

Alluvial Fans and the Cost to Local Governments

Alluvial Fan Task Force Plenary Meeting 1

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A Lack of Planning on Your Part...

- Residential development in cities seek locations that provide amenities and features.
- Views are a desirable feature and development along foothills are prime areas for high end neighborhoods.
- Alluvial fans offer a broad expanse of land with multiple lots.



Shouldn't Create a Crisis on My Part...

- In City and County Governments, Public Works agencies provide infrastructure maintenance support.
- In most local governments, funding for Public Works can be 5% to 10% of total General Fund.
- In contrast, Public Safety (Police and Fire) may take nearly 60% of General Fund.



Public Works Cleans It UP!

- While Police and Fire are the “sexy” functions in government, they don’t generally stick around to clean up the mud, debris and boulders after the event is over.
- Bulldozers, skip loaders, dump trucks, sweepers and lots of hand shovelling and brooming.



After the hills have burned...

- In San Bernardino County in 2003, combination of Old Fire and Grand Prix fires destroyed nearly 35 miles of watershed
- Over half a million people in seven cities were exposed to potentially catastrophic debris flows.



And before the rains fell

- Nearly 100% of the Public Works resources from October 2003 to March 2004 focused on emergency preparedness and recovery.
- Activities included threat assessments, installation of preventive measures and public education.



Please pass the sand bags...

- Disaster funding from OES and FEMA only available after disaster declaration.
- Limited funding for protective measures such as diversion walls, sand bags.
- Assistance from Federal Department of Agriculture, Natural Resource Conservation Service.



And the rain came down...

- Christmas Day flood resulted in debris flows along entire foothills.
- Loss of 16 lives in two locations north of San Bernardino.
- Mud and water flows create potential catastrophic events, damaged roads and destroyed houses.



Costs to Local Governments

- Extensive amounts of overtime for city staffs.
- Need to protect residents from death, injury and property loss.
- Dislocation and disruption of residents lives.
- Debris removal and facility restoration costs.



Design to Minimize Losses

- Need to recognize that after the developers have left, City / County is responsible for the facilities constructed.
- Designs for future developments should consider maintainability and loss prevention from debris flows.
- An ounce of prevention is worth a pound of cure.



Public Infrastructure Issues to Consider...

- What are best management practices for minimizing debris flows while balancing development.
- Funding for maintenance and restoration without counting on State and Federal agencies.
- Improve ability to quickly restore services and operations to pre-event condition for multiple storm events.

