weight (g):                         |                |                   | 331.15      | Notes:   |               |
| Post-Sieve Weight (g):                        |                |                   | 334.40      |  |               |
| Sieve Loss (%):                               |                |                   | -0.98       |  |               |
| Moment<br>Method<br>Statistics                | Mean (φ)       | Mean (mm)         | Sorting (φ) | Skewness (φ)   | Kurtosis (φ)  |
|   | 1.66           | 0.32              | 0.52        | -2.30  | 17.24         |
| Size Class Distribution                       |                | Carbonate Content |             | Megascopic Description<br>(Munsell Color)  |               |
| Gravel (%): 1                                 |                | % Carbonate: 44   |             |  |               |
| Sand (%): 99                                  |                | Organic Content   |             | Wet/moist color:   |               |
| Mud (%): 0                                    |                | % Organics: NA    |             | Dry color: GLEY1 7N  |               |

### Individual Weight Percent

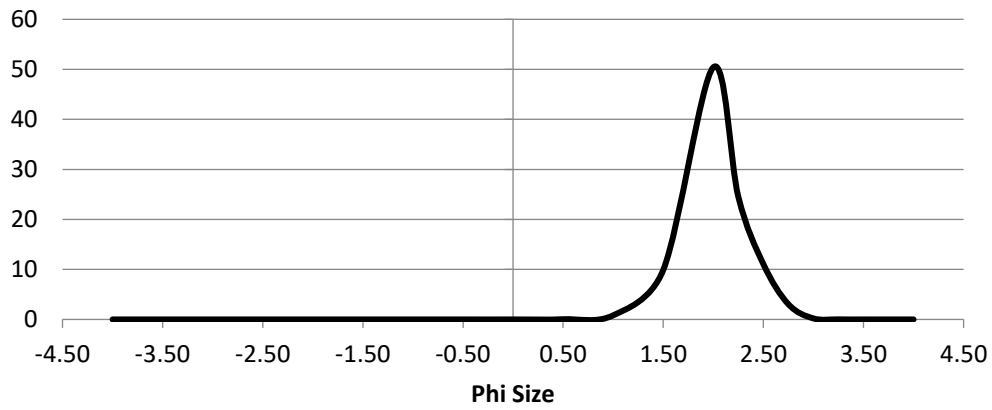


### Cumulative Weight Percent

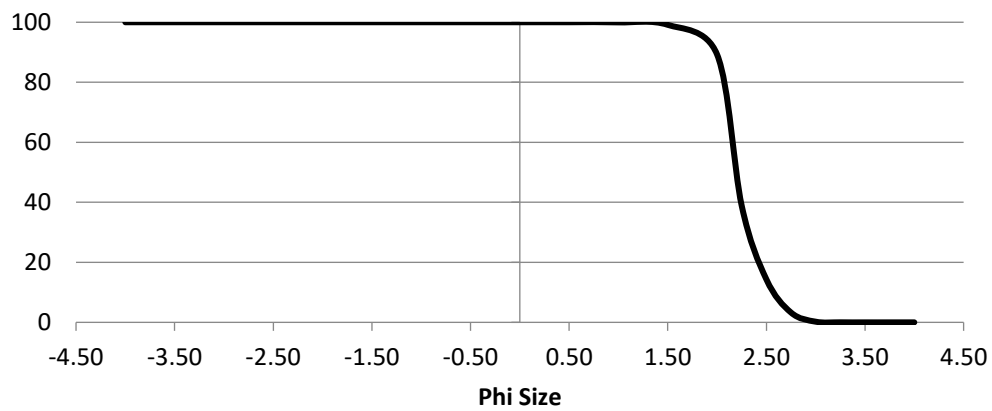


| Granulometric Analysis<br>Sediment Data Sheet |                |                   |             | Florida Atlantic University<br>Department of Geosciences<br>Coastal Studies Laboratory |               |
|---|----------------|-------------------|-------------|--|---------------|
| Project: Boca Nourishment                     |                |                   |             | 777 Glades Road<br>Boca Raton, FL 33431<br>561-297-4669                                |               |
| Sample: R215 3/1/17 SL                        |                |                   |             |  |               |
| Date: 7/20/2017                               |                |                   |             |  |               |
| Processed By: TS                              |                |                   |             |  |               |
| Comments:                                     |                |                   |             |  |               |
| Sieve No.                                     | Sieve Size (φ) | Sieve Size (mm)   | Weight (g)  | % Weight   | Cum. Weight % |
| 3/4   | -4.25          | 19.03             | 0.00        | 0.00   | 100.00        |
| 5/8   | -4.00          | 16.00             | 0.00        | 0.00   | 100.00        |
| 11/16   | -3.50          | 11.31             | 0.00        | 0.00   | 100.00        |
| 5/16  | -3.00          | 8.00              | 0.00        | 0.00   | 100.00        |
| 3.5   | -2.50          | 5.66              | 0.00        | 0.00   | 100.00        |
| 4   | -2.25          | 4.76              | 0.00        | 0.00   | 100.00        |
| 5   | -2.00          | 4.00              | 0.00        | 0.00   | 100.00        |
| 7   | -1.50          | 2.83              | 0.00        | 0.00   | 100.00        |
| 10  | -1.00          | 2.00              | 0.00        | 0.00   | 100.00        |
| 14  | -0.50          | 1.41              | 0.00        | 0.00   | 100.00        |
| 18  | 0.00           | 1.00              | 0.00        | 0.00   | 100.00        |
| 25  | 0.50           | 0.71              | 0.11        | 0.04   | 100.00        |
| 35  | 1.00           | 0.50              | 2.03        | 0.82   | 99.96         |
| 45  | 1.50           | 0.35              | 24.46       | 9.88   | 99.14         |
| 60  | 2.00           | 0.25              | 124.78      | 50.41  | 89.25         |
| 70  | 2.25           | 0.21              | 60.68       | 24.52  | 38.84         |
| 80  | 2.50           | 0.18              | 27.37       | 11.06  | 14.33         |
| 100   | 2.75           | 0.15              | 7.53        | 3.04   | 3.27          |
| 120   | 3.00           | 0.13              | 0.51        | 0.21   | 0.23          |
| 140   | 3.25           | 0.11              | 0.05        | 0.02   | 0.02          |
| 170   | 3.50           | 0.09              | 0.00        | 0.00   | 0.00          |
| 200   | 3.75           | 0.07              | 0.00        | 0.00   | 0.00          |
| 230   | 4.00           | 0.06              | 0.00        | 0.00   | 0.00          |
| Pan   | >4.00          | <0.06             | 0.00        | 0.00   | 0.00          |
| Pre-Sieve Weight (g):                         |                |                   | 247.65      | Notes:   |               |
| Post-Sieve Weight (g):                        |                |                   | 247.52      |  |               |
| Sieve Loss (%):                               |                |                   | 0.05        |  |               |
| Moment<br>Method<br>Statistics                | Mean (φ)       | Mean (mm)         | Sorting (φ) | Skewness (φ)   | Kurtosis (φ)  |
|   | 1.88           | 0.27              | 0.35        | -0.20  | 3.56          |
| Size Class Distribution                       |                | Carbonate Content |             | Megascopic Description   |               |
| Gravel (%): 0                                 |                | % Carbonate: 74   |             | (Munsell Color)  |               |
| Sand (%): 100                                 |                | Organic Content   |             | Wet/moist color:   | 2.5Y 4/1      |
| Mud (%): 0                                    |                | % Organics: NA    |             | Dry color:   | 2.5Y 7/1      |

