Reviewed by:
FMP Steering Committee

Prepared by:
Bureau of Engineering
NFIP/CRS Coordinator
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PURPOSE

The City’s Floodplain Management Plan (FMP) was first adopted in November 2001. Subsequently, an Implementation Progress Report was prepared to determine the progress of program implementation during 2002. Appendix A includes a brief description of programs discussed in the first progress report with current information. This document is the Implementation Progress Report for the year 2003.

1. BACKGROUND

In 2001, the Federal Emergency Management Agency (FEMA) approved the City’s FMP. This approval qualified the City for a rating increase (from a 9 to an 8) under the Community Rating System (CRS) of the National Flood Insurance Program (NFIP). The rating increase is reflected as a 10% reduction in insurance premiums for all property owners in FEMA designated 100-year floodplains and a 5% premium reduction for property owners in other areas of the City.

2. PLANNING REGULATIONS

Hazard Mitigation Grant Program

FEMA guidelines published last year for the implementation of the Disaster Mitigation Act of 2000 (DMA 2000) require local communities (counties and cities) to prepare a Multihazard Mitigation Plan by November 1, 2004, in order to qualify for Hazard Mitigation Grant monies beyond that date. With DMA 2000, FEMA has replaced the Hazard Mitigation Grant Program (HMGP) with a pre-disaster competitive grant program.

Historically, local communities have relied on HMGP to implement mitigation measures following a natural disaster. During the past four years, the Federal Hazard Mitigation Grant Program, administered by the California Office of Emergency Services, has provided over $17 million to the City.

The City’s FMP meets the criteria and satisfies the flood component of the multihazard plan. However, a multihazard plan that includes mitigation actions for fire, earthquakes, and other natural hazards needs to be prepared following very similar planning steps utilized in the preparation of the FMP. The Department of Emergency Preparedness will prepare the multihazard mitigation plan with close cooperation from the Bureau of Engineering.

Congress approved DMA 2000, on October 10, 2000. On October 30, 2000, the President signed the bill into law, creating Public Law 106-390. The purpose of DMA 2000 is to amend the Stafford Act, establishing a national program for pre-disaster mitigation and streamline administration of disaster relief. DMA 2000 places new emphasis on local mitigation planning by requiring local governments to develop and submit pre-disaster mitigation plans as a condition of receiving Hazard Mitigation Grant Program (HMGP) project grants.
FMP Update

The FMP must be updated every 5 years as a condition of maintaining the CRS credits for this activity. Since the original FMP due date was October 2000, then the FMP update is due in 2005. The planning steps that were followed when the FMP was first developed will be utilized when preparing the update.

3. RAINFALL

According to the Santa Monica Bay Shoreline Monitoring Assessment Report (July 1, 2002 – June 30, 2003) prepared by the Bureau of Sanitation, there were eight months with measurable rainfall during the 2002-2003 fiscal year with February 2003 receiving the most rain (4.64 inches). Figure 1 shows a graphic representation of the rainy season during fiscal year 2002-2003. Approximately 90% of the total rainfall (16.43 inches) occurred from November 1 to March 31. Total precipitation was slightly greater than the annual average of 15 inches for Los Angeles.

![Monthly Rainfall](image)

FIGURE 1 - YEAR 2001-2002 MONTHLY RAINFALL

4. REPETITIVE LOSS PROPERTIES

Since the FMP was first adopted in 2001, the total number of Repetitive Loss Properties (RLPs) increased by 7 for a total of 124 properties. The RLP maps in Appendix B show the RLPs distribution by Council District and Citywide.

As indicated in Figure 2, nineteen (19) RLPs, out of the total 124, are considered “inactive” because mitigation activities have been implemented to resolve the
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immediate flood risk. This year, the City has requested FEMA to re-designate 10 additional RLPs as “inactive”. Until FEMA concurs with the proposed “inactive” designation, the total number of “active” RLPs is 105. Although the total number of RLPs has increased over the last 3 years, Figure 3 shows a clear trend towards reducing the net number of “active” RLPs.

“Active” RLPs are believed to continue to be at risk of flood damage because there are no known mitigating factors associated with it. Inactive RLPs can be re-designated as “active”, once again, if additional flood damages occur (indicating that the flood risk is not fully mitigated).

During 2003, two RLPs were referred to the Bureau of Engineering as part of the building permit application process (a direct result from implementation of program No. 42 and 55). RLPs, properties in Special Flood Hazard Areas and properties located along Mandeville Canyon are identified during the permit application process and referred to the Bureau of Engineering (BOE). BOE staff determines whether mitigation action is appropriate as a condition of receiving a building permit clearance. Once the mitigation project is completed, RLPs can be recommended as “inactive” RLP during the annual update to FEMA.

5. QUESTIONNAIRE ASSESSMENT

The assessment of responses to the questionnaire distributed in 2001 by the Bureau of Engineering is summarized in this section. The results from this analysis will be used to focus resources and conduct field investigations to confirm the primary flood problems and reported damage.

Note: Assessment is based strictly on responses received. Information provided has not been confirmed. Reported flood events /damage did not always correspond to the property listed as the source of the response (i.e. in numerous occasions, the response indicated that no problems existed for the particular property, however, respondent directed the attention to a different location, which had flooding problems).
A total number of 1744 responses were received from the original 60,000 questionnaires mailed to residents in flood risk areas (3% response). Out of the responses received, 78% (1,364 responses) have been assessed to determine whether a primary flood hazard exist and whether the reported event should be referred to another public agency (City, County or other) for further investigation.

Figure 4 shows the breakdown of the assessed responses. Only 64 property owners (6%) reported damage to people or property caused by one of the primary hazards. Most respondents (760 or 67%) indicated that no flooding problems existed at all. Approximately 27% (310 respondents) reported an impact to people or property by a primary hazard with no damage.

All reported cases of primary hazards will be recommended for further investigation. Figure 5 shows the types and frequency of primary hazard reported. The most common primary hazard is flooding (primarily ponding or street overflows). The second most common is mud/debris flows, followed by landslides. The total number of reported primary hazards is higher than the number of responses received, because some properties were affected by more than one primary hazard.

Table 1 shows the number recommended investigations per agency. The total number of investigations will increase when all questionnaires are assessed.
The investigations are broken down into Tier 1 and Tier 2. Tier 1 identifies the properties that reported damage to people or property. Tier 2 refers to an impact not resulting in damage. The distinction of Tier 1 and Tier 2 is intended to help focus staff resources for the purpose of investigation. The resulting information can then be used to map confirmed cases of flood areas and flood damage.

