

**APPROVED**  
JUL 11 2007

REPORT OF GENERAL MANAGER

NO. 07-159

DATE July 11, 2007

**BOARD OF RECREATION  
and PARK COMMISSIONERS**

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BOARD OF RECREATION AND PARK COMMISSIONERS

SUBJECT: GRIFFITH PARK FIRE RECOVERY - EROSION CONTROL PROJECT - SCOPE OF WORK AND CALL FOR BIDS

R. Adams	_____	J. Kolb	_____
J. Combs	_____	F. Mok	_____
H. Fujita	_____	K. Regan	_____
S. Huntley	_____	*M. Shull	<i>Chapman</i>

*Ray Adams*  
General Manager

Approved \_\_\_\_\_

Disapproved \_\_\_\_\_

Withdrawn \_\_\_\_\_

RECOMMENDATION:

That the Board:

1. Direct staff to complete the plans and specification for the hydro-mulching scope of work for erosion control of areas within the Griffith Park burned area that is critical for protection of private and public property under the Griffith Park Fire Recovery - Erosion Control project as indicated in the body of this report; and
2. Authorize the General Manager to release the bid plans upon completion of the scope of work and specifications to be included therein, subject to City Attorney approval as to form.

SUMMARY:

On May 8, 2007, a brush fire broke out and, over the course of the next two days, consumed over 800 acres of Griffith Park. The fire caused significant damage to the vegetation and destroyed the majority of the mixed chaparral and mixed shrub plant communities. While these plants species are critical to the natural ecosystem and will likely recover on their own over the next 10 years, the existing burned landscape is at risk of heavy erosion and runoff during rain events.

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Fires greatly alter the physical characteristics of hillside slopes, stripping them of their natural protective cover of vegetation and organic litter and removing barriers that stabilize soil and hold sediment. In Southern California, the chaparral vegetation has a natural tendency to develop water repellent soils due to their natural high wax content. This water repellency dramatically increases after a wildfire because the waxes become vaporized and get driven into the soil by the heat of the fire. This water repellency reduces water infiltration in the soil and increases runoff rates. According to the U.S. Forest Service (USDA Forest Service Gen.Tech.Rep. RMRS-GTR-63.2000), peak flows increase 500 to 9,600 percent during the first year after a fire. As a result, burned watersheds generally shed runoff faster than unburned watersheds and commonly produce flash floods, debris flows, and landslides, which can be devastating to property and human life. The burned areas of Griffith Park have the potential of demonstrating this behavior.

Approximately one-fifth of Griffith Park was adversely affected by the fire. As shown by the Fire Intensity Map in Attachment A, the majority of the burn area is categorized as moderate to severe, which indicates that most, if not all, of the pre-existing vegetation has been removed from these areas. During the field work for the Fire Intensity Map, moderate to high water repellency rates were observed in the soils within the burn area. Furthermore, the majority of the burn occurred where the topography is steep to very steep and where the soils are shallow and underlain by impermeable bedrock, which prevents water infiltration and makes the topsoil very prone to erosion and debris flow.

Immediately following the fire, Recreation and Parks staff assembled the Griffith Park Fire Recovery Team composed of experts from the agencies listed in Attachment B. The team has been meeting on a weekly basis discussing both short and long term recovery strategies. After assessing the overall burn severity, assets at risk, watershed mapping and potential sediment loading, the team's focus has been on the short term for the potential of accelerated erosion and runoff.

Due to the urban nature of Griffith Park and the densely populated surrounding area, the team has been discussing and investigating many preventive erosion control measures that could be implemented prior to the rainy season which typically begins in November.

One such measure is known as hydraulic mulching (hydro-mulching). Hydro-mulching is a relatively new post-fire rehabilitation treatment process where wood fiber mulch or straw mulch, polymers, and bonded fiber are applied with a tacking agent in a slurry with water to form a matrix that provides temporary stabilization of bare slopes or other bare areas (There is no seed in this mixture). This mulching method provides uniform, economical slope protection that reduces erosion and fosters plant growth. Hydro-mulch reduces erosion by providing cover that reduces raindrop impact and absorbs overland flow. Hydro-mulching also binds loose soil and ash to protect downstream water quality. The mulch improves moisture retention, which benefits the natural recovery of the vegetative cover. The effect of hydro-mulch on native vegetation was monitored on the Cedar fire in Southern California, and quantitative findings indicated that vegetation recovery (percent cover) was not hindered by the hydro-mulch.