### Individual Weight Percent

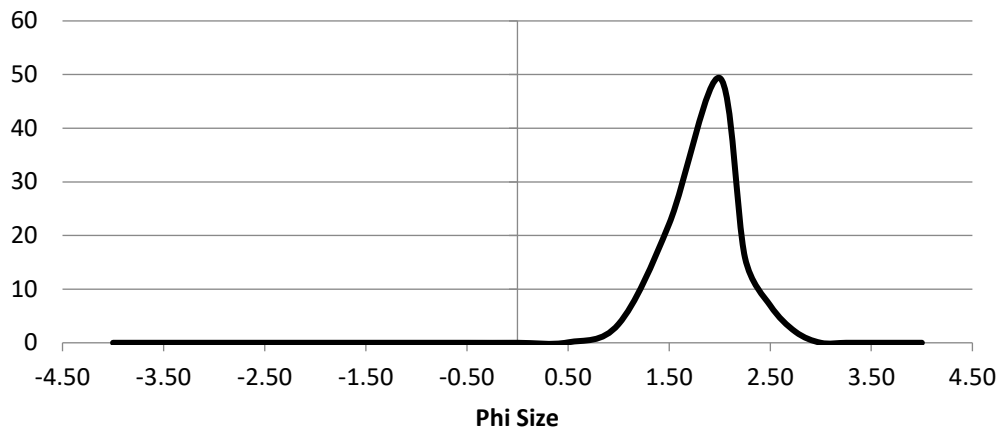


### Cumulative Weight Percent

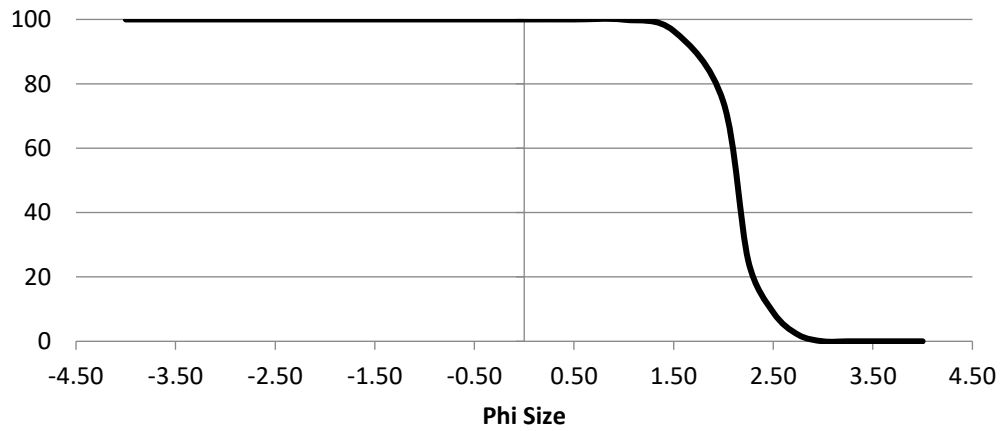


| Granulometric Analysis<br>Sediment Data Sheet |                |                   |             | Florida Atlantic University<br>Department of Geosciences<br>Coastal Studies Laboratory |               |
|---|----------------|-------------------|-------------|--|---------------|
| Project: SURF                                 |                |                   |             | 777 Glades Road<br>Boca Raton, FL 33431<br>561-297-4669                                |               |
| Sample: R216, dune toe, 6/8/16                |                |                   |             |  |               |
| Analysis Date: 7/16/2016                      |                |                   |             |  |               |
| Processed By: Maddy                           |                |                   |             |  |               |
| Comments:                                     |                |                   |             |  |               |
| Sieve No.                                     | Sieve Size (φ) | Sieve Size (mm)   | Weight (g)  | % Weight   | Cum. Weight % |
| 3/4   | -4.25          | 19.03             | 0.00        | 0.00   | 100.00        |
| 5/8   | -4.00          | 16.00             | 0.00        | 0.00   | 100.00        |
| 11/16   | -3.50          | 11.31             | 0.00        | 0.00   | 100.00        |
| 5/16  | -3.00          | 8.00              | 0.00        | 0.00   | 100.00        |
| 3.5   | -2.50          | 5.66              | 0.00        | 0.00   | 100.00        |
| 4   | -2.25          | 4.76              | 0.00        | 0.00   | 100.00        |
| 5   | -2.00          | 4.00              | 0.00        | 0.00   | 100.00        |
| 7   | -1.50          | 2.83              | 0.00        | 0.00   | 100.00        |
| 10  | -1.00          | 2.00              | 0.00        | 0.00   | 100.00        |
| 14  | -0.50          | 1.41              | 0.00        | 0.00   | 100.00        |
| 18  | 0.00           | 1.00              | 0.00        | 0.00   | 100.00        |
| 25  | 0.50           | 0.71              | 0.10        | 0.08   | 100.00        |
| 35  | 1.00           | 0.50              | 4.40        | 3.48   | 99.92         |
| 45  | 1.50           | 0.35              | 28.00       | 22.15  | 96.44         |
| 60  | 2.00           | 0.25              | 62.40       | 49.37  | 74.29         |
| 70  | 2.25           | 0.21              | 20.10       | 15.90  | 24.92         |
| 80  | 2.50           | 0.18              | 8.80        | 6.96   | 9.02          |
| 100   | 2.75           | 0.15              | 2.60        | 2.06   | 2.06          |
| 120   | 3.00           | 0.13              | 0.00        | 0.00   | 0.00          |
| 140   | 3.25           | 0.11              | 0.00        | 0.00   | 0.00          |
| 170   | 3.50           | 0.09              | 0.00        | 0.00   | 0.00          |
| 200   | 3.75           | 0.07              | 0.00        | 0.00   | 0.00          |
| 230   | 4.00           | 0.06              | 0.00        | 0.00   | 0.00          |
| Pan   | >4.00          | <0.06             | 0.00        | 0.00   | 0.00          |
| Pre-Sieve Weight (g):                         |                |                   | 126.40      | Notes:   |               |
| Post-Sieve Weight (g):                        |                |                   | 126.40      |  |               |
| Sieve Loss (%):                               |                |                   | 0.00        |  |               |
| Moment<br>Method<br>Statistics                | Mean (φ)       | Mean (mm)         | Sorting (φ) | Skewness (φ)   | Kurtosis (φ)  |
|   | 1.72           | 0.30              | 0.40        | -0.23  | 3.12          |
| Size Class Distribution                       |                | Carbonate Content |             | Megascopic Description<br>(Munsell Color)  |               |
| Gravel (%): 0                                 |                | % Carbonate: 57   |             |  |               |
| Sand (%): 100                                 |                | Organic Content   |             | Wet/moist color: 2.5Y 5/1  |               |
| Mud (%): 0                                    |                | % Organics: NA    |             | Dry color: 2.5Y 7/1  |               |

