FINAL RECOMMENDATION OF THE DEVIL'S GATE DAM SEDIMENT WORKING GROUP

TO:	CITY MANAGER, MICHAEL BECK
FROM:	DEVIL'S GATE DAM SEDIMENT WORKING GROUP
SUBJECT:	CITY OF PASADENA "ALTERNATIVE"
DATE:	MAY 1, 2014
CC:	MAYOR BILL BOGAARD, ASSISTANT CITY MANAGER JULIE GUTIERREZ, PUBLIC WORKS DIRECTOR SIOBHAN FOSTER, AND CITY ENGINEER STEVEN L. WRIGHT

OVERVIEW:

The City of Pasadena wants to work in partnership with the LA County Flood Control District (LACFCD) to ensure flood protection for local residents below Devil's Gate Dam and to preserve the rare natural values of the Arroyo Seco and Hahamongna Watershed Park. Those goals can best be achieved by an ongoing sediment management program that minimizes negative impacts on Hahamongna and the surrounding neighborhoods.

Pasadena proposes a long-term agreement with LACFCD for the County to achieve and maintain a capacity in the Hahamongna basin for 2.5 million cubic yards (mcy) of sediment. In reaching and maintaining this capacity, no more than 220,000 cubic yard (cy) would be removed per year, except after unusually large storm events. Maintaining sediment capacity of 2.5 mcy will ensure adequate flood protection while minimizing impacts to habitat and recreation activities in Hahamongna Watershed Park and the surrounding communities.

SEDIMENT TARGET AND REMOVAL PROGRAM

The Draft EIR's proposed target of capacity for 2 Design Debris Events, approximately 4 mcy of sediment, would mean an overly aggressive project with excessive impacts on wildlife, habitat and the surrounding communities. The historical record of sediment within Hahamongna indicates that a target of 2.5 mcy of sediment storage capacity is quite adequate.

The current available sediment capacity in Hahamongna is about 1.4 million cubic yards. (Draft Summary of Devils Gate Dam and Reservoir Design Standards and History – Los Angeles County Flood Control District March 26, 2014). In reaching a sediment target level of 2.5 mcy, sediment should be removed at a rate of 220,000 cy per year until the target goal is achieved. However, if a large amount of sediment enters the reservoir during the initial five year period**,** the County may remove up to 100,000 cy per year above the regular annual amount of 220,000 cy.

After the initial five year period, 2.5 mcy of available storage capacity should be maintained with a schedule of sediment removal acceptable to the City, and with regular topographic surveys to

evaluate sediment storage, especially after heavy rainfall brings large amounts of sediment into the basin.

A summary of the figures:

Desired target sediment capacity in the Hahamongna basin	2.5 mcy
Existing sediment capacity in the basin	1.4 mcy
Amount to be removed to reach the desired capacity	1.1 mcy
Maximum amount to remove each year until target goal is achieved.	220,000 cy
Additional amount to remove after heavy inflow during the first five years	100,000 cy

PROJECT FOOTPRINT:

A modification of Alternative 3, Configuration D described in the Draft EIR would be the best pattern for sediment excavation with least damage to the environment**.** The majority of the excavation should take place just to the north of the dam and on the natural stream channel along the east side of the Arroyo as far north as Johnson Field. But in contrast to the proposal in the Draft EIR, there should be no excavation in the westside stream channel beyond where the two channels merge. This will preserve valuable riparian habitat on the westside. An irregular shaped seasonal conservation pool near the dam should be constructed that will allow for water infiltration, water bird habitat, and other wildlife habitat during the wet season. It is recommended that space for wildlife conductivity/passage be located adjacent to the conservation pool.

TRAFFIC/TRUCKING ROUTE

A lane will be constructed off Oak Grove Drive onto the paved area just east of the dam for incoming trucks to enter the reservoir while avoiding the La Canada Verdugo Road neighborhood. Trucks will descend into the basin on the existing ramp. Loaded trucks will depart using the westside reservoir access road, turn right on Oak Grove Drive, then left on Berkshire to the 210 Freeway. The existing western access road is currently unpaved, and the part of this access road from below the West Rim Trail to the reservoir will be widened but remain unpaved. The section of this access road from Oak Grove Drive to the West Rim Trail will need to be widened and paved. Both access roads will only allow for one-way truck traffic. Dedicated turn lanes are essential for all construction vehicle movement. In addition, flaggers are essential to allow for smooth traffic flow and ensure all non-essential traffic for the project site is re-routed.