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Hydro-mulching is an effective way to increase water retention, thereby reducing erosion for six months to one year. Beyond one year, the effectiveness decreases. Hydro-mulching can be applied to areas within approximately 200 feet of a road or areas that can otherwise be reached by truck. Aerial hydro-mulching provides immediate soil cover to hillsides inaccessible by ground-based equipment and has a high-erosion hazard rating in areas that were more severely burned.

Hydro-mulching initially reduces sediment generation by 70% to 80% as compared to sediment production off bare slopes. Within two years, the breakdown of wood fiber will have reduced its effectiveness to 40% to 60%. Beyond that time, only 10% to 30% effectiveness can be expected, and the mulch should be replaced. Regeneration of plant nutrient in the mulched soil is typically reduced to 50% to 70% for six months, 20% to 50% up to two years, and zero % to 10% beyond two years.

We have estimated the area of hydro-mulching to be approximately 400 acres at an estimated cost of \$1,000,000. Funding has been identified in the adopted 2007-2008 City Budget in the amount of \$2,000,000 in the Unappropriated Balance to address the most immediate needs at Griffith Park. We are required to report back to City Council and the Mayor prior to the use of these funds.

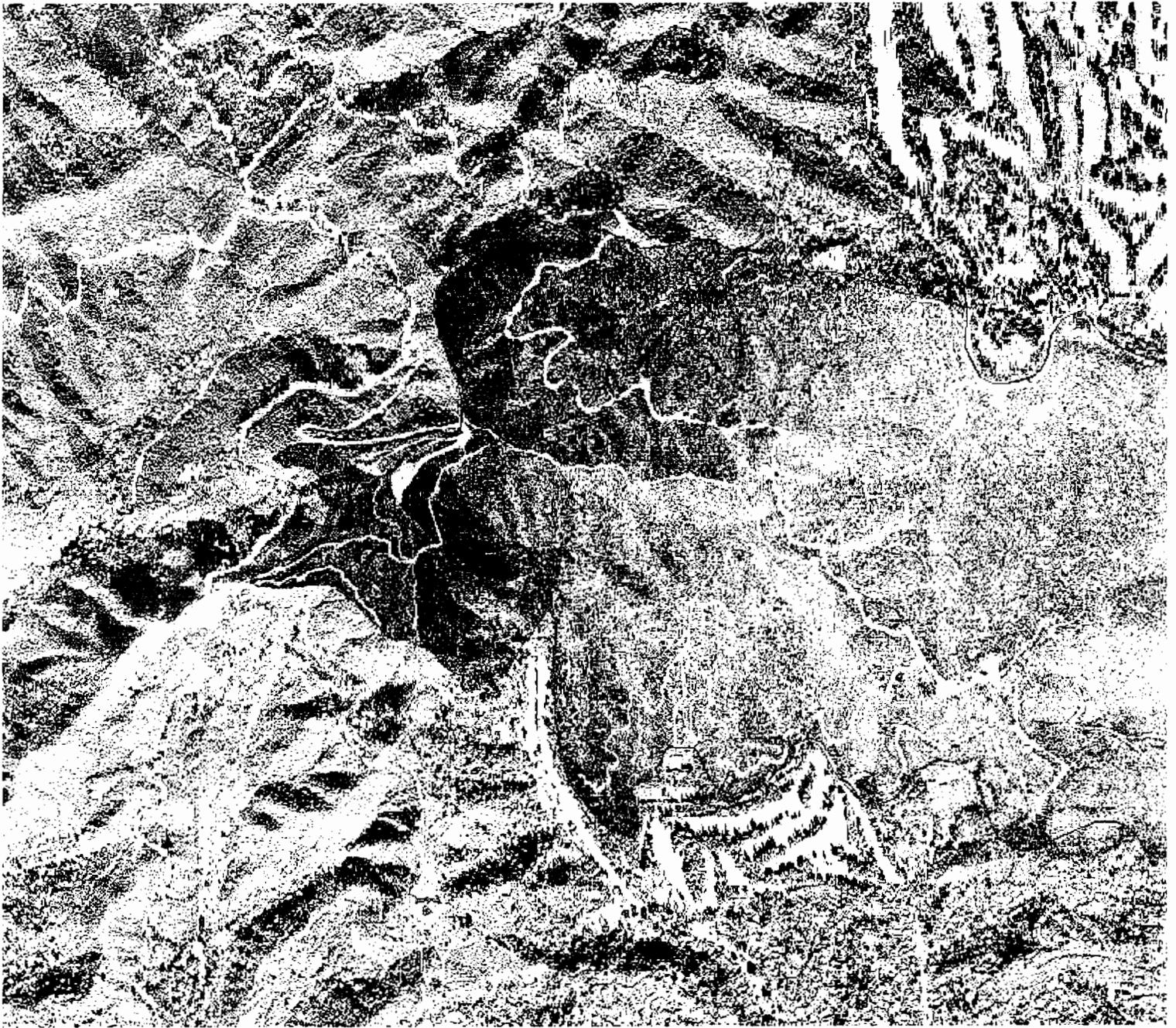
Measures to prevent erosion and protect the burn area must be implemented prior to the rainy season; however, staff has not yet completed the bid plans and specifications for hydro-mulching as it is specialized work. Because time is of the essence, and the Board only meets once in July, staff is requesting approval on the scope of work and permission to advertise once the plans and specifications are ready. Following receipt of bids, staff will return to the Board with a bid award recommendation.

