

# EXECUTIVE SUMMARY

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The primary objective of the Sun Valley Watershed Management Plan (WMP) is to solve the chronic local flooding problem with a multipurpose solution, acknowledging that rainfall is a significant component of our water supply in this semi-arid region. The Sun Valley Watershed Stakeholders Group (Stakeholders) has been meeting since late 1998 to address the flooding problem in Sun Valley under the leadership of the Watershed Management Division, County of Los Angeles Department of Public Works (LACDPW). The Watershed Management Division was formed in recognition that integrated solutions can address flood protection, water supply and stormwater quality needs of the County. The Stakeholders defined a mission for the Sun Valley watershed that is consistent with this philosophy. The mission of the Stakeholders is:

*“...to solve the local flooding problem while retaining all stormwater runoff from the watershed, increasing water conservation, recreational opportunities, wildlife habitat, and reducing stormwater pollution.”*

The Sun Valley Watershed is located in the San Fernando Valley, about 14 miles northwest of Downtown Los Angeles. It is a subbasin of the Los Angeles River Watershed. The green oval in **Figure ES-1** shows the location of the Sun Valley Watershed in the Los Angeles River Watershed. The Sun Valley area is not served by a major flood control system and is highly developed. Consequently, stormwater runoff causes flooding of city streets during even minor rainfall events, and has caused property damage during heavy rainfall events.

**Figure ES-1**  
**Sun Valley Watershed Location**



## Executive Summary

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The purpose of the Sun Valley Watershed Management Plan project is to meet the multiple objectives of the Stakeholders. The watershed management planning process is based on an organized methodology for development and evaluation of alternatives. The process includes the following steps:

- Define project objectives
- Define Best Management Practice (BMP) elements
- Evaluate opportunities and constraints
- Assemble into alternatives
- Evaluate and refine alternatives
- Select and evaluate four final sample alternatives.

