U.S. Department of Homeland Security
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FEMA

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MEMORANDUM FOR: Regional Administrators
Acting Regions Administrators
Regions I - X

ATTENTION: Disaster Assistance Division Directors

FROM: Elizabeth A. Zimmerman
Assistant Administrator
Disaster Assistance Directorate

SUBJECT: Disaster Assistance Fact Sheet DAP9580.8
Eligible Sand Replacement on Public Beaches

The purpose of this memorandum is to announce the issuance of the attached final Disaster Assistance Fact Sheet DAP9580.8, *Eligible Sand Replacement on Public Beaches*. This fact sheet is applicable to all major disasters and emergencies declared on or after the date of publication.

If you have any questions about this Fact Sheet, please contact Byron Mason, Public Assistance Division, via email at Byron.Mason@dhs.gov, facsimile (202) 646-3304, or phone (202) 646-4368.

Attachment

FEMA DISASTER ASSISTANCE

FACT SHEET 9580.8

ELIGIBLE SAND REPLACEMENT ON PUBLIC BEACHES

Overview

A beach is an area of unprotected, unconfined sand along a body of water subject to winds, tides, currents, and/or waves. When conducting evaluations of sand losses due to storm-induced erosion, the entire beach profile must be considered. The beach profile includes a dune or elevated back beach, a backshore consisting of a relatively flat berm(s) above high tide or high water and a sloped foreshore that is subject to variations in water levels, and a sub-aqueous nearshore zone that is influenced by the tides, currents, and wave action (USACE, 2003). The beach profile is very dynamic, constantly changing with changes in the tides, currents, and wave action that affect it. Sand moves from the dune and/or berm to the foreshore and sub-aqueous nearshore zone, and back again. This movement or redistribution of sand within the beach profile is a natural process that does not constitute beach damage.

Occasionally a storm causes such dramatic changes in the tides, currents, and wave actions that affect a beach, that sand is moved outside of the beach profile. It is moved too far on-shore, off-shore, or along-shore such that it is not recoverable by natural processes. In these cases, the beach is considered damaged by the storm.

The Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), 42 U.S.C. 5121-5206, as amended, Sections 403 and 406; and 44 Code of Federal Regulations (CFR) §§ 206.225, **Emergency work,** and 206.226, **Restoration of damaged facilities,** authorize FEMA's Public Assistance (PA) Program to fund replacement of sand on damaged public beaches under certain conditions.

Eligibility is divided into two areas: emergency work and permanent work (restoration of damaged facilities). This Fact Sheet addresses eligibility requirements for each area.

FEMA will review proposed sand replacement projects for compliance with the Endangered Species Act, Coastal Barrier Resources Act, and the National Historic Preservation Act. In addition, the applicant is responsible for obtaining all permits as required by applicable Federal, State, Tribal, or local regulatory agencies including, but not limited to, permits under Section 404 of the Clean Water Act and Coastal Zone Management Act.

ELIGIBLE SAND REPLACEMENT ON PUBLIC BEACHES

Emergency Work

- Emergency work, in accordance with 44 CFR §206.225(a)(3), is eligible for PA funding when it is necessary to:
  - Eliminate or lessen immediate threats to life, public health, or safety; or
  - Eliminate or lessen immediate threats of significant additional damage to improved property.
    - Immediate threat means the threat of additional damage or destruction from an event which can reasonably be expected to occur within five years (see 44 CFR §206.221(c)); and
    - Emergency work to eliminate or lessen immediate threats of additional damage to improved property must be cost effective (see 44 CFR §206.225(a)(3)(ii)).

- If a beach has eroded to a point where a five-year storm or flood event will damage improved property, cost-effective emergency work on the beach may be eligible. Improved property is defined as a "structure, facility or item of equipment which was built, constructed or manufactured" according to 44 CFR §206.221(d), **Definitions**.

- Emergency work on beaches typically includes the construction of a temporary sand berm to protect against additional damage from a five-year storm. These sand berms are not intended to be permanent, only to provide protection from immediate threats.

- FEMA determined the five-year flood protection criterion for emergency work from a frequency versus average dune erosion relationship that the National Flood Insurance Program developed for application on a nationwide basis (FEMA, 1988). For a five-year event, the average expected erosion above the five-year stillwater elevation (the maximum storm-induced water-surface elevation, primarily a combination of the normal tide and the storm surge) is 6 cubic yards per linear foot (CY/LF) of shoreline.