<table>
<thead>
<tr>
<th>Agency</th>
<th>Tier 1</th>
<th>Tier 2</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bureau of Engineering (BOE)</td>
<td>41</td>
<td>191</td>
<td>232</td>
</tr>
<tr>
<td>Bureau of Street Services (BSS)</td>
<td>19</td>
<td>100</td>
<td>119</td>
</tr>
<tr>
<td>Bureau of Sanitation (BOS)</td>
<td>20</td>
<td>83</td>
<td>103</td>
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<tr>
<td>Building and Safety (B&amp;S)</td>
<td>30</td>
<td>92</td>
<td>122</td>
</tr>
<tr>
<td>Dpt. of Water and Power (DWP)</td>
<td>2</td>
<td>15</td>
<td>17</td>
</tr>
<tr>
<td>Fire Department (FIRE)</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Dpt. of Emergency Preparedness (DEP)</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>L.A. County (LACoDPW)</td>
<td>0</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Other agencies</td>
<td>9</td>
<td>22</td>
<td>31</td>
</tr>
</tbody>
</table>

**TABLE 1 – INVESTIGATIONS RECOMMENDED BY AGENCY**
6. FMP IMPLEMENTATION PROGRESS

This chapter identifies the progress of programs identified to meet the Goals, Objectives, and Policies of the Floodplain Management Plan (FMP). Activities specifically related to Repetitive Losses under the City’s jurisdiction are addressed in programs P-54 through 57. Other program relevant to repetitive losses (although not specific to RLPs) are P-12, 14, 15, 16, 17, 18, 19, 24, 25, 27, 28, 29, 32, 33, 34, 39, 42, 48, 58, 59, and 61.

P-01  Participate in the Los Angeles County Operational Area Tsunami Mitigation Task Force.

    Cost:  TBD
    Schedule:  On Going
    Policy Addressed:  1.a.01
    Responsible Agency:  Harbor Department
    Financing:  Harbor Department

P-02  Maintain membership in the tsunami warning system.

    Cost:  TBD
    Schedule:  On Going
    Policy Addressed:  1.a.01
    Responsible Agency:  Harbor Department
    Financing:  Harbor Department

P-03  Research and recommend the need to include a Tsunami element in the City’s Emergency Response Master Plan.

    Cost:  TBD
    Schedule:  DEFERRED
    Policy Addressed:  1.a.02
    Responsible Agency:  Department of Emergency Preparedness
    Financing:  General Fund

P-04  Continue to maintain and annually update the Dam and Reservoir Emergency Notification List.

    Cost:  TBD
    Schedule:  On Going
    Policy Addressed:  1.a.04
Responsible Agency: Department of Water and Power
Financing: Department of Water and Power

P-05  Provide dam inundation maps to the public.
      Cost: TBD
      Schedule: PENDING
      Policy Addressed: 1.a.03
      Responsible Agency: Department of Public Works, Bureau of Engineering
      Financing: Stormwater Pollution Abatement Fund

P-06  Continue to evaluate reservoirs in terms of earthquake safety and
      implement necessary mitigation/improvement measures, as required by
      the California Department of Water Resources, Division of Safety of
      Dams.
      Cost: TBD
      Schedule: On Going
      Policy Addressed: 1.a.03
      Responsible Agency: Department of Water and Power
      Financing: Department of Water and Power

P-07  Continue to collect and analyze data regarding water volumes and
      pumping capabilities in water storage facilities provided by the Los
      Angeles Water Systems Data Acquisition Center to prevent catastrophic
      events.
      Cost: TBD
      Schedule: On Going
      Policy Addressed: 1.a.03
      Responsible Agency: Department of Water and Power
      Financing: Department of Water and Power

P-08  Continue to dispatch reservoir inspection and damage teams following
      natural disasters to inspect and report the condition of facilities.
      Cost: TBD
      Schedule: On Going
      Policy Addressed: 1.a.03
      Responsible Agency: Department of Water and Power
Financing: Department of Water and Power

P-09 Continue to routinely monitor the existing structural condition of City-owned water storage facilities.

Cost: TBD
Schedule: On Going
Policy Addressed: 1.a.03
Responsible Agency: Department of Water and Power
Financing: Department of Water and Power

P-10 Identify a flood warning system for properties located downstream of City-owned water tanks.

Cost: TBD
Schedule: Existing; On Going
Policy Addressed: 1.a.04
Responsible Agency: Department of Water and Power
Financing: Department of Water and Power

P-11 Submit copies of emergency plans for water tank storage and other non-dam storage systems to the Flood Hazard Mitigation Coordinator and provide updates as they become available.

Cost: TBD
Schedule: CANCELLED
Policy Addressed: 1.a.04
Responsible Agency: Department of Water and Power
Financing: Department of Water and Power

P-12 Continue implementing the City’s Annual Emergency Preparedness Fair.

Cost: TBD
Schedule: Annual; On Going
Policy Addressed: 2.a.04, 2.a.05, 2.a.07
Responsible Agency: Department of Emergency Preparedness
Financing: General Fund

P-13 Maintain the City web page to provide emergency preparedness information to the general public and media.
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Cost: TBD
Schedule: On Going
Policy Addressed: 2.a.04, 2.a.05, 2.a.07
Responsible Agency: Department of Emergency Preparedness
Financing: General Fund

P-14 Distribute information regarding flood prevention and flood insurance at emergency operations and emergency preparedness events.

Cost: TBD
Schedule: Annual; On Going
Policy Addressed: 2.c.03
Responsible Agency: Department of Emergency Preparedness
Financing: General Fund

P-15 Maintain the City’s Emergency Operations Master Plan and Procedures.

Cost: TBD
Schedule: On Going
Policy Addressed: 2.a.04, 2.a.05, 2.a.07, 2.c.04
Responsible Agency: Department of Emergency Preparedness
Financing: General Fund

P-16 Make sand and sand bags available to flood risk property owners during the wet season, provide notifications of the availability of these materials, and track the distribution of the materials.

Cost: TBD
Schedule: Annual; On Going
Policy Addressed: 2.a.04, 2.b.01, 2.b.04
Responsible Agency: Fire Department; Department of Public Works, Bureau of Street Services and Bureau of Engineering
Financing: General Fund; Stormwater Pollution Abatement Fund

P-17 Establish and maintain a technically based prioritization methodology for use in developing the stormwater capital improvement program.

Cost: 0.5 FTE
Schedule: Completed; On Going
Policy Addressed: 2.a.06, 2.a.09, 2.a.11, 2.c.05, 2.c.07, 3.a.01, 3.a.02, 3.a.03

Responsible Agency: Department of Public Works, Bureau of Sanitation and Bureau of Engineering

Financing: Stormwater Pollution Abatement Fund

P-18 Conduct quarterly coordination meetings with the Los Angeles County Department of Public Works to communicate the City’s list of priority stormwater projects, to discuss watershed management programs, and to develop countywide standards.

