



*This jar test shows a large layer of sand with a thin layer of silt and organic debris above it. Repeating this test annually can track changes in contamination.*

# MONITORING SAND CONTAMINATION IN BUNKERS

BY GREEN SECTION STAFF

It is common for bunker sand performance to gradually decline over time. Washouts from rainstorms and the natural accumulation of silt, clay and organic debris changes the color of bunker sand and plugs up pore space – resulting in more moisture retention and heavier, compacted sand conditions.

Superintendents and golfers will notice these subtle changes over time, but how rapidly is contamination happening and at what point do you need to replace the sand? One way to evaluate contamination is to have a laboratory perform periodic testing of the bunker sand to gather accurate data and track changes. A less costly method is to do a jar test. Here’s how it works:



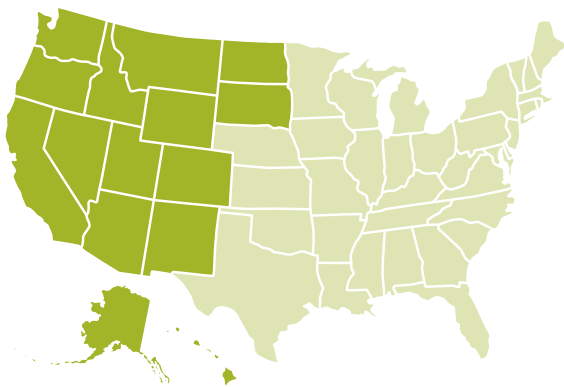
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- Fill a 1-quart glass jar halfway with a representative sample of bunker sand.
- Fill the rest of the jar with tap water.
- Add one or two drops of dishwashing detergent.
- Put the lid on the jar and shake vigorously for several seconds to mix the contents.
- Place the jar in an area where it will not be disturbed for one or two days to allow the contents to settle.

The sample will settle in layers – sand on the bottom, silt and organic debris above that, and cloudy water on top that contains the clay particles. It’s a good idea to place a ruler next to the sample and take a photo so that comparisons can be made from year to year. A separate jar test of new bunker sand can be done and used as a comparison.

While the jar test is not as accurate a lab test, it provides a good visual estimation of sand contamination that can be compared from year to year. This information can be used to forecast when sand replacement is necessary.



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