### Individual Weight Percent

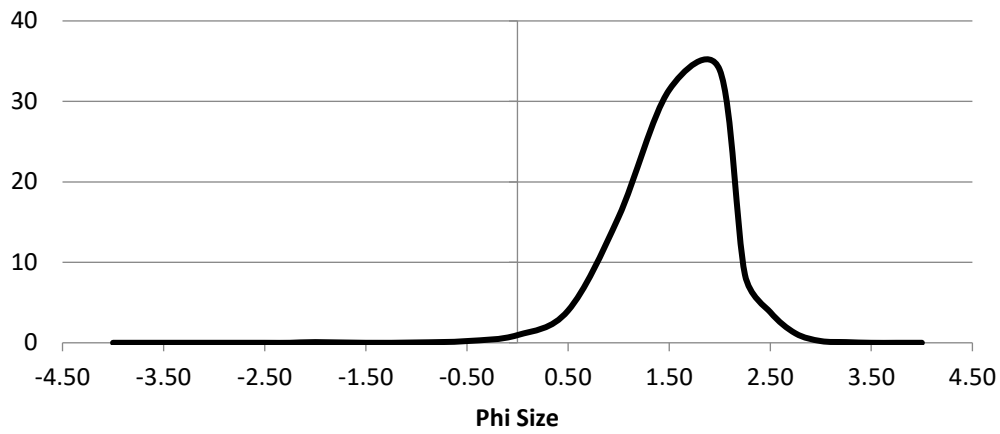


### Cumulative Weight Percent

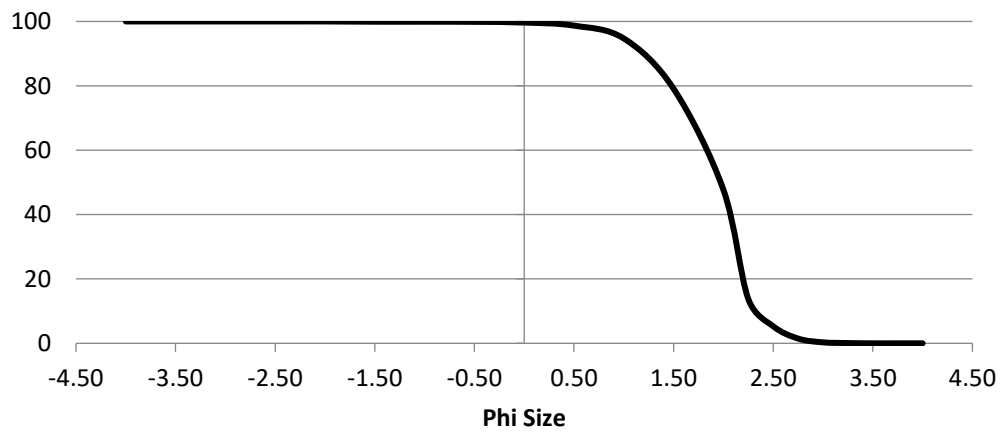


| Granulometric Analysis<br>Sediment Data Sheet |                |                   |             | Florida Atlantic University<br>Department of Geosciences<br>Coastal Studies Laboratory |               |
|---|----------------|-------------------|-------------|--|---------------|
| Project: SURF                                 |                |                   |             | 777 Glades Road<br>Boca Raton, FL 33431<br>561-297-4669                                |               |
| Sample: R216, midbeach, 6/8/16                |                |                   |             |  |               |
| Analysis Date: 7/16/2016                      |                |                   |             |  |               |
| Processed By: Maddy                           |                |                   |             |  |               |
| Comments:                                     |                |                   |             |  |               |
| Sieve No.                                     | Sieve Size (φ) | Sieve Size (mm)   | Weight (g)  | % Weight   | Cum. Weight % |
| 3/4   | -4.25          | 19.03             | 0.00        | 0.00   | 100.00        |
| 5/8   | -4.00          | 16.00             | 0.00        | 0.00   | 100.00        |
| 11/16   | -3.50          | 11.31             | 0.00        | 0.00   | 100.00        |
| 5/16  | -3.00          | 8.00              | 0.00        | 0.00   | 100.00        |
| 3.5   | -2.50          | 5.66              | 0.00        | 0.00   | 100.00        |
| 4   | -2.25          | 4.76              | 0.00        | 0.00   | 100.00        |
| 5   | -2.00          | 4.00              | 0.20        | 0.09   | 100.00        |
| 7   | -1.50          | 2.83              | 0.00        | 0.00   | 99.91         |
| 10  | -1.00          | 2.00              | 0.10        | 0.04   | 99.91         |
| 14  | -0.50          | 1.41              | 0.50        | 0.22   | 99.87         |
| 18  | 0.00           | 1.00              | 2.20        | 0.95   | 99.65         |
| 25  | 0.50           | 0.71              | 9.20        | 3.99   | 98.70         |
| 35  | 1.00           | 0.50              | 36.00       | 15.62  | 94.71         |
| 45  | 1.50           | 0.35              | 72.40       | 31.41  | 79.09         |
| 60  | 2.00           | 0.25              | 78.20       | 33.93  | 47.68         |
| 70  | 2.25           | 0.21              | 19.50       | 8.46   | 13.75         |
| 80  | 2.50           | 0.18              | 8.80        | 3.82   | 5.29          |
| 100   | 2.75           | 0.15              | 2.70        | 1.17   | 1.48          |
| 120   | 3.00           | 0.13              | 0.50        | 0.22   | 0.30          |
| 140   | 3.25           | 0.11              | 0.20        | 0.09   | 0.09          |
| 170   | 3.50           | 0.09              | 0.00        | 0.00   | 0.00          |
| 200   | 3.75           | 0.07              | 0.00        | 0.00   | 0.00          |
| 230   | 4.00           | 0.06              | 0.00        | 0.00   | 0.00          |
| Pan   | >4.00          | <0.06             | 0.00        | 0.00   | 0.00          |
| Pre-Sieve Weight (g):                         |                |                   | 232.00      | Notes:   |               |
| Post-Sieve Weight (g):                        |                |                   | 230.50      |  |               |
| Sieve Loss (%):                               |                |                   | 0.65        |  |               |
| Moment<br>Method<br>Statistics                | Mean (φ)       | Mean (mm)         | Sorting (φ) | Skewness (φ)   | Kurtosis (φ)  |
|   | 1.42           | 0.37              | 0.57        | -0.66  | 4.83          |
| Size Class Distribution                       |                | Carbonate Content |             | Megascopic Description<br>(Munsell Color)  |               |
| Gravel (%): 1                                 |                | % Carbonate: 57   |             |  |               |
| Sand (%): 99                                  |                | Organic Content   |             | Wet/moist color: 2.5Y 5/2  |               |
| Mud (%): 0                                    |                | % Organics: NA    |             | Dry color: 2.5Y 7/2  |               |

### Individual Weight Percent



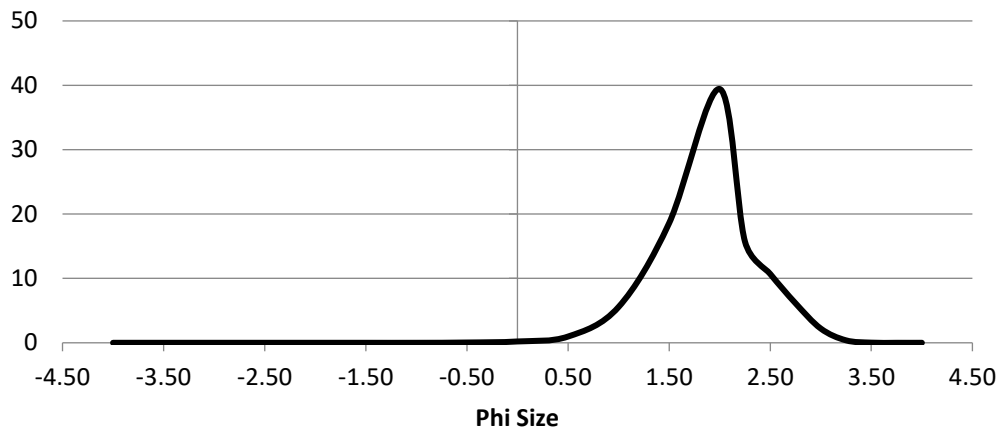
### Cumulative Weight Percent



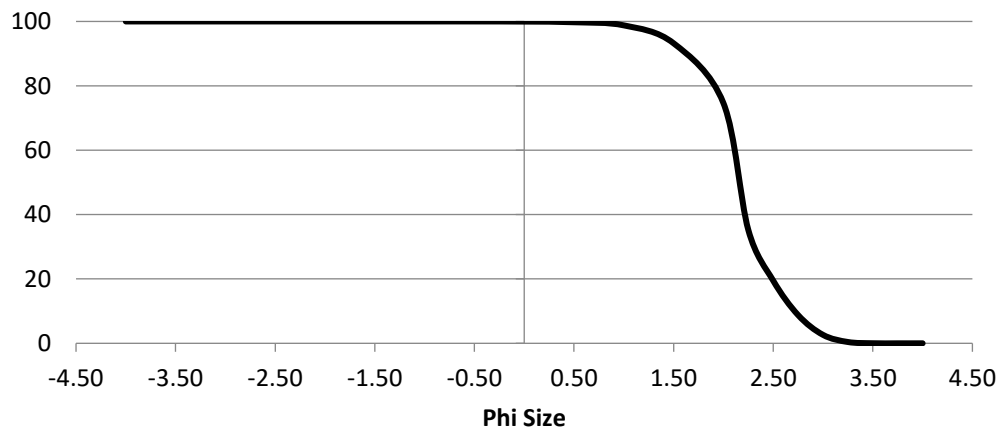


| Granulometric Analysis<br>Sediment Data Sheet |                |                   |             | Florida Atlantic University<br>Department of Geosciences<br>Coastal Studies Laboratory |               |
|---|----------------|-------------------|-------------|--|---------------|
| Project: Boca Raton                           |                |                   |             | 777 Glades Road<br>Boca Raton, FL 33431<br>561-297-4669                                |               |
| Sample: R217 07-07-17 H 45                    |                |                   |             |  |               |
| Analysis Date: 10/4/2017                      |                |                   |             |  |               |
| Processed By: PJ                              |                |                   |             |  |               |
| Comments:                                     |                |                   |             |  |               |
| Sieve No.                                     | Sieve Size (φ) | Sieve Size (mm)   | Weight (g)  | % Weight   | Cum. Weight % |
| 3/4   | -4.25          | 19.03             | 0           | 0.00   | 100.00        |
| 5/8   | -4.00          | 16.00             | 0           | 0.00   | 100.00        |
| 11/16   | -3.50          | 11.31             | 0           | 0.00   | 100.00        |
| 5/16  | -3.00          | 8.00              | 0           | 0.00   | 100.00        |
| 3.5   | -2.50          | 5.66              | 0           | 0.00   | 100.00        |
| 4   | -2.25          | 4.76              | 0           | 0.00   | 100.00        |
| 5   | -2.00          | 4.00              | 0           | 0.00   | 100.00        |
| 7   | -1.50          | 2.83              | 0           | 0.00   | 100.00        |
| 10  | -1.00          | 2.00              | 0           | 0.00   | 100.00        |
| 14  | -0.50          | 1.41              | 0.08        | 0.05   | 100.00        |
| 18  | 0.00           | 1.00              | 0.37        | 0.21   | 99.95         |
| 25  | 0.50           | 0.71              | 1.72        | 0.97   | 99.75         |
| 35  | 1.00           | 0.50              | 9.87        | 5.56   | 98.78         |
| 45  | 1.50           | 0.35              | 32.96       | 18.58  | 93.21         |
| 60  | 2.00           | 0.25              | 69.94       | 39.43  | 74.63         |
| 70  | 2.25           | 0.21              | 27.92       | 15.74  | 35.21         |
| 80  | 2.50           | 0.18              | 18.97       | 10.69  | 19.47         |
| 100   | 2.75           | 0.15              | 10.91       | 6.15   | 8.78          |
| 120   | 3.00           | 0.13              | 3.93        | 2.22   | 2.63          |
| 140   | 3.25           | 0.11              | 0.68        | 0.38   | 0.41          |
| 170   | 3.50           | 0.09              | 0.05        | 0.03   | 0.03          |
| 200   | 3.75           | 0.07              | 0           | 0.00   | 0.00          |
| 230   | 4.00           | 0.06              | 0           | 0.00   | 0.00          |
| Pan   | >4.00          | <0.06             | 0           | 0.00   | 0.00          |
| Pre-Sieve Weight (g):                         |                |                   | 177.11      | Notes:   |               |
| Post-Sieve Weight (g):                        |                |                   | 177.40      |  |               |
| Sieve Loss (%):                               |                |                   | -0.16       |  |               |
| Moment<br>Method<br>Statistics                | Mean (φ)       | Mean (mm)         | Sorting (φ) | Skewness (φ)   | Kurtosis (φ)  |
|   | 1.79           | 0.29              | 0.53        | -0.35  | 3.56          |
| Size Class Distribution                       |                | Carbonate Content |             | Megascopic Description<br>(Munsell Color)  |               |
| Gravel (%): 0                                 |                | % Carbonate: 44   |             |  |               |
| Sand (%): 100                                 |                | Organic Content   |             | Wet/moist color:   |               |
| Mud (%): 0                                    |                | % Organics: NA    |             | Dry color: GLEY17/N  |               |

