

## DIVISION 2. - BEACH SAND QUALITY

### Sec. 34-2. - Beach sand quality.

It is hereby declared and determined that preserving and enhancing the quality of the Town of Surfside's beaches is essential to serve and benefit the town's residents and visitors. The chemical and physical composition of beach sand must not interfere with the health, safety or welfare of the public.

(Ord. No. 1631, § 2, 3-10-15)

### Sec. 34-3. - Definitions.

*Applicant:* An individual, corporation or other authorized legal entity filing an application to FDEP for a permit that requires excavation of sand seaward of the Coastal Construction Control Line.

*Beach nourishment:* The maintenance of a restored beach by the replacement of sand to mitigate erosion, often referred to as "beach renourishment."

*Beach restoration:* The placement of sand on an eroded beach for the purposes of restoring it as a recreational beach and providing storm protection for upland properties.

*Coastal Construction Control Line:* A line established by the Florida Department of Environmental Protection that defines that portion of the beach-dune system which is subject to severe fluctuations based on a 100-year storm surge, storm waves, or other predictable weather conditions, as established pursuant to the provisions of Section 161.053, Florida Statutes.

*Construction debris:* The material resulting from the demolition of a structure. Construction debris shall not include such material which has been sorted, cleaned and otherwise processed such that it meets the suitability criteria for armoring materials set forth under FDEP rules.

*Contaminants:* Any substance or matter that does not meet the criteria as enumerated in the testing protocols pursuant to section 34-4 of the Code of Ordinances.

*Dune:* A mound, bluff or ridge of loose sediment, usually sand-sized sediment, lying upland of the beach and deposited by any natural or artificial mechanism, which may be bare or covered with vegetation and is subject to fluctuations in configuration and location.

*Erosion Control Line:* The line which represents the landward extent of the claims of the state in its capacity as sovereign titleholder of the submerged bottoms and shores of the Atlantic Ocean, the Gulf of Mexico, and the bays, lagoons and other tidal reaches thereof on the date of the recording of the survey as authorized by Florida law.

*Excavated sand:* Naturally occurring material that is to be removed and placed pursuant to the Coastal Construction Control Line permit through the mechanical or manual removal or alteration of consolidated or unconsolidated soil or rock material from or within the beach and dune system, pursuant to Section 161.053, Florida Statutes and Rule 62B-33, F.A.C.

*Hardpack:* The sand road west of the Erosion Control Line used by public safety and other authorized vehicles, pursuant to section 90-60.1(5) of the Town Code of Ordinances.

*Mean high water:* The average height of the high waters over a 19-year period. For shorter periods of observation, "mean high water" means the average height of the high waters after corrections are applied to eliminate known variations and to reduce the result to the equivalent of a mean 19-year value. The mean high water line is the intersection of the tidal plane of mean high water with the shore.

*Renourishment sand:* Replacement sand used for beach nourishment or beach restoration.

*Sand:* Material that maintains the general character and functionality of the material occurring on the beach and in the adjacent dune and coastal system.

*Seasonal high-water line:* The line formed by the intersection of the rising shore and the elevation of 150 percent of the local mean tidal range above local mean high water.

(Ord. No. 1631, § 2, 3-10-15)

### Sec. 34-4. - Testing protocols for the chemical composition of excavated sand seaward of the Coastal Construction Control Line.

Prior to placing excavated sand seaward of the Coastal Construction Control Line, the applicant must comply with testing pursuant to the "Testing Protocols for the chemical composition of excavated sand seaward of the Coastal Construction Control Line," as listed in Appendix A, and made a part of this Ordinance. These tests may be reassessed for periodic updates and review.

#### *Appendix A*

##### **Testing Protocols for the Chemical Composition of Excavated Sand Seaward of the Coastal Construction Control Line**

Pursuant to Section 34-4 of the Town Code of Ordinances, prior to placing excavated sand seaward of the Coastal Construction Control Line, the applicant must comply with the following protocols on the chemical composition of the excavated sand:

