

# Suitability for Construction Materials: Sand Source - Hawaii (2008)



*This map was prepared as a general planning aid; on-site soil evaluations may be required prior to making land management decisions. Soils were rated solely on the basis of physical soil properties. Ratings are for soils in their present condition and do not consider current land use.*

*Geographic proximity to watercourses and land use were not considered in this interpretive rating. In cases where multiple soil series are mapped within a given soil delineation (e.g., a map unit complex), the interpretive rating associated with the most common soil series was applied to the entire delineation.*



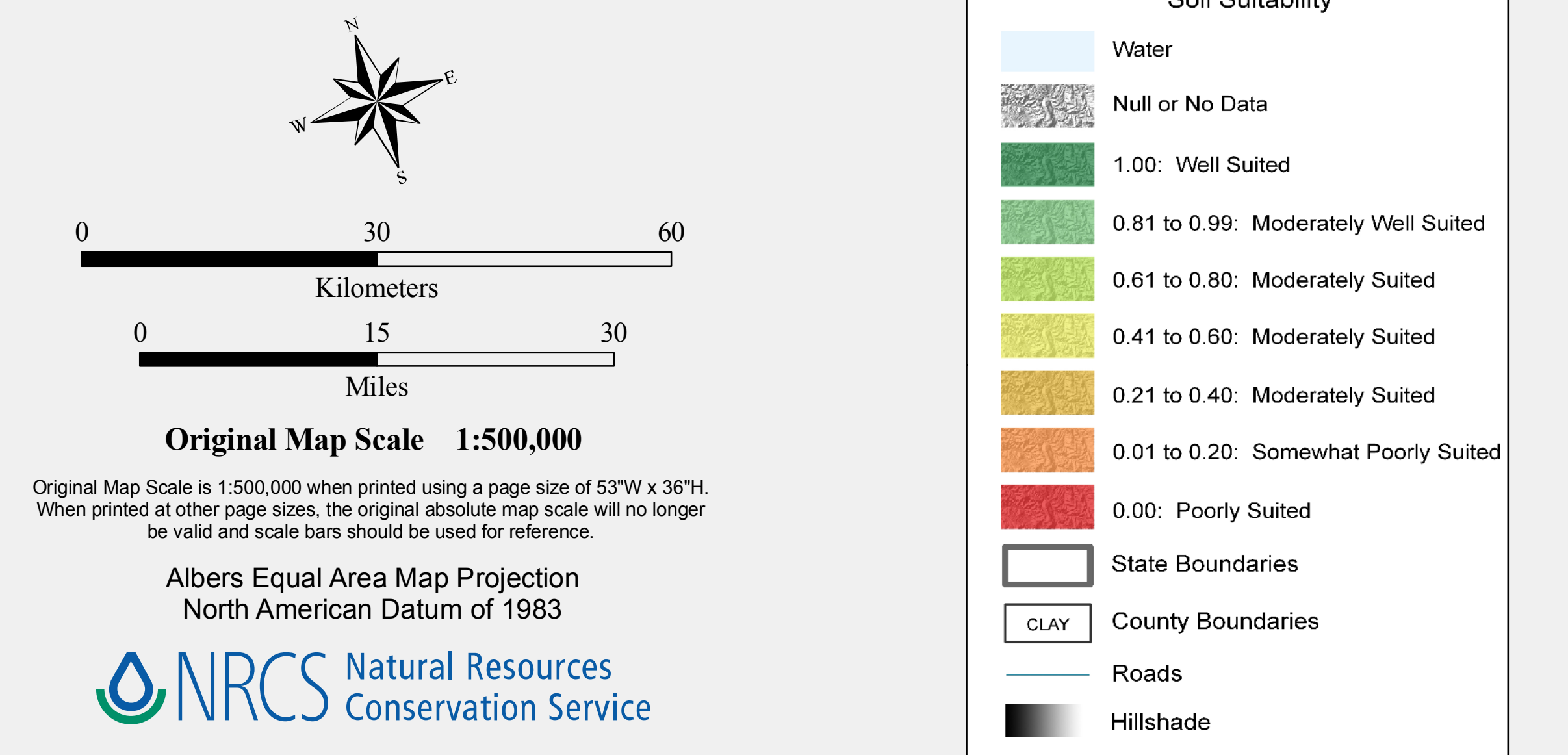
## Suitability for Construction Materials: Sand Source

Sand is used in great quantities in many kinds of construction. Specifications for each purpose vary widely, though sand as a construction material is usually defined as particles ranging in size from 0.074 mm (sieve #200) to 4.75 mm (sieve #4) in diameter. The intent of this rating is to show only the probability of finding material in suitable quantity. The suitability of the sand for specific purposes is not evaluated. Final site evaluation and selection require an onsite inspection to determine the suitability and quality of the materials for the intended purpose. Implementation of these interpretations helps minimize the need for excessive random exploratory investigation by pinpointing potential sites.

Soils are rated and placed into sand source suitability rating classes per their rating indices. These are poor (rating index = 0), fair (rating index > 0 and < 1.0), or good (rating index = 1.0).

Soil properties influence selection of a site as a potential source of sand. The soil interpretation for sand source is used as a tool in evaluating soil suitability or identifying the soil limitations as a potential source. The properties used to evaluate the soils as a probable source of sand are the grain size as indicated by the Unified soil classification, the thickness of the sand layer, and the amount of rock fragments in the soil material. If the lowest layer of the soil contains sand, the soil is rated as a probable source regardless of thickness.

Soil survey interpretations for construction materials are designed to provide guidance to users in selecting the site of a potential source. Soils may be selected as potential source materials because they are nearby, are the only source available, or meets some or all of the physical or chemical properties required for the intended application. In theory, every soil may be used as source materials, but in reality, only a few soils have the profile characteristics that meet the defined criteria and performance requirements when rated for a specific propose. The use of rating guides can provide the user a means to select potential sites for further evaluation.



Sources:  
 ESRI: 1992, 1:3,000,000 Contours, ArcInfo, ESRI - Redlands, CA  
 National Atlas (http://www.nationalatlas.gov), Roads, (192005)  
 National Atlas (http://www.nationalatlas.gov), State Boundaries, (10/2007)  
 Soil Survey Staff: 2007, Construction Materials: Sand Source Interpretation-National Soil Information System (07/15/2007), USDA Natural Resource Conservation Service, National Soil Survey Center, Lincoln, Nebraska, (http://soils.usda.gov)  
 USDA-NRCS Staff: 2003, County Boundaries Derived from 1:100,000 Bureau of Census - TIGER/Line source as provided by: U.S. Dept. of Commerce, Information Technology Center, Fort Collins, CO.  
 USDA-NRCS: 2008, Soil Survey Geographic Database (SSURGO) version 2.1, Hawaii Collection - Honolulu, HI. Soil Data Mart Source (http://soildatamart.nrcs.usda.gov). Fiscal Year 2008, second quarter edition.  
 USGS: Analytical Raster Data from 30-meter National Elevation Dataset (NED) using the following parameters: 115 degree azimuth, 45 degree azimuth, and 1 factor. Prepared by USDA-NRCS-MRDC, Morgantown, WV.