### Individual Weight Percent

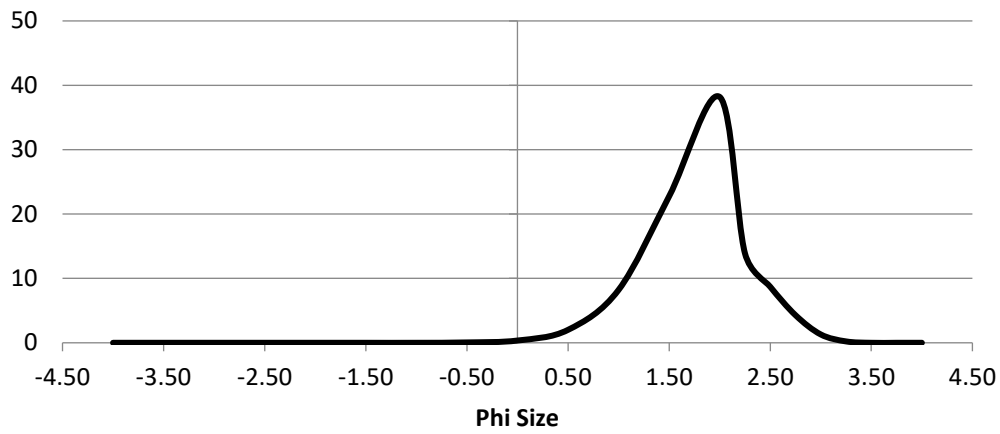


### Cumulative Weight Percent

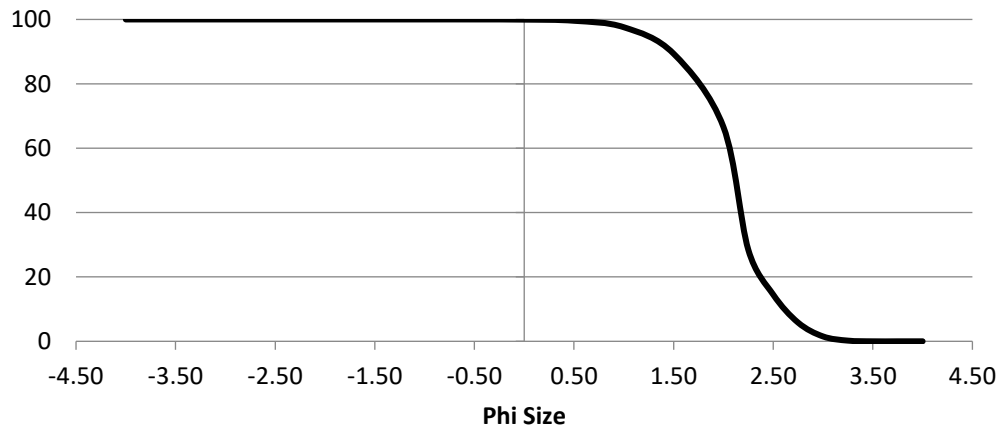


| Granulometric Analysis<br>Sediment Data Sheet |                |                   |             | Florida Atlantic University<br>Department of Geosciences<br>Coastal Studies Laboratory |               |
|---|----------------|-------------------|-------------|--|---------------|
| Project: Boca Nourishment                     |                |                   |             | 777 Glades Road<br>Boca Raton, FL 33431<br>561-297-4669                                |               |
| Sample: R217 collected 9/16/16 - SL           |                |                   |             |  |               |
| Analysis Date: 12/21/2016                     |                |                   |             |  |               |
| Processed By: TS                              |                |                   |             |  |               |
| Comments:                                     |                |                   |             |  |               |
| Sieve No.                                     | Sieve Size (φ) | Sieve Size (mm)   | Weight (g)  | % Weight   | Cum. Weight % |
| 3/4   | -4.25          | 19.03             | 0.00        | 0.00   | 100.00        |
| 5/8   | -4.00          | 16.00             | 0.00        | 0.00   | 100.00        |
| 11/16   | -3.50          | 11.31             | 0.00        | 0.00   | 100.00        |
| 5/16  | -3.00          | 8.00              | 0.00        | 0.00   | 100.00        |
| 3.5   | -2.50          | 5.66              | 0.00        | 0.00   | 100.00        |
| 4   | -2.25          | 4.76              | 0.00        | 0.00   | 100.00        |
| 5   | -2.00          | 4.00              | 0.00        | 0.00   | 100.00        |
| 7   | -1.50          | 2.83              | 0.00        | 0.00   | 100.00        |
| 10  | -1.00          | 2.00              | 0.00        | 0.00   | 100.00        |
| 14  | -0.50          | 1.41              | 0.30        | 0.06   | 100.00        |
| 18  | 0.00           | 1.00              | 1.80        | 0.35   | 99.94         |
| 25  | 0.50           | 0.71              | 10.20       | 2.01   | 99.59         |
| 35  | 1.00           | 0.50              | 41.70       | 8.21   | 97.58         |
| 45  | 1.50           | 0.35              | 115.50      | 22.75  | 89.36         |
| 60  | 2.00           | 0.25              | 193.90      | 38.19  | 66.61         |
| 70  | 2.25           | 0.21              | 70.60       | 13.91  | 28.42         |
| 80  | 2.50           | 0.18              | 44.20       | 8.71   | 14.52         |
| 100   | 2.75           | 0.15              | 21.80       | 4.29   | 5.81          |
| 120   | 3.00           | 0.13              | 6.60        | 1.30   | 1.52          |
| 140   | 3.25           | 0.11              | 1.10        | 0.22   | 0.22          |
| 170   | 3.50           | 0.09              | 0.00        | 0.00   | 0.00          |
| 200   | 3.75           | 0.07              | 0.00        | 0.00   | 0.00          |
| 230   | 4.00           | 0.06              | 0.00        | 0.00   | 0.00          |
| Pan   | >4.00          | <0.06             | 0.00        | 0.00   | 0.00          |
| Pre-Sieve Weight (g): 508.50                  |                |                   | Notes:      |  |               |
| Post-Sieve Weight (g): 507.70                 |                |                   |             |  |               |
| Sieve Loss (%): 0.16                          |                |                   |             |  |               |
| Moment<br>Method<br>Statistics                | Mean (φ)       | Mean (mm)         | Sorting (φ) | Skewness (φ)   | Kurtosis (φ)  |
|   | 1.68           | 0.31              | 0.55        | -0.40  | 3.45          |
| Size Class Distribution                       |                | Carbonate Content |             | Megascopic Description<br>(Munsell Color)  |               |
| Gravel (%): 0                                 |                | % Carbonate: 57   |             |  |               |
| Sand (%): 100                                 |                | Organic Content   |             | Wet/moist color: GLEY1 3/N   |               |
| Mud (%): 0                                    |                | % Organics: NA    |             | Dry color: GLEY1 6/N   |               |