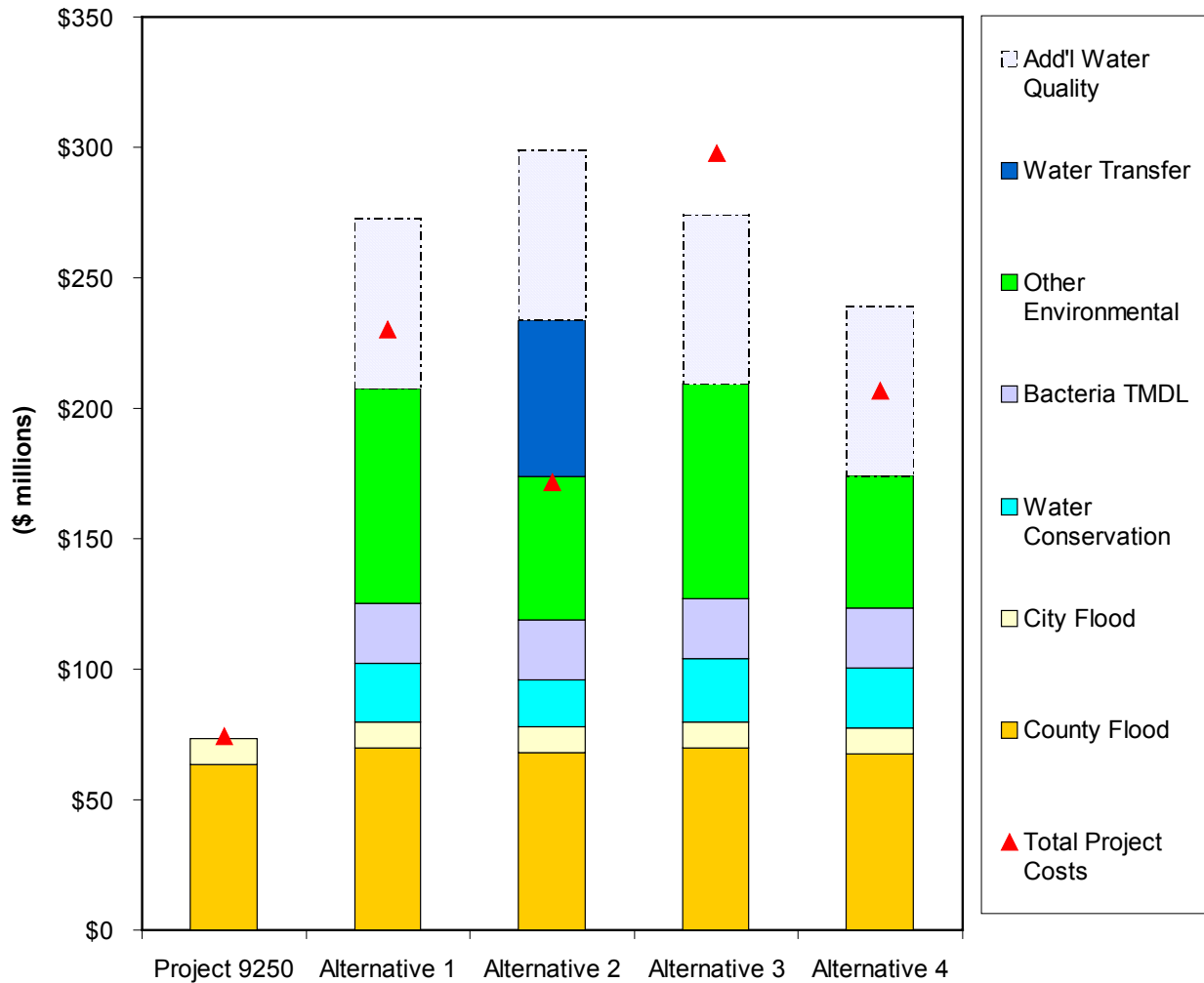
Technical Memoranda completed as part of the project explain the details of each step of the process. This Watershed Management Plan gives an overview of the process and explains the results. The results include four final sample alternatives. The four final sample alternatives are each a system of components that, when combined, meet the project objectives. Examples of project components are infiltration basins, constructed wetlands, tree planting, and storm drains. Many of the components include benefits in addition to flood control. The four final sample alternatives all provide significant water conservation, recreation, water quality, habitat, and other benefits. The components are spread across the watershed to meet the County flood control criteria at all locations.

Detailed analysis of the four final sample alternatives is complete. The analysis includes water balances, conceptual designs, hydraulic models, and benefit/cost analysis. The benefit/cost ratio for each sample alternative and Project 9250 (the County designed storm drain) is shown in **Table ES-1**. A graphical summary of the benefits and costs for each alternative is presented in **Figure ES-2**. The benefit/cost ratios compare the present value of the costs and the benefits of each alternative. The cost includes the present value of the total project cost and O&M over a 50-year evaluation period. The benefits use the present value of the summed benefits over the same evaluation period.

**Table ES-1**  
**Benefit/Cost Ratio for Each Alternative**

	Alternative				
	9250	1	2	3	4
Present Value of All Benefits (in \$ million)	\$73.44	\$270.47	\$295.39	\$274.93	\$239.95
Present Value of Capital and O&M Costs (in \$ million)	\$74.46	\$230.40	\$171.58	\$297.90	\$206.61
Benefit/Cost Ratio	<b>0.99</b>	<b>1.17</b>	<b>1.72</b>	<b>0.92</b>	<b>1.16</b>

