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Physical Analysis Comparison
Country Club
Bunker Sands

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| Sample ID: | Signature/HP (75/25) | SS B-52 Bunker Sand | USGA Guide |
|--------------------|----------------------|---------------------|------------|
| | 4/20/2016 | 2/8/2016 | |
| Clay <.002 mm | 0.30 | 0.30 | <= 3% |
| Silt .002 - .05 mm | 2.20 | 2.80 | <= 5% |
| Sand .05 - 2.00 mm | 96.80 | 96.60 | 94-100% |
| Gravel >2.0 mm | 0.70 | 0.30 | <=3% |
| Organic Matter | 0.11 | 0.19 | |

Sand Fractions

| | | | | |
|-------------------------|-------|-------|--------|--------------------|
| Fine Gravel 2.0 mm | 0.70 | 0.30 | <= 3% | 2mm |
| Very Coarse Sand 1.0 mm | 10.90 | 5.70 | <= 10% | (2mm + 1 mm) |
| Coarse Sand .5 mm | 26.30 | 23.10 | >= 60% | (.5mm + .25 mm) |
| Medium Sand .25 mm | 39.10 | 45.00 | | |
| Fine Sand .15 mm | 14.40 | 17.40 | <= 20% | .15mm |
| Very Fine Sand .106 mm | 4.40 | 4.40 | <= 5% | (.106mm + .053 mm) |
| Very Fine Sand .053 mm | 1.70 | 1.00 | | |

| | | | |
|--------------------------|--|--|---------|
| Color | 6/3 2.5Y Light Yellowish Brown | 4/3 2.5Y Olive Brown | |
| Crusting Characteristics | None | None | None |
| Visual Classification | Medium Sphericity/ subangular to subrounded | Medium Sphericity/ subangular to subrounded | Angular |
| Ball Lie Rating (KG/CM2) | 2.50 | 2.50 | >2.4 |
| Calcium Carbonate Equiv. | 5.80% | 21.10% | <6% |
| | see moisture curve testing | | |

Comments: The USGA Guidelines are for putting green construction.

The Signature/HP (75/25) Bunker sand sample was collected by Mavis Consulting and submitted for testing. Based on the complete bunker sand testing, there are no concerns for this mixture as long as the moisture and cultivation are properly managed. Based on the moisture curve data, this sand should be placed in the bunkers at more than 8" in depth to remain below 20% moisture. Otherwise frequent cultivation may be needed to reduce this concern.

Red indicates values not meeting USGA guidelines for root-zone material or bunker sands.