In compliance with the California Environmental Quality Act (CEQA), staff has determined that the proposed erosion control project is an emergency action in a disaster-stricken area for which a state of emergency has been proclaimed by the Governor pursuant to Chapter 7 of Division 1, Title 2 of the Government Code. Therefore, the project is exempt from CEQA pursuant to Article II, Section 2(a)(1) of the City CEQA Guidelines.

### FISCAL IMPACT STATEMENT:

The extent of the impact to the Department's budget will vary depending on the amount and intensity of the rain we receive this fall and winter; consequently, debris clean-up and maintenance are likely to continue. Hydro-mulching will help hold sediment in place and help reduce clean up efforts. Staff will continue to monitor and report back on fiscal impacts throughout the recovery of the park.

This report was prepared by Michael A. Shull, Superintendent, Planning and Development Division.



ATTACHMENT A -GRIFFITH PARK BURN AREA MAP NORTH



**Attachment B**  
**Griffith Park Fire Recovery Team**

**FEDERAL GOVERNMENT**

- U.S. Forest Service-Wildland Fire Leadership Council (Burned Area Emergency Response)
- U.S. Fish and Wildlife Service (FWS) – Fire Management
- CAL FIRE (California Department of Forestry and Fire Protection)
- National Park Service – Santa Monica Mountains National Recreation Area (SMMNRA)
- USDA Natural Resources Conservation Service (NRCS)

**STATE GOVERNMENT**

- Los Angeles Regional Water Quality Control Board
- California Department of Fish and Game
- California Department of Recreation and Parks
- California Office of Historic Preservation
- Southern California Air Quality Management District
- University of California Cooperative Extension (Agriculture and Natural Resources)

**LOCAL GOVERNMENT**

- Los Angeles Natural History Museum
- Bureau of Engineering
- Bureau of Sanitation
- Bureau of Street Services
- Department of Animal Services
- Department of General Services
- Department of Public Works
- LA County Fire Department
- Environmental Affairs Department
- Department of Water and Power
- LA Fire Department
- LA Police Department
- LA Zoo
- Million Trees LA

**COMMUNITY**

- Neighborhood Councils
- Griffith Park Master Plan Working Group
- Hollywood Beautification Team
- California Native Plant Society
- Los Angeles Conservation Corps
- TreePeople