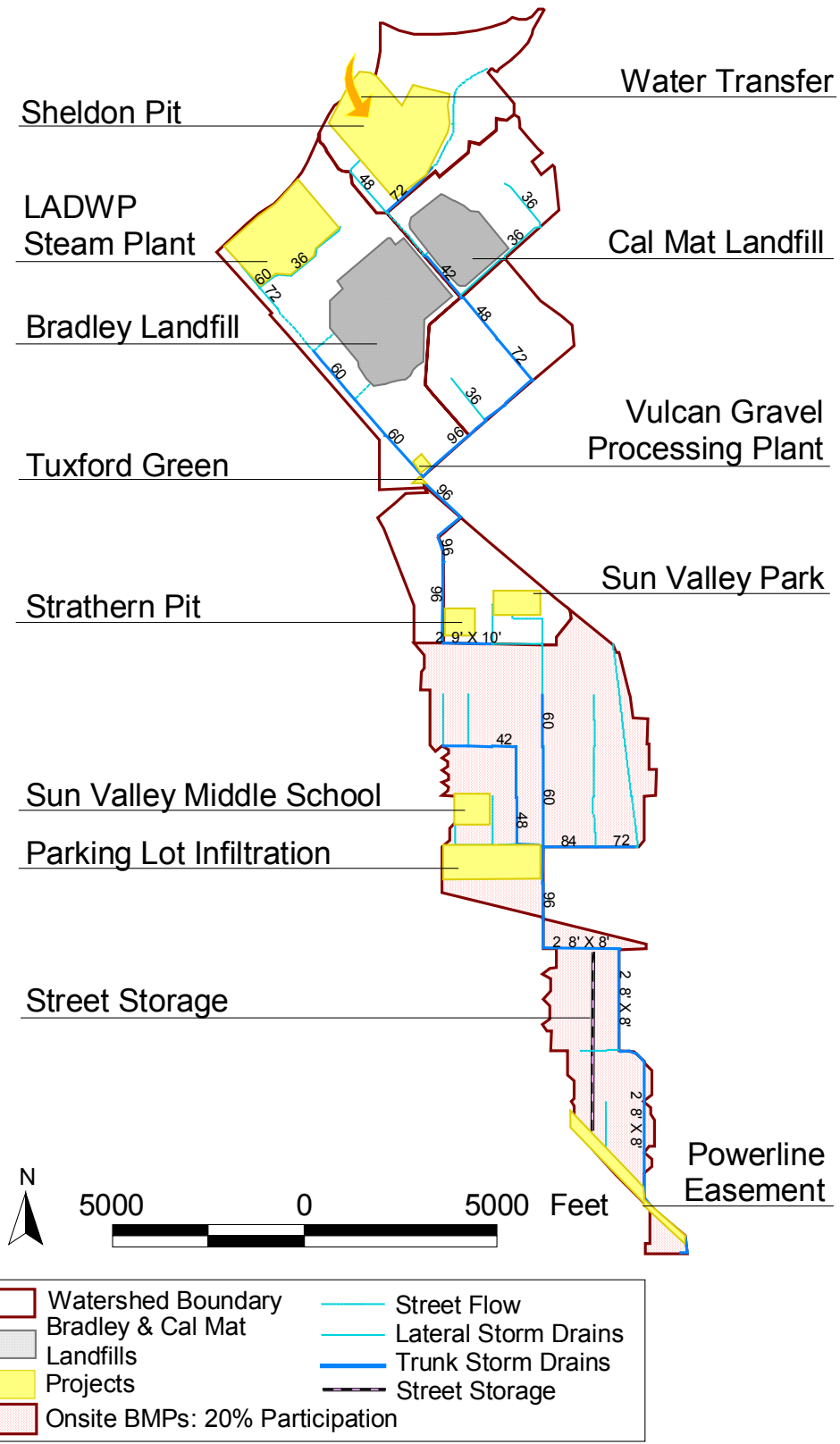
**Figure ES-2**  
**Benefits of the Sun Valley Alternatives**



Alternative 2, Water Conservation, has the highest benefit-to-cost ratio of 1.72. This is due to the combination of higher overall benefits and lower total project costs. The higher benefits are associated with the water transfer component from Tujunga Wash to Sheldon Pit, which provides almost four times the groundwater recharge provided by any other alternative. If the water transfer component were included in the other alternatives, their benefit-to-cost ratios would also increase. The lower cost results from implementing fewer retention projects, and releasing water from the watershed outlet during large storm events.