Cost: 0.1 FTE

Schedule: On Going

Policy Addressed: 2.a.09, 3.a.02

Responsible Agency: Department of Public Works, Bureau of Sanitation and Bureau of Engineering, Los Angeles County Department of Public Works

Financing: Stormwater Pollution Abatement Fund (City); Benefit Assessment for Flood Control (County)

P-19 Maintain regular contact with surrounding cities, the Los Angeles County Department of Public Works, State and Federal agencies regarding flood hazard mitigation and the National Flood Insurance Program.

Cost: 0.1 FTE

Schedule: On Going

Policy Addressed: 1.a.01, 2.a.09, 2.b.02, 2.b.06, 3.d.01

Responsible Agency: Department of Public Works, Bureau of Engineering; Department of Recreation and Parks

Financing: Stormwater Pollution Abatement Fund; General Fund

P-20 Participate in organizations such as the Association of State Floodplain Managers and the National Association of Flood and Stormwater Management Agencies to network with other agencies and remain current in the field of floodplain management.

Cost: 0.05 FTE

Schedule: On Going

Policy Addressed: 1.a.01, 2.a.03, 2.a.04, 2.a.05, 2.a.07, 2.b.02, 2.b.05, 2.b.06, 2.c.01

Responsible Agency: Department of Public Works, Bureau of Sanitation
P-21 Provide the training and support necessary to maintain a Certified Floodplain Manager within the Department of Public Works.

Cost: 0.05 FTE
Schedule: Completed; On Going
Policy Addressed: 1.a.01, 2.a.03, 2.a.04, 2.a.05, 2.a.07, 2.b.02, 2.b.05, 2.b.06, 2.c.01
Responsible Agency: Department of Public Works, Bureau of Sanitation and Bureau of Engineering
Financing: Stormwater Pollution Abatement Fund

P-22 Conduct an annual National Flood Insurance Program seminar for City agencies responsible for applying and enforcing floodplain management regulations.

Cost: 0.1 FTE
Schedule: Annual; December 2003
Policy Addressed: 2.a.01, 2.a.08, 2.b.02, 2.b.04
Responsible Agency: Department of Public Works, Bureau of Engineering
Financing: Stormwater Pollution Abatement Fund

P-23 Based on the annual National Flood Insurance Program seminar, update operational procedures and training materials for staff that apply and enforce floodplain management regulations and provide annual training.

Cost: TBD
Schedule: Complete; On Going
Policy Addressed: 1.a.02, 2.a.01, 2.a.02, 2.a.05, 2.a.08, 2.a.10, 2.b.02, 2.b.05, 2.c.06
Responsible Agency: Department of Building and Safety; Department of City Planning; Harbor Department
Financing: General Fund

P-24 Conduct a stormwater facilities condition assessment program to identify the physical and hydraulic condition of the system and to support infrastructure management needs.

Cost: 7.0 FTE; plus $1,000,000
Schedule: Start (June/2001); Finish (March/2005)
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Policy Addressed: 2.a.06, 2.a.11, 2.c.05, 2.c.07, 3.a.01, 3.a.02, 3.a.03
Responsible Agency: Department of Public Works, Bureau of Sanitation and Bureau of Engineering
Financing: Stormwater Pollution Abatement Fund

P-25 Develop Geographic Information System mapping and modeling capability to support the stormwater facilities condition assessment program.

Cost: 4.0 FTE
Schedule: Start (June/2001); Finish (December/2003)
Policy Addressed: 2.a.06, 2.a.11, 2.c.05, 2.c.07, 3.a.01, 3.a.02, 3.a.03
Responsible Agency: Department of Public Works, Bureau of Sanitation and Bureau of Engineering
Financing: Stormwater Pollution Abatement Fund

P-26 Continue to maintain precise survey benchmarks throughout the City.

Cost: 4.0 FTE
Schedule: Finish 2006
Policy Addressed: 2.b.02, 2.b.05
Responsible Agency: Department of Public Works, Bureau of Engineering
Financing: General Fund

P-27 Develop and maintain a Citywide list of priority maintenance-related flood problem sites.

Cost: TBD
Schedule: On Going
Policy Addressed: 2.b.01, 2.b.02, 3.a.01, 3.a.02, 3.a.03, 3.b.01
Responsible Agency: Department of Public Works, Bureau of Sanitation and Bureau of Engineering
Financing: Stormwater Pollution Abatement Fund

P-28 Based on P-27, conduct necessary inspection and maintenance at priority maintenance-related flood problem sites prior to the wet season and after significant storms.

Cost: TBD
Schedule: Annual; On Going
Policy Addressed: 2.b.01, 2.b.02, 3.a.01, 3.a.02, 3.a.03, 3.b.01
Responsible Agency: Department of Public Works, Bureau of Sanitation
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Financing: Stormwater Pollution Abatement Fund

P-29 Provide public education about maintaining the stormwater system free of debris and reporting violations.

Cost: TBD
Schedule: On Going
Policy Addressed: 2.b.02, 3.a.01, 3.b.01, 3.c.02
Responsible Agency: Department of Public Works, Bureau of Sanitation and Bureau of Engineering
Financing: Stormwater Pollution Abatement Fund

P-30 Post “No Dumping” signs at points of entry to the stormwater system.

Cost: TBD
Schedule: Completed; On Going
Policy Addressed: 2.b.02, 3.a.01, 3.b.01, 3.c.02
Responsible Agency: Department of Public Works, Bureau of Sanitation; Los Angeles County Department of Public Works
Financing: Stormwater Pollution Abatement Fund (City); Benefit Assessment for Flood Control (County)

P-31 Conduct a systematic evaluation of FEMA designated flood zones and revise/update designated flood zones to reflect current conditions.

Cost: [1.0 FTE]
Schedule: TBD
Policy Addressed: 2.a.03, 2.a.12, 2.b.01, 2.b.02, 2.b.03
Responsible Agency: Department of Public Works, Bureau of Sanitation and Bureau of Engineering
Financing: Stormwater Pollution Abatement Fund

P-32 Revise the Map of Hillside Areas (Bureau of Engineering Basic Grid Map A-13372) to more accurately reflect areas subject to hillside regulations based on current data and technology.

Cost: TBD
Schedule: TBD
Policy Addressed: 2.a.12, 2.b.01, 2.b.04
Responsible Agency: Department of Public Works, Bureau of Sanitation and Bureau of Engineering; Department of Building and Safety; Department of City Planning
P-33 Develop a map of known landslide and mudflow areas.