- A. Provide to the Town proof of a Phase 1 Environmental Site Assessment on applicant's property and where practicable, applicant's adjacent property. This must be completed within one year prior to the application, and must be in compliance with applicable American Society of Testing and Materials standards. Applicant may also be required to conduct a Phase 2 Environmental Site Assessment based on results from the applicant's Phase 1 Environmental Site Assessment. Applicant must conduct lead and asbestos testing through a firm or an individual that is certified for lead inspection and/or abatement in Florida.
- B. Applicant must comply with the following tests in (B)(1—5). Data to be expressed in mg/kg or in the relevant unit of measure.
  1. Resource Conservation and Recovery Act ("RCRA") 8 metals with extraction by United States Environmental Protection Agency ("USEPA") Method 3050 and analysis by USEPA Method 6010 or 200.7 (i.e., arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver).
  2. Total Recoverable Petroleum Hydrocarbons (TRPH) by Florida Department of Environmental Protection (FDEP) FL-PRO method.
  3. Chlorinated hydrocarbon pesticides by USEPA Method 8081, specifically aldrin, chlordane, dieldrin, endrin, heptachlor, and the DDT (dichlorodiphenyltrichloroethane)/DDD (dichlorodiphenyldichloroethane) /DDE (dichlorodiphenyldichloroethylene) group.
  4. Polychlorinated biphenyls (PCBs by USEPA Method 8082 (i.e. Aroclors 1016, 1221, 1232, 1242, 1248, 1254, and 1260).  
Alternatively, USEPA Method 8270 may be used to capture the analysis in the tests in the #3 and #4 categories. Data to be expressed in mg/kg. However, use of USEPA Method 8270 will involve reporting many more substances than the individual methods specified.
  5. The applicant must apply the Synthetic Precipitation Leaching Procedure (SPLP; USEPA Method 1312).
- C. Location and Quantity of Samples: The applicant shall propose a sampling plan for excavated sand to be placed seaward of the Coastal Construction Control Line to comply with tests within (B). The applicant must provide adequate documentation to demonstrate that the location and quantity of samples is a fair and reasonable representation of the site. Post placement testing shall include no fewer than five samples consistent with the sampling plan approved by the Town. The Town's independent expert or designee must review and approve the sampling plan and find it to be a fair and reasonable representation of the site.
- D. Submission of Results: The Town's independent expert will approve the collection methodology and attest the samples were submitted to a certified analytical laboratory for analysis, with appropriate chain of custody documentation.
- E. Evaluation of Results: The samples collected from the sampling plan will be compared to the Miami-Dade County DERM Residential Soil Cleanup Target Levels and to the Minimum Variable Unbiased Estimator (MVUE) value, if available, from the November 7, 2004 document entitled "Natural Background Soil Concentrations for the Barrier Islands of Miami-Dade County. The acceptable concentration will be the more restrictive of the two comparisons, except when derived limits are more restrictive than the natural background, and with the exception of Arsenic. Arsenic levels shall be consistent with naturally occurring arsenic levels on the barrier island beaches in Miami-Dade County, based on a Minimum Variance Unbiased Estimate (MVUE) of 5.2 mg/kg and the upper tolerance level (95% limit) of 11.3 mg/kg. Any values above these limits are unacceptable unless reviewed and concurred by the Town's independent toxicologist for acceptability.

Appropriate Quality Assurance/Quality Control (QA/QC) procedures must be followed by the firm selected for the sampling, per the applicable FDEP standard protocols FDEP SOP FS 3000 Soil and FDEP SOP FQ 1000 Field Quality Control Requirements.

(Ord. No. 1631, § 2, 3-10-15)

Prior to placing excavated sand seaward of the Coastal Construction Control Line, the applicant must satisfy the requirements of "Criteria for Physical Composition of Sand excavated sand seaward of the Coastal Construction Control Line" as listed in Appendix B, and made a part of this division. These requirements may be reassessed for periodic updates and review.

*Appendix B*

**Criteria for Physical Composition of Sand excavated sand seaward of the Coastal Construction Control Line.**

- A. The following physical sand characteristic standards are required for excavated sand landward of the Seasonal High Water Line and seaward of the Erosion Control Line.
  - 1. Munsell value of 7 or greater with a chroma of 3 or lower when wet.
  - 2. Mean grain size between 0.30 mm and 0.55 mm.
  - 3. Silt content less than 2% (passing a #230 sieve).
  - 4. No material greater than 5% retained on #10 sieve.
  - 5. Sand shall be free of construction debris, toxic material as determined by tests in Section 34-4, and other foreign matter.
- B. The following protocols for sampling and analysis shall be employed:
  - 1. One core boring shall be analyzed for every 3,000 cubic yards of sand to be excavated, as reasonably available to implement on site.
  - 2. Sediment samples will be extracted from the core borings at irregular intervals based on distinct stratigraphic layers in the sediment sequence. Samples that are representative of the material defined within the area will be extracted and analyzed,
  - 3. Composite data will represent the average physical characteristics of the material to be placed.
  - 4. An average of the representative layer, weighted by effective length, will be calculated for each core, producing the core composite. The composites will then be averaged and weighted by effective length to calculate the composite of the entire sand source.
- C. The composite of the source as a whole shall satisfy the aforementioned criteria for material to be deemed eligible for placement along the Town's beach.

(Ord. No. 1631, § 2, 3-10-15)

**Sec. 34-6. - Charges for consulting services for beach sand quality testing.**

The cost for compliance with the town's beach sand quality requirements shall be incurred by the applicant. Applicant shall pay the cost of the collection of the sand from the applicant's site and the submission of the samples for tests to a qualified, licensed, and regulated lab that meets industry standards to test the sand; as well as pay money through cost recovery to pay for the town's independent consultants and professionals to evaluate the sand quality testing results from the lab. Charges for consulting services for applicants are established in section 90-11 of the Town Code of Ordinances, and shall apply to the beach sand quality testing required by sections 34-4 and 34-5.

(Ord. No. 1631, § 2, 3-10-15)

**Sec. 34-7. - Lack of compliance.**

In the event that sand to be excavated seaward of the Coastal Construction Control Line does not meet the town's standards as described herein, then the applicant may request from FDEP removal and relocation of the non-compliant sand in an approved upland area and must replace it with an equal or greater volume of sand from an FDEP approved sand source, which will be subject to the same testing protocols as set forth herein.

(Ord. No. 1631, § 2, 3-10-15)

**Sec. 34-8. - Exclusions.**

Sections 34-2 to 34-7 do not apply to sand for beach nourishment or beach restoration projects authorized, undertaken and paid for by Miami-Dade County, the State of Florida, or federal authorities. In no event shall the exclusions authorized by this Section apply to activities of the applicant.