**Figure ES-3** is a graphical representation of sample Alternative 2. It depicts how the different project components are distributed geographically across the watershed.

Figure ES-3  
Alternative 2 Diagram



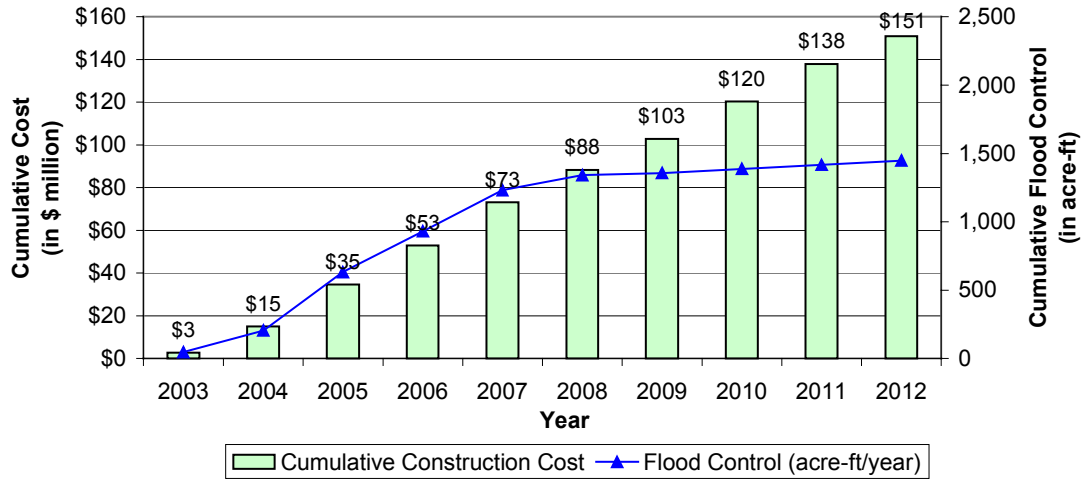
**Table ES-2** lists the components included in Alternative 2 and the amount of water that will be conserved by the components in an average year. Table ES-2 also lists the estimated capital cost for each component. The total estimated cost of Alternative 2 is \$151 million. Due to the multiple benefits of Alternative 2, there are a number of agencies and funding sources likely to participate in project funding.

**Table ES-2  
Sample Alternative 2 Design, Water Conservation, and Cost Summary**

Project Component	Average Annual Water Conservation (acre-ft)	Capital Cost
LADWP Steam Plant	184	\$4,539,000
Vulcan Gravel Processing Plant	45	952,000
Tuxford Green	Mostly Conveyance – Negligible Conservation	4,350,000
Sun Valley Park	38	2,800,000
Sun Valley Middle School	25	3,033,000
Tree Planting and Mulching	Negligible	2,200,000
Tujunga Wash Diversion	6,000	650,000
Sheldon Pit	303	16,850,000
Strathern Pit	649	15,500,000
Parking Lot Infiltration	57	15,300,000
Street Storage	113	17,643,000
Onsite BMPs	113	16,407,000
Powerline Easement	596	7,500,000
Trunk Storm Drains	Conveyance Only	36,816,000
Lateral Storm Drains	Conveyance Only	6,362,000
<b>Total</b>	<b>8,123</b>	<b>\$150,902,000</b>

The implementation plan for the sample project covers ten years with annual costs ranging between \$9 and \$19 million. **Figure ES-4** depicts the cumulative costs and flood protection of Alternative 2. The flood control curve shows that projects with a large flood protection benefit are scheduled for construction in the first five years of implementation. When all proposed flood control structures are completed, the Sun Valley Watershed will be in compliance with the County Flood Control requirements.

Figure ES-4  
Cumulative Construction Cost and Flood Protection of Sample Alternative 2



Note: Flood protection data is based on structures that retain water and ignores flood protection provided by storm drains. The measure of flood protection from storm drains cannot be measured in acre-feet.