- **Cost:** TBD
- **Schedule:** TBD
- **Policy Addressed:** 2.a.12, 2.b.01, 2.b.04
- **Responsible Agency:** Department of Building and Safety; Department of Public Works, Bureau of Engineering
- **Financing:** General Fund; Stormwater Pollution Abatement Fund

P-34 Evaluate current development regulations, including the grading ordinance, to determine whether the standards provide sufficient protection for adjacent (downstream or downslope) development.

- **Cost:** TBD
- **Schedule:** TBD
- **Policy Addressed:** 2.a.02, 2.c.01
- **Responsible Agency:** Department of City Planning; Department of Building and Safety; Department of Public Works, Bureau of Engineering
- **Financing:** General Fund; Stormwater Pollution Abatement Fund

P-35 Establish a policy for identifying significant (substantial) improvement projects that is consistent with Federal Emergency Management Agency requirements.

- **Cost:** [0.2 FTE]
- **Schedule:** Completed
- **Policy Addressed:** 2.a.01, 2.a.02, 2.b.02
- **Responsible Agency:** Department of Building and Safety
- **Financing:** General Fund

P-36 Verify, through the plan check process, that new development complies with the regulations in the City’s Specific Plan for the Management of Flood Hazards, Ordinance No. 172,081, including freeboard requirements on new construction and substantial improvements.

- **Cost:** TBD
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Schedule: On Going
Policy Addressed: 1.a.02, 2.a.01
Responsible Agency: Department of Building and Safety; Department of
City Planning; Harbor Department; Department of
Public Works, Bureau of Engineering
Financing General Fund; Stormwater Pollution Abatement Fund

P-37 Require that all land division proposals within FEMA designated flood
zones include base flood elevation data.

Cost: TBD
Schedule: On Going
Policy Addressed: 2.a.01, 2.a.08, 2.a.10, 2.c.06, 3.a.01, 3.a.04, 3.e.02
Responsible Agency: Department of Public Works, Bureau of Engineering;
Department of City Planning
Financing: Stormwater Pollution Abatement Fund; General Fund

P-38 Study and recommend solutions to conflicts between height limitations
and flood mitigation elevation requirements for structures.

Cost: TBD
Schedule: TBD
Policy Addressed: 2.a.01, 2.a.02, 2.a.05, 2.a.12, 2.c.01, 2.d.01
Responsible Agency: Department of City Planning; Department of Public
Works, Bureau of Engineering
Financing: General Fund; Stormwater Pollution Abatement Fund

P-39 Research and continue to improve Municipal Code regulations regarding
soil stability and erosion abatement.

Cost: TBD
Schedule: TBD
Policy Addressed: 2.a.07
Responsible Agency: Department of City Planning; Department of Building
and Safety; Department of Public Works, Bureau of Engineering
Financing: General Fund; Stormwater Pollution Abatement Fund
P-40 Provide information to the Flood Hazard Mitigation Coordinator for preparation of the Annual FMP Evaluation Report that describes the progress made for each Program and any floodplain management regulatory actions and compliance actions conducted during the reporting period, including (a) the number of permits approved in designated flood hazard areas, (b) the number of waivers applied for, (c) the number of waivers approved. The information shall be provided to the Flood Hazard Mitigation Coordinator on July 1 of each year.

Cost: TBD
Schedule: On Going
Policy Addressed: 1.a.02, 2.a.01, 2.a.08, 2.a.10
Responsible Agency: Department of Building and Safety; Department of City Planning; Fire Department; Harbor Department; Department of Water and Power; Department of Public Works, Bureau of Engineering and Bureau of Sanitation.
Financing: General Fund; Stormwater Pollution Abatement Fund

P-41 Maintain a filing system for all Elevation Certificates and evaluate and improve the process for obtaining accurately completed Elevation Certificates.

Cost: 0.1 FTE
Schedule: On Going
Policy Addressed: 2.a.01, 2.b.02, 2.b.05
Responsible Agency: Department of Public Works, Bureau of Engineering; Department of Building and Safety
Financing: Stormwater Pollution Abatement Fund; General Fund

P-42 Continue to refine the use of the Plan Check and Inspection System (PCIS) to track high-risk properties and ensure that drainage is adequately addressed through the plan check process.

Cost: TBD
Schedule: Existing; On Going
Policy Addressed: 2.a.01, 2.a.02, 2.a.08, 2.b.01, 2.c.01
Responsible Agency: Department of Building and Safety; Department of Public Works, Bureau of Sanitation and Bureau of Engineering
P-43 Incorporate floodplain management information into the Zoning Information and Map Access System (ZIMAS).

Cost: TBD
Schedule: Start (June/2003); Complete (December 2003)
Policy Addressed: 2.a.01, 2.a.04, 2.a.10, 2.b.02, 2.b.04, 2.d.01
Responsible Agency: Department of City Planning; Department of Public Works, Bureau of Engineering
Financing: General Fund; Stormwater Pollution Abatement Fund

P-44 Annually transfer electronic data regarding structures damaged due to flooding caused by catastrophic events to the Flood Hazard Mitigation Coordinator.

Cost: [0.1 FTE]
Schedule: On Going
Policy Addressed: 1.a.04, 2.a.12, 2.b.04
Responsible Agency: Department of Building and Safety
Financing: General Fund

P-45 Annually transfer electronic data regarding hazardous materials storage (including water reactive chemicals) to the Flood Hazard Mitigation Coordinator.

Cost: [0.1 FTE]
Schedule: TBD
Policy Addressed: 1.a.04, 2.a.11, 2.a.12
Responsible Agency: Fire Department
Financing: General Fund

P-46 Continue to notify insurance agencies and realtors of the requirement that all lessors or renters give written notice to all prospective and interested parties, including but not limited to, purchasers, lessees and renters, prior to finalization of such a transaction when the subject land and/or structures are located within FEMA designated flood zones. The notice shall contain the following information:

1) The nature and classification of the designated flood zone,
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2) The zone designation,
3) Whether waivers have been granted for development located within
the designated flood zone, and
4) That premium rates for flood insurance of new structures built at
elevations below the base flood shall substantially increase as the
elevations decrease. Failure to give such notice shall be a basis for
rescinding any sale, lease or rental agreement.

    Cost: 0.05 FTE
    Schedule: Annual; Scheduled for October 2003
    Policy Addressed: 1.a.02, 2.a.01, 2.a.04, 2.b.02, 2.c.03
    Responsible Agency: Department of Public Works, Bureau of Engineering
    Financing: Stormwater Pollution Abatement Fund

P-47 Provide flood zone information to all residents; provide notifications when
flood insurance is required; and provide notifications when FEMA
designated flood zones changes are made.

    Cost: 1.0 FTE
    Schedule: On Going
    Policy Addressed: 2.a.04, 2.b.02, 2.c.03
    Responsible Agency: Department of Public Works, Bureau of Engineering
    Financing: Stormwater Pollution Abatement Fund

P-48 Develop and distribute flood protection information and materials to
property owners and developers in high-risk areas.