### Individual Weight Percent

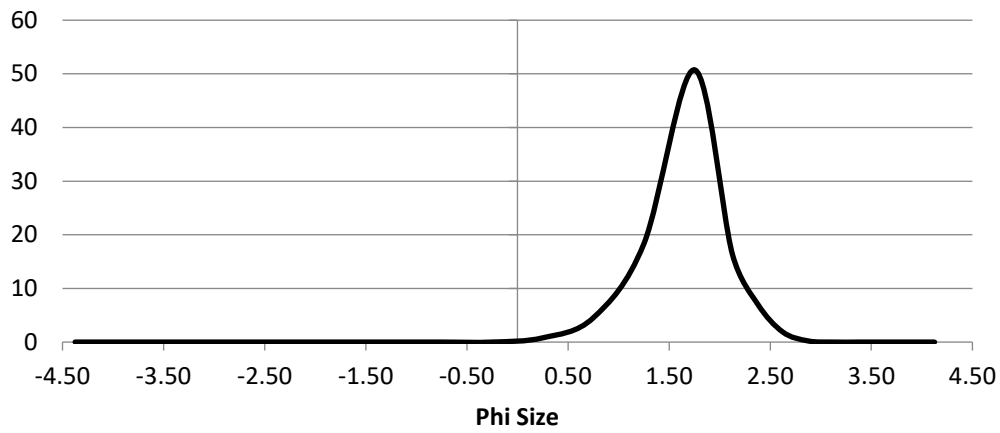


### Cumulative Weight Percent

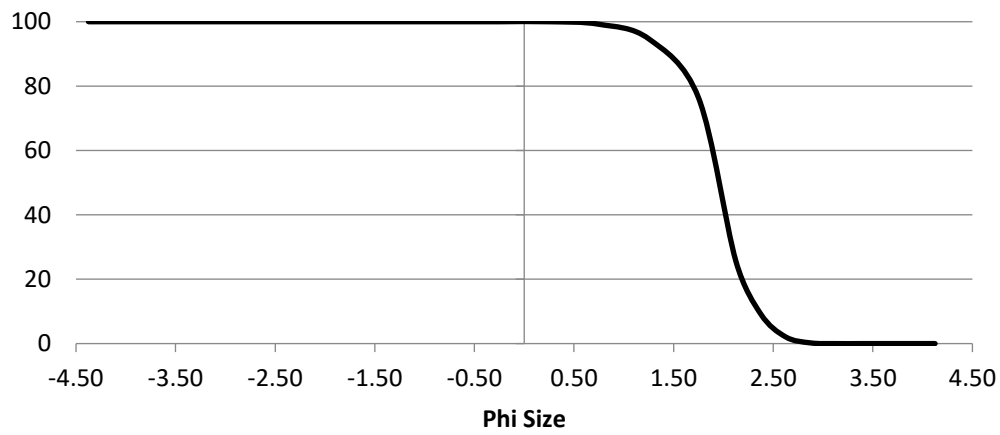


| Granulometric Analysis<br>Sediment Data Sheet |                |                   |             | Florida Atlantic University<br>Department of Geosciences<br>Coastal Studies Laboratory |               |
|---|----------------|-------------------|-------------|--|---------------|
| Project: SURF                                 |                |                   |             | 777 Glades Road<br>Boca Raton, FL 33431<br>561-297-4669                                |               |
| Sample: Boca, R218A, dune toe, 6/8/16         |                |                   |             |  |               |
| Analysis Date: 6/29/2016                      |                |                   |             |  |               |
| Processed By: Maddy                           |                |                   |             |  |               |
| Comments:                                     |                |                   |             |  |               |
| Sieve No.                                     | Sieve Size (φ) | Sieve Size (mm)   | Weight (g)  | % Weight   | Cum. Weight % |
| 3/4   | -4.25          | 19.03             | 0.00        | 0.00   | 100.00        |
| 5/8   | -4.00          | 16.00             | 0.00        | 0.00   | 100.00        |
| 11/16   | -3.50          | 11.31             | 0.00        | 0.00   | 100.00        |
| 5/16  | -3.00          | 8.00              | 0.00        | 0.00   | 100.00        |
| 3.5   | -2.50          | 5.66              | 0.00        | 0.00   | 100.00        |
| 5   | -2.00          | 4.00              | 0.00        | 0.00   | 100.00        |
| 7   | -1.50          | 2.83              | 0.00        | 0.00   | 100.00        |
| 10  | -1.00          | 2.00              | 0.00        | 0.00   | 100.00        |
| 14  | -0.50          | 1.41              | 0.00        | 0.00   | 100.00        |
| 18  | 0.00           | 1.00              | 0.00        | 0.00   | 100.00        |
| 25  | 0.50           | 0.71              | 1.10        | 0.79   | 100.00        |
| 35  | 1.00           | 0.50              | 6.30        | 4.52   | 99.21         |
| 45  | 1.50           | 0.35              | 25.50       | 18.31  | 94.69         |
| 60  | 2.00           | 0.25              | 70.70       | 50.75  | 76.38         |
| 70  | 2.25           | 0.21              | 22.90       | 16.44  | 25.63         |
| 80  | 2.50           | 0.18              | 9.90        | 7.11   | 9.19          |
| 100   | 2.75           | 0.15              | 2.60        | 1.87   | 2.08          |
| 120   | 3.00           | 0.13              | 0.30        | 0.22   | 0.22          |
| 140   | 3.25           | 0.11              | 0.00        | 0.00   | 0.00          |
| 170   | 3.50           | 0.09              | 0.00        | 0.00   | 0.00          |
| 200   | 3.75           | 0.07              | 0.00        | 0.00   | 0.00          |
| 230   | 4.00           | 0.06              | 0.00        | 0.00   | 0.00          |
| Pan   | >4.00          | <0.06             | 0.00        | 0.00   | 0.00          |
| Pre-Sieve Weight (g):                         |                |                   | 139.20      | Notes:   |               |
| Post-Sieve Weight (g):                        |                |                   | 139.30      |  |               |
| Sieve Loss (%):                               |                |                   | -0.07       |  |               |
| Moment<br>Method<br>Statistics                | Mean (φ)       | Mean (mm)         | Sorting (φ) | Skewness (φ)   | Kurtosis (φ)  |
|   | 1.73           | 0.30              | 0.42        | -0.55  | 3.89          |
| Size Class Distribution                       |                | Carbonate Content |             | Megascopic Description<br>(Munsell Color)  |               |
| Gravel (%): 0                                 |                | % Carbonate: 45   |             |  |               |
| Sand (%): 100                                 |                | Organic Content   |             | Wet/moist color: 5Y 4/1  |               |
| Mud (%): 0                                    |                | % Organics: NA    |             | Dry color: 5Y 6/1  |               |