There will be no staging of trucks on city streets. In addition, onsite storage of trucks and construction equipment shall be minimized; but, if storage takes place onsite, trucks and construction equipment shall be stored when not in use away from recreation, wildlife corridors and habitat to the greatest extent feasible.

SCHEDULE

The sediment removal will take place during the dry season from April 15th to October 15th. This alternative does not allow for work during the following days:

- No Weekend Operation (52 days)
- 4 Federal Holidays (Memorial Day, Fourth of July, Labor Day, Columbus Day)
- No operations during Rose Bowl Displacement Events (unknown number of days)

In addition, to reduce the impacts to the adjacent communities the project will limit dump truck activity to the period from 8:45am to 2:45pm. However, it will allow for daily site arrival and setup at 8:00 am and daily site closure at 4:00 pm. In addition, the proposed project limits the number of trucks to 120 trucks per day. The number of trucks per day may need to be adjusted after heavy rainfall brings large amounts of sediment into the basin.

AIR QUALITY

Air quality is of major concern with the proposed project. During sediment removal activities it is anticipated that very fine particulate matter will become airborne. The airborne sediment will have significant public health impacts on northern Arroyo neighborhoods, particularly Pasadena and Altadena Eastside neighborhoods, and on nearby schools. To limit public health impacts of airborne sediment, the Project must be slowed down and spread out over a reasonable time. In addition, construction activities should be suspended during high winds and/or poor air quality and/or Red Flag Days and/or during area wildfires. To mitigate fugitive dust the project should implement best management practices, which include but are not limited to installation of wheel washer, using water trucks to keep sediment from becoming airborne and requiring all trucks to be tarped.

Air quality associated with production of NOx emissions are of concern. Thus to reduce these the following are necessary steps that will reduce construction air quality impacts:

- Use low emission vehicles that adhere to the highest Federal and State standards, including AQMD standards;
- Use electricity from power poles rather than temporary diesel or gasoline power generators; and
- Contractors should apply for SCAQMD "SOON" funds (reduction of NOx emission).

WILDLIFE

Southern California is considered one of about two dozen of the planet's ecological "hotspots" with many of the world's plant and animal species, including those that are rare or endangered. Hahamongna stands out for its rich variety. We want to preserve as much as possible of its vegetation for its own sake, and as habitat for the many birds and animals that forage, nest and rest there during the year. Sediment excavation also should try to preserve corridors for wildlife to move back and forth, some from the foothills southward under the roadways to attractive

places such as Cottonwood Canyon and other points farther south of the dam in the Arroyo Seco Watershed. These corridors should be 100 feet wide, or more, where possible to give animals cover from predators.

HABITAT MITIGATION

Habitat mitigation is necessary to reduce overall impacts to the environment. The riparian and alluvial habitat should be replaced at a rate of 5 to 1. The mitigation should take place primarily within the Arroyo Seco Watershed or otherwise within the City of Pasadena.

ONSITE PROJECT MANAGER ACCESSABILITY

To facilitate prompt resolution of Project issues or impacts which require immediate, responsive attention, the following contact information shall be provided on an ongoing basis throughout the Project to the Working Group, the Pasadena neighborhood associations adjacent to Hahamongna and the Central Arroyo, the Public Works Department of the City of Pasadena, and, the City of La Canada-Flintridge: the name and cell phone number of the onsite Project Manager. The onsite Project Manager's contact information shall be regularly updated throughout the duration of the Project as necessary.

A LARGER VISION

The aim for this project should be more than sediment removal and basin capacity. It should accommodate a stream restoration program taking account of the U.S. Army Corps of Engineers Arroyo Seco Watershed Feasibility Study. The Los Angeles County Flood Control District is a partner with the Army Corps in this study, and mitigation for the proposed project could be used to implement this kind of stream restoration. The project should align with the Hahamongna Watershed Park Master Plan.

DEVIL'S GATE DAM SEDIMENT WORKING GROUP

Members of the Working Group: Don Bremner, Tim Brick, Gretchen Brickson, Nina Chomsky, Henreen Nunley and Dr. Seema Shah-Fairbank

Advisors to Sediment Working Group:

Dr. Norman H. Brooks, James Irvine Professor of Environmental and Civil Engineering, Emeritus at California Institute of Technology.

Michael "Mickey" Long, former Natural Areas Administrator of L.A. County's 19 Natural Areas and Nature Centers, and Supervisor at Eaton Canyon Natural Area Park and Nature Center.