    Cost: TBD
    Schedule: Annual; On Going
    Policy Addressed: 2.c.03
    Responsible Agency: Department of Public Works, Bureau of Engineering;
Department of City Planning; Department of Building and Safety; Fire Department; Department of
Emergency Preparedness; Library Department
    Financing: Stormwater Pollution Abatement, General Fund

P-49 Maintain a list of Critical Facilities throughout the City, provide flood
protection information to operators of critical facilities located in FEMA
designated flood zones, and encourage the implementation of flood
protection measures at such facilities.

    Cost: TBD
P-50 Distribute a revised Flood Hazard Assessment Questionnaire to an additional sector of the population to gather flood damage data.

Cost: TBD
Schedule: Start July 2004
Policy Addressed: 2.a.03, 2.c.02, 3.a.02, 3.a.03, 3.b.01
Responsible Agency: Department of Public Works, Bureau of Engineering
Financing: Stormwater Pollution Abatement Fund

P-51 Prepare a list of City owned/leased properties that are located in FEMA designated flood zones.

Cost: TBD
Schedule: Completed
Policy Addressed: 2.a.01
Responsible Agency: Department of General Services; Department of Public Works, Bureau of Engineering
Financing: General Fund; Stormwater Pollution Abatement Fund

P-52 Evaluate flood hazards to City owned/leased properties located in FEMA designated flood zones and develop mitigation recommendations.

Cost: TBD
Schedule: TBD
Policy Addressed: 2.a.01
Responsible Agency: Department of Public Works, Bureau of Engineering
Financing: Stormwater Pollution Abatement Fund

P-53 Maintain adequate flood insurance on public structures located in FEMA designated flood zones.

Cost: TBD
Schedule: TBD
Policy Addressed: 2.a.01
Responsible Agency: Department of General Services
Financing: General Fund

P-54 Continue to investigate Repetitive Loss Properties, as they are identified by the Federal Emergency Management Agency (FEMA), annually notify Repetitive Loss Property owners regarding local flood hazards and proper protection activities, provide technical advice regarding flood protection and flood preparedness, and distribute a revised Repetitive Loss Property Questionnaire to new Repetitive Loss Properties.

Cost: 0.4 FTE
Schedule: Completed; On Going
Policy Addressed: 2.d.01, 2.d.02, 2.d.03, 2.d.04, 2.d.05
Responsible Agency: Department of Public Works, Bureau of Engineering
Financing: Stormwater Pollution Abatement Fund

P-55 Repetitive Loss Properties shall be flagged in the Plan Check and Inspection System (PCIS) database for review and approval of building permit applications by the Flood Hazard Mitigation Coordinator.

Cost: 0.2 FTE
Schedule: Completed; On Going
Policy Addressed: 2.d.03
Responsible Agency: Department of Public Works, Bureau of Engineering; Department of Building and Safety
Financing: Stormwater Pollution Abatement Fund; General Fund

P-56 Request that FEMA modify the Repetitive Loss Property list based on mitigation projects already implemented by the owner or other responsible party.

Cost: 0.1 FTE
Schedule: Annual; On Going
Policy Addressed: 2.d.02, 2.d.03, 2.d.04
Responsible Agency: Department of Public Works, Bureau of Engineering
Financing: Stormwater Pollution Abatement Fund

P-57 Identify possible sources of funding including Increase Cost of Compliance funds and mitigation grant funds among others, and provide this information to Repetitive Loss Property owners.
2003 FLOODPLAIN MANAGEMENT PLAN
IMPLEMENTATION PROGRESS REPORT

Cost: 0.1 FTE
Schedule: On Going
Policy Addressed: 2.d.05
Responsible Agency: Department of Public Works, Bureau of Sanitation and Bureau of Engineering
Financing: Stormwater Pollution Abatement Fund

P-58 Identify and maintain a list of high-risk properties that could be acquired for conversion into open space.

Cost: TBD
Schedule: On Going
Policy Addressed: 2.a.03, 2.c.02
Responsible Agency: Department of Public Works, Bureau of Sanitation and Bureau of Engineering
Financing: Stormwater Pollution Abatement Fund

P-59 Establish standards and/or incentives for the use of structural and non-structural techniques that mitigate flood-hazards and manage stormwater pollution.

Cost: TBD
Schedule: On Going
Policy Addressed: 3.c.01, 3.c.02
Responsible Agency: Department of Public Works, Bureau of Sanitation and Bureau of Engineering
Financing: Stormwater Pollution Abatement Fund

P-60 Plan and design stormwater projects so that water quality is protected without creating a flood risk through the alteration of water flow.

Cost: TBD
Schedule: On Going
Policy Addressed: 3.c.02, 3.d.01, 3.a.04
Responsible Agency: Department of Public Works, Bureau of Sanitation and Bureau of Engineering
Financing: Stormwater Pollution Abatement Fund

P-61 Continue to require environmental review in the development process to provide for the protection of natural resources.
P-62 Continue to implement environmentally sensitive property management at City owned sites.

Cost: TBD  
Schedule: On Going  
Policy Addressed: 3.e.01  
Responsible Agency: Department of City Planning  
Financing: General Fund

P-63 The Floodplain Management Committee will meet at least one time during the year to develop the Annual FMP Evaluation Report and recommend any updates to the Plan.

Cost: 0.1 FTE  
Schedule: Annual  
Policy Addressed: 2.a.12  
Responsible Agency: FMP Committee; Department of Public Works, Bureau of Engineering  
Financing: Stormwater Pollution Abatement Fund; General Fund
4. FMP COMMITTEE

Report Evaluation
The FMP Committee Meeting met on September 23, 2003, at the Glendale Wastewater Treatment Plant. Attendees included a total of 4 citizen members and 12 City departmental members. A list of attendees, as well as the meeting minutes, is included in Appendix D.

Recommendations
After reviewing and discussing the progress of the implementation plan, the committee adopted two motions:

Motion 1: Approve 2003 FMP-IPR with the understanding that the multihazard mitigation plan will address tsunami hazards by September 1, 2004, and the FMP will incorporate the status of the City and County Tsunami plan in the next progress report.

Motion 2: Create a subcommittee made up of B&S, Tom Grant (CAO) is the Chair, Bureau of Sanitation, Bureau of Street Maintenance (if agrees to join), Bureau of Sanitation and Mr. Joel Henderson, representing Citizens. The goal is to complete the questionnaire investigations and report results to the committee by September 2004. The first meeting will take place prior to November 1, 2003. During the first meeting, members will agree on the frequency of subsequent meetings. Investigations are to be completed by September 1, 2004.
APPENDICES

Appendix A – PROGRAM SUMMARIES
Tsunami, Dam Inundation Maps, Emergency Response (Dam/Reservoir/Water Tanks), Public Information, Citywide Emergency Operations Master Plan, Capital Improvement Projects, New and Significant Improvements in Special Flood Hazard Areas and High Risk Flood Areas, Catch basin maintenance.