### Individual Weight Percent

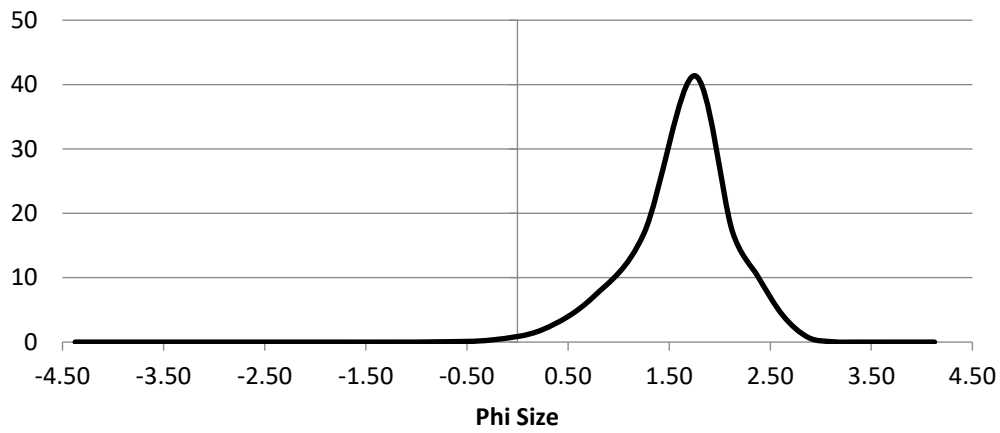


### Cumulative Weight Percent

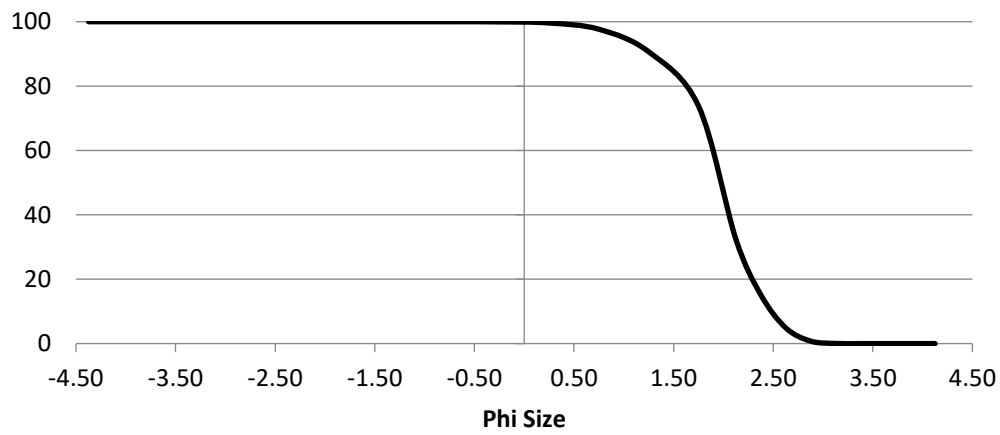


| Granulometric Analysis<br>Sediment Data Sheet |                |                   |             | Florida Atlantic University<br>Department of Geosciences<br>Coastal Studies Laboratory |               |
|---|----------------|-------------------|-------------|--|---------------|
| Project: SURF                                 |                |                   |             | 777 Glades Road<br>Boca Raton, FL 33431<br>561-297-4669                                |               |
| Sample: Boca, R218A, mid-beach, 6/8/16        |                |                   |             |  |               |
| Analysis Date: 6/29/2016                      |                |                   |             |  |               |
| Processed By: Maddy                           |                |                   |             |  |               |
| Comments:                                     |                |                   |             |  |               |
| Sieve No.                                     | Sieve Size (φ) | Sieve Size (mm)   | Weight (g)  | % Weight   | Cum. Weight % |
| 3/4   | -4.25          | 19.03             | 0.00        | 0.00   | 100.00        |
| 5/8   | -4.00          | 16.00             | 0.00        | 0.00   | 100.00        |
| 11/16   | -3.50          | 11.31             | 0.00        | 0.00   | 100.00        |
| 5/16  | -3.00          | 8.00              | 0.00        | 0.00   | 100.00        |
| 3.5   | -2.50          | 5.66              | 0.00        | 0.00   | 100.00        |
| 5   | -2.00          | 4.00              | 0.00        | 0.00   | 100.00        |
| 7   | -1.50          | 2.83              | 0.00        | 0.00   | 100.00        |
| 10  | -1.00          | 2.00              | 0.00        | 0.00   | 100.00        |
| 14  | -0.50          | 1.41              | 0.10        | 0.05   | 100.00        |
| 18  | 0.00           | 1.00              | 0.70        | 0.34   | 99.95         |
| 25  | 0.50           | 0.71              | 4.00        | 1.95   | 99.61         |
| 35  | 1.00           | 0.50              | 14.40       | 7.01   | 97.66         |
| 45  | 1.50           | 0.35              | 34.60       | 16.85  | 90.65         |
| 60  | 2.00           | 0.25              | 85.00       | 41.38  | 73.81         |
| 70  | 2.25           | 0.21              | 35.40       | 17.23  | 32.42         |
| 80  | 2.50           | 0.18              | 21.10       | 10.27  | 15.19         |
| 100   | 2.75           | 0.15              | 8.50        | 4.14   | 4.92          |
| 120   | 3.00           | 0.13              | 1.50        | 0.73   | 0.78          |
| 140   | 3.25           | 0.11              | 0.10        | 0.05   | 0.05          |
| 170   | 3.50           | 0.09              | 0.00        | 0.00   | 0.00          |
| 200   | 3.75           | 0.07              | 0.00        | 0.00   | 0.00          |
| 230   | 4.00           | 0.06              | 0.00        | 0.00   | 0.00          |
| Pan   | >4.00          | <0.06             | 0.00        | 0.00   | 0.00          |
| Pre-Sieve Weight (g):                         |                |                   | 205.90      | Notes:   |               |
| Post-Sieve Weight (g):                        |                |                   | 205.40      |  |               |
| Sieve Loss (%):                               |                |                   | 0.24        |  |               |
| Moment<br>Method<br>Statistics                | Mean (φ)       | Mean (mm)         | Sorting (φ) | Skewness (φ)   | Kurtosis (φ)  |
|   | 1.73           | 0.30              | 0.53        | -0.70  | 3.89          |
| Size Class Distribution                       |                | Carbonate Content |             | Megascopic Description   |               |
| Gravel (%): 0                                 |                | % Carbonate: 53   |             | (Munsell Color)  |               |
| Sand (%): 100                                 |                | Organic Content   |             | Wet/moist color: 5Y 4/1  |               |
| Mud (%): 0                                    |                | % Organics: NA    |             | Dry color: 5Y 5/1  |               |

### Individual Weight Percent



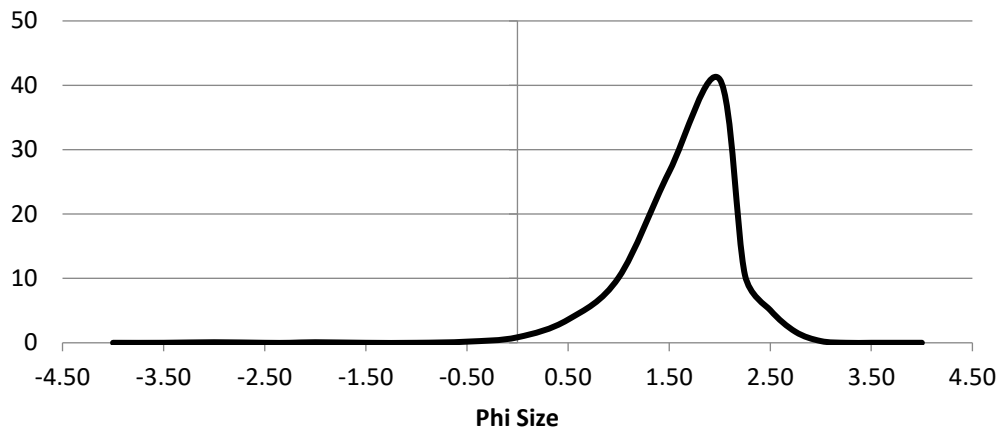
### Cumulative Weight Percent



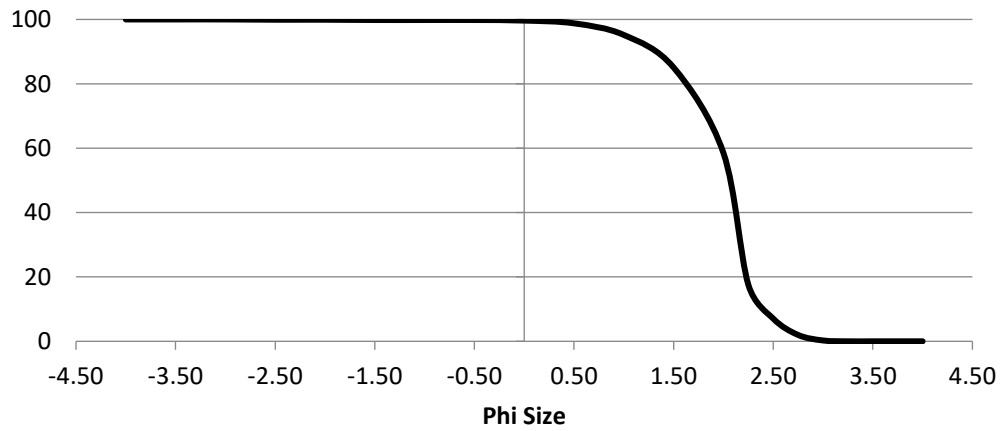


| Granulometric Analysis<br>Sediment Data Sheet |                |                   |             | Florida Atlantic University<br>Department of Geosciences<br>Coastal Studies Laboratory |               |
|---|----------------|-------------------|-------------|--|---------------|
| Project: SURF                                 |                |                   |             | 777 Glades Road<br>Boca Raton, FL 33431<br>561-297-4669                                |               |
| Sample: R219, midbeach, 6/14/16               |                |                   |             |  |               |
| Analysis Date: 7/15/2016                      |                |                   |             |  |               |
| Processed By: Maddy                           |                |                   |             |  |               |
| Comments:                                     |                |                   |             |  |               |
| Sieve No.                                     | Sieve Size (φ) | Sieve Size (mm)   | Weight (g)  | % Weight   | Cum. Weight % |
| 3/4   | -4.25          | 19.03             | 0.00        | 0.00   | 100.00        |
| 5/8   | -4.00          | 16.00             | 0.00        | 0.00   | 100.00        |
| 11/16   | -3.50          | 11.31             | 0.00        | 0.00   | 100.00        |
| 5/16  | -3.00          | 8.00              | 0.20        | 0.09   | 100.00        |
| 3.5   | -2.50          | 5.66              | 0.00        | 0.00   | 99.91         |
| 4   | -2.25          | 4.76              | 0.00        | 0.00   | 99.91         |
| 5   | -2.00          | 4.00              | 0.20        | 0.09   | 99.91         |
| 7   | -1.50          | 2.83              | 0.00        | 0.00   | 99.82         |
| 10  | -1.00          | 2.00              | 0.00        | 0.00   | 99.82         |
| 14  | -0.50          | 1.41              | 0.40        | 0.18   | 99.82         |
| 18  | 0.00           | 1.00              | 1.90        | 0.85   | 99.64         |
| 25  | 0.50           | 0.71              | 8.00        | 3.60   | 98.79         |
| 35  | 1.00           | 0.50              | 22.50       | 10.12  | 95.19         |
| 45  | 1.50           | 0.35              | 59.00       | 26.54  | 85.07         |
| 60  | 2.00           | 0.25              | 91.00       | 40.94  | 58.52         |
| 70  | 2.25           | 0.21              | 23.40       | 10.53  | 17.59         |
| 80  | 2.50           | 0.18              | 11.30       | 5.08   | 7.06          |
| 100   | 2.75           | 0.15              | 3.80        | 1.71   | 1.98          |
| 120   | 3.00           | 0.13              | 0.60        | 0.27   | 0.27          |
| 140   | 3.25           | 0.11              | 0.00        | 0.00   | 0.00          |
| 170   | 3.50           | 0.09              | 0.00        | 0.00   | 0.00          |
| 200   | 3.75           | 0.07              | 0.00        | 0.00   | 0.00          |
| 230   | 4.00           | 0.06              | 0.00        | 0.00   | 0.00          |
| Pan   | >4.00          | <0.06             | 0.00        | 0.00   | 0.00          |
| Pre-Sieve Weight (g):                         |                |                   | 222.60      | Notes:   |               |
| Post-Sieve Weight (g):                        |                |                   | 222.30      |  |               |
| Sieve Loss (%):                               |                |                   | 0.13        |  |               |
| Moment<br>Method<br>Statistics                | Mean (φ)       | Mean (mm)         | Sorting (φ) | Skewness (φ)   | Kurtosis (φ)  |
|   | 1.52           | 0.35              | 0.57        | -1.33  | 9.08          |
| Size Class Distribution                       |                | Carbonate Content |             | Megascopic Description<br>(Munsell Color)  |               |
| Gravel (%): 1                                 |                | % Carbonate: 57   |             |  |               |
| Sand (%): 99                                  |                | Organic Content   |             | Wet/moist color: 2.5Y 5/1  |               |
| Mud (%): 0                                    |                | % Organics: NA    |             | Dry color: 2.5Y 6/1  |               |

