

A New Plan

An introduction to the Sediment Management Strategic Plan

In recent years, the Los Angeles County Flood Control District (District) has identified new challenges in managing sediment. In particular, the wildfires that occurred between 2007 and 2009 burned a large portion of the County and led to an increased inflow of sediment and debris within District facilities. This has put pressure on the remaining capacity of existing sediment placement sites, where the District has traditionally placed sediment. As a result, the District has developed a 20-year Sediment Management Strategic Plan for years 2012-2032, which pursues new alternatives that can reduce the environmental and social impacts of sediment management.

What is sediment?



Soil, sand, and rock from the mountains that are broken down by weather and erosion are referred to as sediment. These materials are usually transported by water, wind, and gravity to lower elevations. In particular, sediment is carried to the reservoirs and debris basins by stormwater.

The Strategic Plan represents the results of a continuing dialogue about sediment management between the District and numerous stakeholders in the region. The Strategic Plan provides an overview of sediment management issues, evaluates various strategies to help identify optimal solutions for sediment management, and identifies general steps that should be pursued to meet the District's mission. The Strategic Plan is guided by the following key objectives: maintaining flood risk management and water conservation, recognizing opportunities for increased environmental stewardship, reducing social impacts, identifying ways to use sediment as a resource, and ensuring the District is fiscally responsible in its decision-making.

The Strategic Plan is a living document that is open to other alternatives and may be revised in the future as conditions change.

20 year planning quantity:
67.5 million cubic yards

67.5 MCY

Active Sediment Placement Site (SPS)
remaining capacity:
48 million cubic yards

48 MCY

19.5
MCY

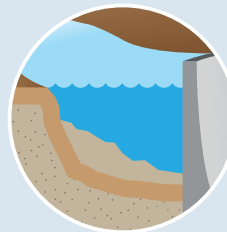
Additional sediment capacity needed:
19.5 million cubic yards

Why is sediment management important?

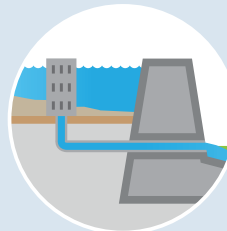
Too much accumulated sediment can impact the flood control and water conservation system in the following ways:



Diminishes a dam's ability to manage water flow from severe storms, potentially affecting downstream communities.



Takes up reservoir space that could otherwise be used to store water.



Reduces the ability of debris basins to capture sediment naturally delivered by stormwater during subsequent storms.

LA County



2009 Station Fire

Forest fires greatly increase the amount of sediment that must be managed by the District. When mountains and hills are burned, their soils become exposed and more susceptible to erosion. These soils, along with the dense ash and charred debris of burned vegetation, are picked up by storm flows and end up in reservoirs and debris basins when it rains. The duration and intensity of a storm, as well as the severity of the fire, determine the amount of sediment that is produced.

The 2009 Station Fire, the largest fire in Los Angeles County's recorded history, burned more than 250 square miles before it was contained.



The Sediment Management Strategic Plan Development Approach

1. Identify sediment removal, transportation, and placement/use alternatives.
2. Evaluate the alternatives by considering environmental and social impacts, ability to implement, performance, and cost.
3. Combine potentially feasible alternatives for each facility.

Stakeholder Task Force

The Stakeholder Task Force was made up of representatives from agencies, cities, landfill owners and operators, water agencies, sand and gravel companies, environmental groups, and others that play a role in sediment management or are directly affected by the sediment management process. This group provided feedback on the Strategic Plan.

Sediment Management Advisory Working Group

The Advisory Working Group provided advisory recommendations and acted as public liaisons, while representing the various, broad interests of the community. Members included representatives from local jurisdictions, water agencies, environmental groups, and the media.

Internal Working Group

The Internal Working Group provided a range of background and expertise for reviewing the alternatives and the Strategic Plan. Each Department of Public Work's division that is affected by sediment management operations had a representative in the group.

The Sediment Management Strategic Plan

To address the rapidly diminishing capacity of sediment placement sites, the Sediment Management Strategic Plan identifies ways to manage sediment in a cost-effective manner while benefitting people and the environment to the highest possible extent. The Strategic Plan accomplishes the following:

Community Stakeholders

Public Open Houses were conducted to provide a forum for public input during the Strategic Plan review period. Two Open Houses were held in the general vicinity of major facilities to allow neighboring community members to provide feedback on the alternatives identified in the Strategic Plan.



Establishes strategies for sediment management to provide for flood risk management and water conservation.



Emphasizes sustainable strategies that balance environmental, social, and economic impacts.



Incorporates public input and transparency into Strategic Plan development and project implementation.

Alternatives Analysis

The alternatives were evaluated based on the following five main factors:

- Environmental impacts
- Social impacts
- Ability to implement
- Performance of the alternatives
- Cost

Based on the analysis and balancing of the key objectives of the Strategic Plan, a number of potential removal, transport, and placement/use alternatives were determined.

Sediment Management Methods

Removal

- Dry Excavation
- Sluicing
- Dredging
- Flow-Assisted Sediment Transport

Transport

- Sluicing
- Conveyor belts
- Slurry pipeline
- Trucks (including low-emission trucks)

Placement

- Gravel pits/aggregate industry
- Sediment placement sites
- Landfills