Appendix B – NEW POLICIES/GUIDELINES
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BOE Special Order No. 004-0302 (Watercourse Permits in Flood Risk Areas).

Appendix C – MAPS
Special Flood Hazard Areas
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Appendix D – FMP COMMITTEE
Membership
2003 Meeting Minutes
APPENDIX A - PROGRAM SUMMARIES

Appendix A - PROGRAM SUMMARIES

Tsunami, Dam Inundation Maps, Emergency Response (Dam/Reservoir/Water Tanks), Public Information, Citywide Emergency Operations Master Plan, Capital Improvement Projects, New and Significant Improvements in Special Flood Hazard Areas and High Risk Flood Areas, Catch basin maintenance.
Tsunami
The County of Los Angeles is the primary lead for the development of emergency response plans, identification of evacuation routes as well as coordination of the Tsunami Mitigation Task Force (Tsunami Task Force). The Tsunami Task Force has not met, however, it is expected that Tsunami hazards will be incorporated into the Countywide DMA 2000 Multihazard Mitigation plan.

At this time, California Office of Emergency Services (OES) has produced a tsunami inundation map for the Los Angeles area. This map is intended solely for local jurisdictional-coastal evacuation planning only. It is not intended to be used for land use planning or real estate disclosure requirements. Additional inundation maps for the rest of southern California are on hold due to lack of funding.

Dam Inundation Maps
Dam inundation maps are no longer available on the World Wide Web (WWW). The OES has made a determination that due to terrorist risks, these maps will be indefinitely removed from the WWW. The Bureau of Engineering will not be making these Dam inundation maps available through the Internet either.

Emergency Response (Dam/Reservoir/Water Tanks)
The Department of Water and Power maintains a dam and reservoir emergency notification list. This notification list is reviewed annually and modified as required. Personnel from the Water Services Organization are on call 24 hours a day to respond to natural disasters. Operational procedures are in place to respond to unusual occurrences or emergency response plans are in place to respond following a natural disaster.

The Los Angeles Water Systems Data Acquisition Center monitors tank and reservoir storage levels. Alarms are activated when an unusual occurrence happens, such as a sudden release of water. Emergency plans for water tank storage are submitted to the Department of Emergency Preparedness (DEP) on an annual basis in accordance with the Mayor’s Executive Directive No. 2000-8. Detailed plans and procedures contain confidential information that cannot be released outside the Department of Water and Power for security reasons.

Public Information
In order to promote public awareness regarding disaster preparations, the DEP holds an annual Emergency Preparedness Fair and also maintains both the DEP/Emergency Operations Organization web page and the Updatela web page (http://www.updatela.com). Updatela informs the community of current emergency situations occurring in the City, whereas the Emergency
Preparedness site offers tips for preparedness and mitigation and links to other sites. http://www.lacity.org/epd/index.htm. In 2003, the Fair took place in Balboa Park (San Fernando Valley), Ports O’Call Village (San Pedro, Venice Beach (West Los Angeles) and Olvera Street (Central Los Angeles). Flood protection information among other disaster preparedness information was distributed. The Bureau of Engineering participated in the Emergency Preparedness Fair events and also a series of 5 “Clean Community Celebrations” throughout the City and distributed flood prevention and flood insurance information.

During the storm season, the Bureau of Street Services offers free sand and sandbags through other City facilities such as the Fire Department and maintenance yards. As of April 2003, the Bureau of Street Services reported that no sandbags and no sand were distributed. Availability of these materials is publicized as indicated in P-12, 13, and 14. Furthermore, the Bureau of Street services maintains a web site (linked to other City web-sites) listing where the public can obtain or request delivery of sand to their location. The web site address is http://www.lacity.org/BOSS/Resurfacing/storm.htm.

Flood zone information for all properties within City limits continues to be provided. The public can obtain flood information by calling either of the following phone numbers or through the internet:

(213) 847-5220 or (800) 974-9794

Citywide Emergency Operations Master Plan
Revisions to the Emergency Operations Master Plan are continuous. A Storm Annex was completed on May 1993. Two new annexes, a Damage Assessment and Heat Emergency Annex, are being developed at this time.

Capital Improvement Projects
A technically based prioritization methodology for developing a capital improvement program (CIP) was completed in 2001. The Board of Public Works and Council offices recognizes and accepts its use to determine the projects, which will be funded for construction under the CIP. Projects outside of the CIP can be built if non-budgeted funding is available.

The County of Los Angeles no longer requests municipalities to identify their high priority projects to be considered for funding in the County’s CIP. However, quarterly meetings with the specific purpose of discussing the construction of drainage projects took place in July and October of 2002.

Both the Bureaus of Sanitation and Engineering represent the City in the Ballona Creek, Los Angeles River and Dominguez Channel/Los Angeles Harbor Watershed Management Committees (WMC). These WMCs (created as part of the National Pollution Discharge Elimination System) are charged with
estimating watershed goals and objectives relating to the pollution prevention aspects of watershed management. They meet at least quarterly.

**New and Significant Improvements in Special Flood Hazard Areas and High Risk Flood Areas**

The Bureau of Engineering and the Department of Building and Safety review proposed construction new habitable structures or significant improvements to existing structures in Special Flood Hazard Areas and High Risk Flood Areas. In order to ensure uniform implementation of these regulations, both Departments have developed guidance documents for public counter staff, as well as, a hand out with information for property owners regarding construction guidelines in Special flood hazard areas and flood risk areas. Training for public counter staff will take place during November and December 2003. Computed aided data is also being used to flag projects that merit detailed reviews when applying for construction permits.

In March 2002, the City Engineer adopted an Engineering Directive that provided guidance to Engineering staff when issuing watercourse permit in Mandeville Canyon. Mandeville Canyon is the first canyon recognized by the City as a flood risk area due to mudflows.

Engineering has updated the database that includes:

1. Special Flood Hazard Area properties.
2. Repetitive Loss Properties and adjacent/affected properties.
3. Mandeville Canyon properties.

The database is updated at least yearly and transmitted to Planning, Building and Safety, as well as, Survey and Mapping/Engineering.

**Catch basin maintenance**

The Bureau of Sanitation maintains a list of all its catch basins. Each catch basin is assigned a level of priority, which determines the frequency of cleaning prior to the rainy season. The priority list is updated continuously. The highest priority catch basins receive maintenance twice or more each year.