### Individual Weight Percent

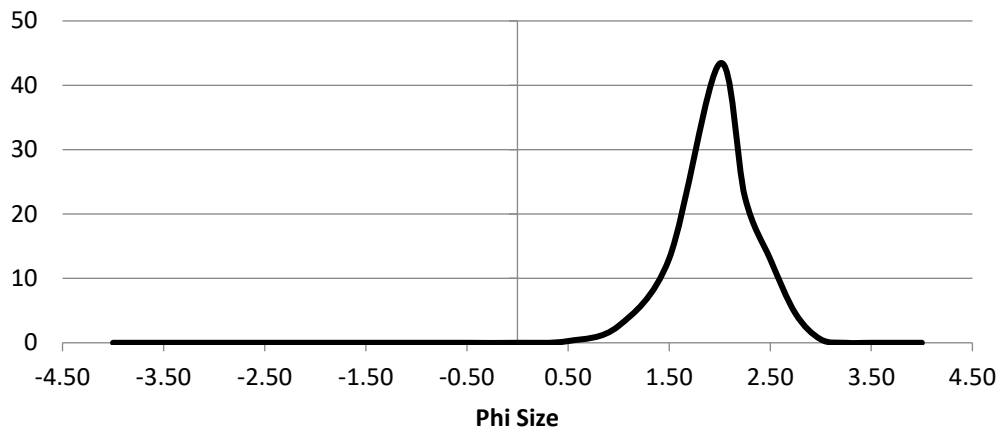


### Cumulative Weight Percent

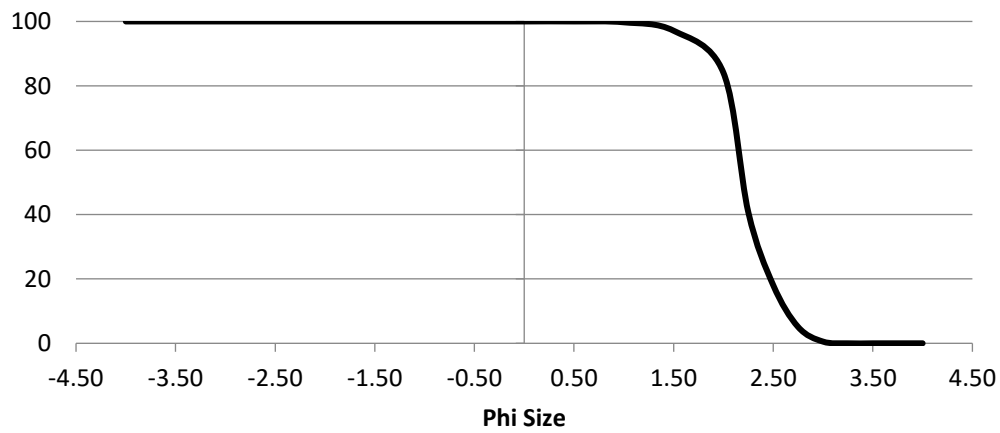


| Granulometric Analysis<br>Sediment Data Sheet    |                |                   |             | Florida Atlantic University<br>Department of Geosciences<br>Coastal Studies Laboratory |               |
|--|----------------|-------------------|-------------|--|---------------|
| Project: Boca Nourishment                        |                |                   |             | 777 Glades Road<br>Boca Raton, FL 33431<br>561-297-4669                                |               |
| Sample: R219 Pre Nourishment collected 4/1/16 SL |                |                   |             |  |               |
| Date: 7/19/2016                                  |                |                   |             |  |               |
| Processed By: TS                                 |                |                   |             |  |               |
| Comments:  |                |                   |             |  |               |
| Sieve No.  | Sieve Size (φ) | Sieve Size (mm)   | Weight (g)  | % Weight   | Cum. Weight % |
| 3/4  | -4.25          | 19.03             | 0.00        | 0.00   | 100.00        |
| 5/8  | -4.00          | 16.00             | 0.00        | 0.00   | 100.00        |
| 11/16  | -3.50          | 11.31             | 0.00        | 0.00   | 100.00        |
| 5/16   | -3.00          | 8.00              | 0.00        | 0.00   | 100.00        |
| 3.5  | -2.50          | 5.66              | 0.00        | 0.00   | 100.00        |
| 4  | -2.25          | 4.76              | 0.00        | 0.00   | 100.00        |
| 5  | -2.00          | 4.00              | 0.00        | 0.00   | 100.00        |
| 7  | -1.50          | 2.83              | 0.00        | 0.00   | 100.00        |
| 10   | -1.00          | 2.00              | 0.00        | 0.00   | 100.00        |
| 14   | -0.50          | 1.41              | 0.00        | 0.00   | 100.00        |
| 18   | 0.00           | 1.00              | 0.00        | 0.00   | 100.00        |
| 25   | 0.50           | 0.71              | 0.50        | 0.27   | 100.00        |
| 35   | 1.00           | 0.50              | 4.90        | 2.62   | 99.73         |
| 45   | 1.50           | 0.35              | 24.40       | 13.05  | 97.11         |
| 60   | 2.00           | 0.25              | 81.10       | 43.37  | 84.06         |
| 70   | 2.25           | 0.21              | 42.30       | 22.62  | 40.70         |
| 80   | 2.50           | 0.18              | 24.30       | 12.99  | 18.07         |
| 100  | 2.75           | 0.15              | 8.50        | 4.55   | 5.08          |
| 120  | 3.00           | 0.13              | 1.00        | 0.53   | 0.53          |
| 140  | 3.25           | 0.11              | 0.00        | 0.00   | 0.00          |
| 170  | 3.50           | 0.09              | 0.00        | 0.00   | 0.00          |
| 200  | 3.75           | 0.07              | 0.00        | 0.00   | 0.00          |
| 230  | 4.00           | 0.06              | 0.00        | 0.00   | 0.00          |
| Pan  | >4.00          | <0.06             | 0.00        | 0.00   | 0.00          |
| Pre-Sieve Weight (g):                            |                |                   | 188.10      | Notes:   |               |
| Post-Sieve Weight (g):                           |                |                   | 187.00      |  |               |
| Sieve Loss (%):                                  |                |                   | 0.58        |  |               |
| Moment<br>Method<br>Statistics                   | Mean (φ)       | Mean (mm)         | Sorting (φ) | Skewness (φ)   | Kurtosis (φ)  |
|  | 1.87           | 0.27              | 0.42        | -0.44  | 3.51          |
| Size Class Distribution                          |                | Carbonate Content |             | Megascopic Description<br>(Munsell Color)  |               |
| Gravel (%): 0                                    |                | % Carbonate: NA   |             |  |               |
| Sand (%): 100                                    |                | Organic Content   |             | Wet/moist color:   |               |
| Mud (%): 0                                       |                | % Organics: NA    |             | Dry color:   | 2.5Y 4/1      |

