

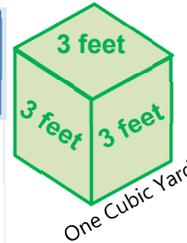
CITY OF DEL MAR

COASTAL SEDIMENT MANAGEMENT PLAN

The **Sediment Management Plan** was developed to preserve the Del Mar beach and the many benefits it provides into the future. This Plan responds to findings from the Del Mar **Vulnerability Assessment Report**, which showed the potential for significant vulnerabilities and risks to Del Mar (ESA 2016). The City has already experienced beach erosion and coastal and river flooding, which are projected to be more severe in the future with projected sea-level rise. The Plan serves as a companion document to the **Community Plan, Adaptation Plan, and Local Coastal Program** to inform the City's policies. The Sediment Management Plan evaluates current and future beach conditions, the interaction between the beach and San Dieguito River Lagoon, beach nourishment, and planning-level costs.

Potential Beach Nourishment Volumes and Costs to Maintain a Walkable Beach

	Currently	1 foot SLR	5.5 feet SLR
Nourishment needed approximately every 10 years	190,000 cubic yards	380,000 cubic yards	860,000 cubic yards
Total Cost approximately every 10 years	\$5,700,000	\$9,600,000	\$21,500,000 or more*



*The availability and cost of sand needed with 5.5 feet of sea-level rise is uncertain.



Photo courtesy of Coastal Environments, 2017

Study Conclusions

- **To maintain a walkable beach in the future with sea-level rise, additional beach nourishment will be needed** beyond the existing San Dieguito Lagoon mouth dredging.
- **Beach nourishment is expected to be feasible** with up to 3 feet of sea-level rise, but the feasibility of nourishment for higher levels of sea-level rise is uncertain.
- **Existing sea walls and revetments would need to be raised** in conjunction with beach nourishment to maintain the existing level of flood management for North Beach.
- **External sources of sand will be needed** to nourish and maintain the beach in Del Mar. Potential sources include offshore dredging, sediment from Lake Hodges, and other opportunistic projects. The City is developing a Sand Compatibility and Opportunistic Use Program, or SCOUP, to identify these opportunities.
- Beach nourishment could potentially have some negative effects, including effects to beach ecology, impacts of mining sand sources, and increased deposition of sand in the mouths of San Dieguito and Los Peñasquitos Lagoons.
- The City of Del Mar can participate in **regional beach nourishment programs**. Regional-scale programs are likely to be more effective than a program limited to Del Mar.
- Constructing sand retention structures, such as offshore reefs, is expected to increase the effectiveness of beach nourishment. However, hard structures are not the preferred plan for Del Mar at this time.