According to the Bureau of Sanitation’s Municipal Storm Water Permit Annual Report (2002-2003), the following breakdown of priority catch basins were cleaned during this fiscal year.

- Priority A = 711 catch basins: Approx. 45% of these were cleaned three times per year. The remainder were cleaned 2 times/yr. Total number of cleaning=1,742
- Priority B = 5,023 catch basins: These catch basins were cleaned out twice this year. Total number of cleanings=10,046
• Priority C = 29,399 catch basins; These catch basins were cleaned once this year. Total cleanings = 29,399.

The Bureau of Sanitation conducts extensive public education efforts each year as part of the City’s compliance with the County Municipal Stormwater Permit. Outreach materials are distributed to the public through public counters, festivals, mailings, school assemblies, a speaker’s bureau, community groups, environmental groups, the Storm Drain Hotline – (800) 974-9794, web site (http://www.Lastormwater.org), etc. A detailed list of outreach activities is contained in the City of Los Angeles, Stormwater Public Education Program, Program Documentation for July 1, 2002 through June 30, 2003 Report.

The Bureau of Sanitation owns 35,133 catch basins. The City has applied thermoplastic labels on 84% of these catch basins. Previously, catch basins were marked with painted stencils from 1993-1996. Harbor Department has stenciled a total of 772 catch basins owned by the Department.

The City has 200 access points to creeks and channels that have been fenced or gated. “No Trespassing / No dumping” signs have been placed on all creeks and channels within the City’s jurisdiction.
Appendix B  NEW POLICIES/GUIDELINES

Department of Building and Safety Flood Hazard Management Specific Plan Guidelines (MGD 63) and Plan Check Correction Sheet
Bureau of Engineering (BOE) Hand-out to Developers
BOE Special Order No. 004-0302 (Watercourse Permits in Flood Risk Areas).
FLOOD HAZARD MANAGEMENT
SPECIFIC PLAN GUIDELINES
(Code Sections: L.A. Ordinance 172,081; LAMC Appendix Chapter 34)

The City has adopted a Flood Hazard Specific Plan (Ordinance No. 172,081, effective July 3, 1998) which qualifies the City to be in the regular status classification of the National Flood Insurance Program. This Plan and the Los Angeles Building Code Appendix Chapter 31 are qualifying parts to qualify property owners for greater coverage limitation and generally lower flood insurance premium rates. This Information Bulletin, as required by Section 6.D of the Specific Plan, establishes standards necessary to carry out the provisions and intent of the plan.

A. DEFINITIONS: For the purpose of this Bulletin, the following terms are defined as follows:
   Base Flood: Any flood having a one-percent chance of being equaled or exceeded in any given year.
   Basement: Any area of the building having its floor below adjacent grade level on all sides.
   Coastal High-Hazard Area: Any area, subject to high waters, including, but not limited to wave
   wash or tsunami. This area is designated VI-30 or unnumbered V zones on the Los Angeles
   Flood Hazard Map (LAFHM), maintained by the City Engineer.
   Development: Any man-made change to improved or unimproved real estate, including, but not
   limited to, building or other structures, mining, dredging, filling, grading, paving, excavation or
   drilling operations.
   Elevation Certificate: The Elevation Certificate is an important administrative tool to provide
   elevation information necessary to ensure compliance with of the National Flood Insurance
   Program (NFIP). The Elevation Certificate may be downloaded from the FEMA website at
   Flood or Flooding: A general and temporary condition of partial or complete inundation of
   normally dry land areas from:
   • overflow of inland or tidal waters, including storm waves, or seiches.
   • unusual and rapid accumulation or runoff of surface waters from any source.
   • rupture or breaching of water-retaining structures including, but not limited to dams, canals
   and viaducts caused by an unpreventable force of nature.
   • mudflow which is proximately caused or precipitated by accumulations of water on or under
   the ground.
   • the collapse or subsidence of land resulting from flood-related erosion.
   Flood Prone Area or Flood Plain Area: Any land susceptible to being inundated by water from any
   source.
   Flood-Proofing: Any combination of structural and non-structural additions, changes or
   adjustments to structures which prevent flood-related damage to real estate or improved real
   property, water and sanitary facilities, structures and their contents.
Flood Proofing Certificate: The Flood Proofing Certificate is an administrative tool to document design information necessary to ensure compliance with the National Flood Insurance Program (NFIP). The Flood Proofing Certificate may be downloaded from the FEMA website at: http://www.fema.gov/nfip/f-056.pdf

Flood-Related Erosion Hazard Area: Land which is most likely to be subject to severe flood-related erosion losses. This area is a designated E Zone on the LAFHM.

Floodway: Any floodway so designated on the LAFHM, or other areas determined by the City Engineer, that must be reserved in order to discharge the storm water.

Los Angeles Flood Hazard Map. (LAFHM): The official maps for the City of Los Angeles showing the boundaries of hazard areas. Information from the LAFHM is provided at www.ladbs.org, keywords Zoning Information.


Lowest Floor: The lowest floor of the lowest enclosed area (including basements). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage, in areas other than basements, is not considered a building's lowest floor, provided that such enclosure is built to comply with the Flood Hazard Specific Plan.

Lowest Finished Floor Elevation. (LFFE): The elevation above mean sea level of the lowest floor of the lowest enclosed area (including basements) allowed by each flood Zone determined in accordance with this Bulletin including the freeboard (LFFE = BFE + 1.0 foot) required by the Flood Hazard Specific Plan.

Mudflow: The condition wherein there is a river, flow or inundation of liquid mud and debris down a hillside. Mudflow is usually preceded by brush fires. Mudflow may occur as a distinct phenomenon while a landside is in progress.

Mudflow-Prone Area: Individual lots and/or areas determined by the Department of Building and Safety to be "SUBJECT TO MUDFLOW." Such determination shall be made when the site grading pre-inspection reveals slope surfaces of unconsolidated material with a topographic setting, geology and/or a history that indicates a potential for mudflow. Those sites located within, or at the base of, concentrated drainage areas are the most likely to be subject to mudflow, although, sites located elsewhere may also be subject to such determination.

Substantial Improvement or Substantial Damage: Any reconstruction, rehabilitation, addition or other improvement of a structure, the cost of which equals or exceeds 50% of the Market Value of the structure before the start of construction of the improvement. This term includes structures which have incurred substantial damage, regardless of the actual repair work performed.

Zone: Designation of areas within the Flood Hazard Specific Plan Area based on severity of the risk of flooding.

B. APPLICATION: The following regulations (FEMA Publication 213) apply to all new buildings and Substantial Improvements to public and private development in the designated special flood hazard area furnished by the City Engineer.

1. Projects other than new buildings and Substantial Improvements are not required to comply with these regulations if the Permit Valuation is less than 50% of the Market Value. Documentation to support exemptions shall be attached to the building permit.