- Emergency berms can be constructed with sand recovered from the low-tide beach (foreshore and nearshore zone) and/or over-wash areas. If insufficient quantities are available to be recovered, and/or if state and/or local regulations prohibit these actions, sand can be imported to construct the emergency berms, if the applicant demonstrates that it is cost-effective. The source of imported sand must meet all applicable environmental protection regulations in order to be eligible for FEMA funding. These berms should have no more than 6 CY/LF of sand above the five-year stillwater elevation. In some cases it may be necessary to place sand below the five-year elevation to provide a base for the berm. The placement of that sand is also eligible as part of the emergency protection. If 6 CY/LF of sand did not exist above stillwater elevation before the event, the emergency berm and total amount of sand replaced is limited to the amount of sand eroded by the disaster event.

ELIGIBLE SAND REPLACEMENT ON PUBLIC BEACHES

- **The following items are NOT eligible emergency protective measures:**
  - Sand placement in isolated areas of severe erosion as it does not protect improved property;
  - Protection of improved property that will not be damaged by an event with a 20 percent chance of occurrence each year; or
  - Protection of unimproved property.

Permanent Work

- FEMA provides grants for the repair, restoration, reconstruction, or replacement of public facilities on the basis of their design as they existed immediately prior to the disaster (see 44 CFR §206.226). In accordance with 44 CFR §206.226(j)(2), a beach may be considered an eligible facility when:
  - The beach was constructed by the placement of imported sand (of proper grain size) to a designed elevation, width, and slope;
  - A maintenance program involving periodic renourishment with imported sand has been established and adhered to by the applicant; and
  - The maintenance program preserves the original design.
- To document eligibility of the beach as a designed and maintained facility, the applicant should provide the following information to FEMA:
  - All design studies, plans, construction documents, and as-builts for the original nourishment;
  - All studies, plans, construction documents, and as-builts for every renourishment;
  - Documentation and details of the maintenance plan, including how the need for renourishment is determined and funded; and
  - Pre-and post-storm profiles that extend at least to the seaward edge of the sub-aqueous nearshore zone (closure depth, usually -15 to -20 feet).
- The amount of sand eligible for replacement with permanent work funding is limited to the amount lost as a result of the disaster event. The pre- and post-storm profiles are used to determine the eligible volume of sand. If pre-storm profiles are not available, the estimated erosion from the design study and renourishment history can be used to determine a pre-storm condition.
- The cost to replace sand that eroded prior to the disaster is **not** eligible for FEMA funding. However, the applicant is encouraged to renourish the project to the design.

ELIGIBLE SAND REPLACEMENT ON PUBLIC BEACHES

- Not all beach nourishments are eligible for PA funding as a designed and maintained facility. The following are typically **not** eligible:
  - Emergency or "one-time" nourishments, even if to a design, are **not** eligible projects because they do not have an established and adhered to maintenance program.
  - Emergency or "as-needed" renourishments when the beach has eroded to a critical condition (all of the original nourishment gone), are **not** eligible maintenance programs. A portion of the improved beach must be maintained through scheduled renourishments.
  - Renourishments must be to the project design; partial renourishments or "hot-spot" nourishments are **not** considered maintenance of the improved project.
  - Sand placed on a beach from a channel maintenance project is **not** an eligible beach nourishment project. The sand placed on the beach (dredge spoils) is not selected to meet compatibility design criteria, and the amount placed is dependent on the amount dredged, not a design. If removal of sand from the maintained channel is eligible for PA funding, disposal of the sand spoils on the beach may be eligible as part of that project.
- Work to restore or replace sand on an unimproved natural beach is **not** eligible for FEMA assistance as natural beaches are not constructed and maintained to a design (see 44 CFR §206.226(j)).

References

- Federal Emergency Management Agency, *Basis of Erosion Assessment Procedures for Coastal Flood Insurance Studies*, Washington, DC, November 1988.
- U.S. Army Corps of Engineers, *Coastal Engineering Manual*, EM 1110-2-1100, Change 1, Washington, DC, July 2003.

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10.1.09
Date