### Individual Weight Percent

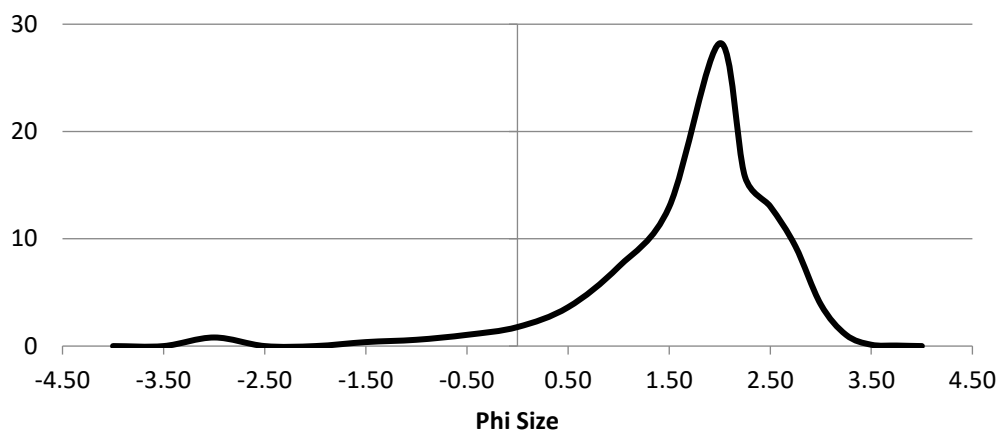


### Cumulative Weight Percent

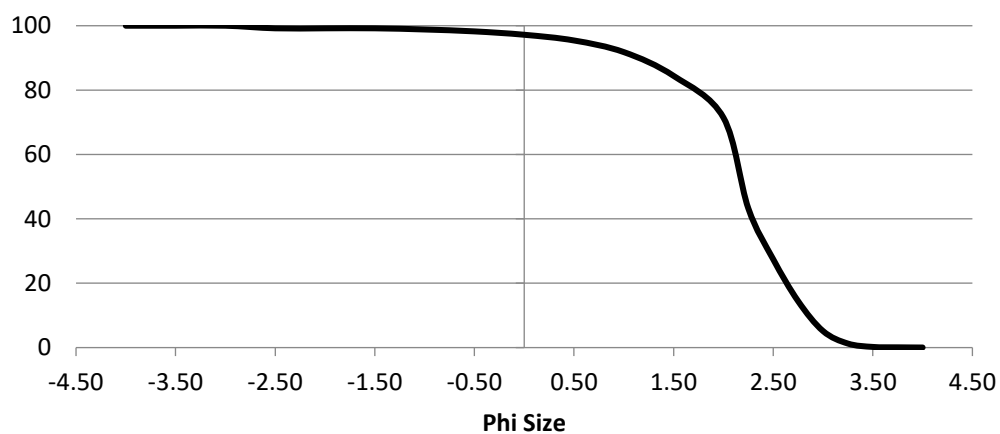


| Granulometric Analysis<br>Sediment Data Sheet |                |                   |             | Florida Atlantic University<br>Department of Geosciences<br>Coastal Studies Laboratory |               |
|---|----------------|-------------------|-------------|--|---------------|
| Project: Boca                                 |                |                   |             | 777 Glades Road<br>Boca Raton, FL 33431<br>561-297-4669                                |               |
| Sample: R220 L80 7-7-17                       |                |                   |             |  |               |
| Analysis Date: 8/31/2017                      |                |                   |             |  |               |
| Processed By: CA JP JB                        |                |                   |             |  |               |
| Comments:                                     |                |                   |             |  |               |
| Sieve No.                                     | Sieve Size (φ) | Sieve Size (mm)   | Weight (g)  | % Weight   | Cum. Weight % |
| 3/4   | -4.25          | 19.03             | 0           | 0.00   | 100.00        |
| 5/8   | -4.00          | 16.00             | 0           | 0.00   | 100.00        |
| 11/16   | -3.50          | 11.31             | 0           | 0.00   | 100.00        |
| 5/16  | -3.00          | 8.00              | 1.27        | 0.80   | 100.00        |
| 3.5   | -2.50          | 5.66              | 0           | 0.00   | 99.20         |
| 5   | -2.00          | 4.00              | 0           | 0.00   | 99.20         |
| 7   | -1.50          | 2.83              | 0.59        | 0.37   | 99.20         |
| 10  | -1.00          | 2.00              | 0.93        | 0.59   | 98.83         |
| 14  | -0.50          | 1.41              | 1.66        | 1.05   | 98.24         |
| 18  | 0.00           | 1.00              | 2.81        | 1.77   | 97.19         |
| 25  | 0.50           | 0.71              | 5.73        | 3.62   | 95.42         |
| 35  | 1.00           | 0.50              | 11.7        | 7.38   | 91.80         |
| 45  | 1.50           | 0.35              | 20.53       | 12.96  | 84.42         |
| 60  | 2.00           | 0.25              | 44.71       | 28.22  | 71.46         |
| 70  | 2.25           | 0.21              | 25.02       | 15.79  | 43.24         |
| 80  | 2.50           | 0.18              | 20.63       | 13.02  | 27.45         |
| 100   | 2.75           | 0.15              | 14.72       | 9.29   | 14.43         |
| 120   | 3.00           | 0.13              | 6.16        | 3.89   | 5.14          |
| 140   | 3.25           | 0.11              | 1.66        | 1.05   | 1.26          |
| 170   | 3.50           | 0.09              | 0.2         | 0.13   | 0.21          |
| 200   | 3.75           | 0.07              | 0.08        | 0.05   | 0.08          |
| 230   | 4.00           | 0.06              | 0           | 0.00   | 0.03          |
| Pan   | >4.00          | <0.06             | 0.05        | 0.03   | 0.03          |
| Pre-Sieve Weight (g):                         |                |                   | 158.69      | Notes:   |               |
| Post-Sieve Weight (g):                        |                |                   | 158.45      |  |               |
| Sieve Loss (%):                               |                |                   | 0.15        |  |               |
| Moment<br>Method<br>Statistics                | Mean (φ)       | Mean (mm)         | Sorting (φ) | Skewness (φ)   | Kurtosis (φ)  |
|   | 1.71           | 0.31              | 0.92        | -1.99  | 9.81          |
| Size Class Distribution                       |                | Carbonate Content |             | Megascopic Description   |               |
| Gravel (%): 2                                 |                | % Carbonate: NA   |             | (Munsell Color)  |               |
| Sand (%): 98                                  |                | Organic Content   |             | Wet/moist color:   |               |
| Mud (%): 0                                    |                | % Organics: NA    |             | Dry color:   | GLE Y1 6/N    |

### Individual Weight Percent

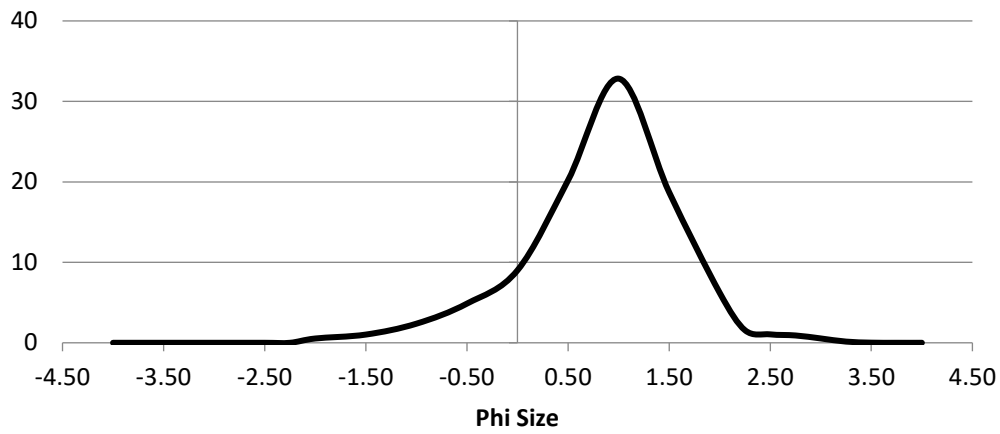


### Cumulative Weight Percent



| Granulometric Analysis<br>Sediment Data Sheet |                |                   |             | Florida Atlantic University<br>Department of Geosciences<br>Coastal Studies Laboratory |               |
|---|----------------|-------------------|-------------|--|---------------|
| Project: Boca Nourishment                     |                |                   |             | 777 Glades Road<br>Boca Raton, FL 33431<br>561-297-4669                                |               |
| Sample: 9/14/2017 SL R220                     |                |                   |             |  |               |
| Analysis Date: 10/2/2017                      |                |                   |             |  |               |
| Processed By: TS                              |                |                   |             |  |               |
| Comments:                                     |                |                   |             |  |               |
| Sieve No.                                     | Sieve Size (φ) | Sieve Size (mm)   | Weight (g)  | % Weight   | Cum. Weight % |
| 3/4   | -4.25          | 19.03             | 0.00        | 0.00   | 100.00        |
| 5/8   | -4.00          | 16.00             | 0.00        | 0.00   | 100.00        |
| 11/16   | -3.50          | 11.31             | 0.00        | 0.00   | 100.00        |
| 5/16  | -3.00          | 8.00              | 0.00        | 0.00   | 100.00        |
| 3.5   | -2.50          | 5.66              | 0.00        | 0.00   | 100.00        |
| 4   | -2.25          | 4.76              | 0.00        | 0.00   | 100.00        |
| 5   | -2.00          | 4.00              | 1.43        | 0.54   | 100.00        |
| 7   | -1.50          | 2.83              | 2.73        | 1.02   | 99.46         |
| 10  | -1.00          | 2.00              | 6.34        | 2.37   | 98.44         |
| 14  | -0.50          | 1.41              | 13.01       | 4.87   | 96.07         |
| 18  | 0.00           | 1.00              | 24.05       | 9.00   | 91.20         |
| 25  | 0.50           | 0.71              | 53.91       | 20.18  | 82.20         |
| 35  | 1.00           | 0.50              | 87.69       | 32.83  | 62.01         |
| 45  | 1.50           | 0.35              | 50.01       | 18.72  | 29.19         |
| 60  | 2.00           | 0.25              | 16.62       | 6.22   | 10.46         |
| 70  | 2.25           | 0.21              | 4.19        | 1.57   | 4.24          |
| 80  | 2.50           | 0.18              | 2.80        | 1.05   | 2.67          |
| 100   | 2.75           | 0.15              | 2.44        | 0.91   | 1.62          |
| 120   | 3.00           | 0.13              | 1.45        | 0.54   | 0.71          |
| 140   | 3.25           | 0.11              | 0.40        | 0.15   | 0.17          |
| 170   | 3.50           | 0.09              | 0.05        | 0.02   | 0.02          |
| 200   | 3.75           | 0.07              | 0.00        | 0.00   | 0.00          |
| 230   | 4.00           | 0.06              | 0.00        | 0.00   | 0.00          |
| Pan   | >4.00          | <0.06             | 0.00        | 0.00   | 0.00          |
| Pre-Sieve Weight (g):                         |                |                   | 267.44      | Notes:   |               |
| Post-Sieve Weight (g):                        |                |                   | 267.12      |  |               |
| Sieve Loss (%):                               |                |                   | 0.12        |  |               |
| Moment<br>Method<br>Statistics                | Mean (φ)       | Mean (mm)         | Sorting (φ) | Skewness (φ)   | Kurtosis (φ)  |
|   | 0.62           | 0.65              | 0.82        | -0.38  | 4.13          |
| Size Class Distribution                       |                | Carbonate Content |             | Megascopic Description<br>(Munsell Color)  |               |
| Gravel (%):                                   | 3              | % Carbonate:      | 57          |  |               |
| Sand (%):                                     | 97             | Organic Content   |             | Wet/moist color:   | GLEY 1 4/N    |
| Mud (%):                                      | 0              | % Organics:       | NA          | Dry color:   | GLEY 1 7/N    |

### Individual Weight Percent



### Cumulative Weight Percent