2. Market Value determined by the County Tax Assessor’s website shall be verified by one of the following (Ref:FEMA publication #213):

   - Itemized estimates from licensed contractors including depreciation (depreciation
shall be based on rates established by the LA County Tax Assessor).

- Damage estimates from damage reports by Federal Emergency Management Agency, FEMA.
- Appraiser certified in the state of California.

3. Projects with Permit Valuation in excess of 50% of the building Market Value are considered "Substantial Improvements."

4. Requests for Modification of Building Ordinances for variations to this specific plan shall be processed with concurrence from the National Flood Insurance Coordinator, Department of Public Works. Ordinance 172,081, Section 9.A.2.

C. CONSTRUCTION LIMITATIONS: The following are special construction limitations based on the location of the development in the special hazard areas in accordance with the Ordinance 172,081, Section 5. Developments located in more than one special hazard area (i.e. floodway, floodprone and mudflow) shall comply with the requirements in each of the applicable hazard areas.

1. All Areas:
   - Commercial and residential projects may comply by elevating the lowest finished floor of the building above the Lowest Finished Floor Elevation, LFFE.
   - Commercial projects may comply by flood proofing parts of the building below the LFFE.
   - Buildings containing residential uses may not be floodproofed.
   - Verification of the constructed finished floor elevation shall be with a licensed survey and documented on the Elevation Certificate or Flood Proofing Certificate.
   - Electrical, heating, ventilation, plumbing and air condition equipment and other service facilities shall be designed and located so as to prevent water from entering or accumulating within the components during conditions of flooding.
   - A site investigation prepared by a registered civil engineer or geologist shall be approved by the LADBS Grading Section prior to permitting any new buildings or Significant Improvements to existing buildings.
   - Garages to store private vehicles with minor storage incidental to the primary use of the building may be located below the LFFE. However, all equipment shall be located above the LFFE or be designed to operate when inundated.
   - Fully enclosed areas below the LFFE that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered civil engineer, structural engineer, or architect or must meet or exceed the following minimum criteria: a minimum of two openings having a total net area of not less than one square inch for every one square foot of enclosed area subject to flooding shall be provided. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
   - The publication, "FEMA-102 -Floodproofing Non-Residential Structures" may be used as a guide for flood-proofing design. Where flood-proofing is required for a structure, a California registered civil engineer or architect shall certify by signature
to the Department that the completed floodproofed structure was constructed in conformity with the approved plans and is adequate to withstand the flood pressures, velocity, impact and uplift forces and other factors associated with base floods. Such certification shall be made on the building plans.

2. Floodway Areas
- No new structures, additions, reconstruction, rehabilitation or other improvements to existing structures shall be permitted within a floodway.
- All development existing within Floodways on October 9, 1980, may continue. No grants, privileges or considerations shall be given which would prolong the life of an existing development that impedes or raises the level of discharge of a Flood.
- Manufacturing buildings or other facilities in which hazardous substances are stored, manufactured or used shall be prohibited in any Floodway.

3. Floodplain and Flood-Prone Areas:
- The lowest floor of all residential structures shall be constructed at least one foot above the Base Flood Elevation, and in Zones AH, AO and VO shall be elevated above the highest adjacent grade at least one foot higher than the depth specified in feet on the LAFHM, or at least two feet if no depth specified.
- All construction below the LFFE shall use flood-resistant materials.
- Residential structures and/or substantial improvement to residential structures located in a flood-prone area shall be designed so that the Lowest Finished Floor Elevation, is constructed at least one foot above the Base Flood Level. Verification of the constructed finished floor elevation shall be verified by a licensed survey and documented on the Elevation Certificate.
- Garages to store private vehicles with minor storage incidental to the primary use of the building may be located below the LFFE. However, all equipment shall be located above the LFFE or be designed to operate when inundated.
- New nonresidential structures and/or substantial improvements to nonresidential structures located in a flood-prone area shall be constructed with the Lowest Finished Floor surface constructed at least one foot above the Base Flood Level, or shall be constructed so that the portion of the structure below a horizontal plane located one foot above the Base Flood Level shall be flood-proofed. Areas that are to be flood-proofed shall be constructed with floors, walls and sealable openings that are substantially impermeable to the passage of flood waters and with construction components having the capability of resisting hydro-static and hydrodynamic loads and the effects of buoyancy.

4. Mudflow-prone Areas:
New construction or substantial improvements or repairs shall not be permitted on sites determined by the Department to be "SUBJECT TO MUDFLOW."

EXCEPTION: Construction may be permitted on a site determined to be "SUBJECT TO MUDFLOW" if the applicant submits evidence, acceptable to the Department, that the proposed development will not subject any improved portion of the site (including parking areas, lawns and similar open areas) to the hazards of mudflow. Such evidence is to include:

a. A site investigation, evaluation and report made by persons qualified and licensed in civil engineering, engineering geology and/or soils engineering to ascertain the
location, magnitude and extent of potential mudflow hazards and to recommend measures for the elimination of such hazards. The report is to be submitted to the Department for evaluation and determination of acceptability.

b. Location and arrangement of developments within or at the base of concentrated drainage areas so that potential mud/debris flow path, gradient and channel capacity are maintained. For areas of abrupt change in flow path and/or gradient, provisions shall be made for the deposition and buildup of mud/debris material. Minimum design parameters to be used for mud/debris flow control systems within and at the base of concentration drainage areas are:

(1) A channel flow capacity of 10 cubic feet per second per acre of tributary drainage area; or

(2) A temporary storage capacity of 400 cubic yards per acre of tributary drainage area.

c. Slope planting, irrigation and drainage systems that are to be installed in a manner that reduces surface erosion, saturation of the upper soil mantle and a buildup of highly flammable brush.

5. Coastal High-hazard Areas:

a. All designs of new construction and Significant Improvements to existing buildings within Zones V and VI-30 on the LAFHM shall be located landward of the reach of mean high tide, as determined by the National Flood Insurance Coordinator, Department of Public Works, and documented on permitted drawings.

b. All new construction and substantial improvements within Zones V and VI-30 on the LAFHM shall be elevated on adequately anchored pilings or columns and securely anchored to such pilings or columns so that the lowest portion of the structural members of the lowest floor (excluding the pilings or columns) is elevated to or above the base flood level. A California registered civil engineer or architect shall certify that the structure is securely anchored to adequately anchored pilings or columns in order to withstand high waters and wave wash.

c. All new construction and substantial improvements within Zones V and VI-30 on the LAFHM shall have the space below the lowest floor free of obstructions or be constructed with "breakaway walls" intended to collapse under stress without jeopardizing the structural support of the structure so that the impact on the structure by abnormally high tides or wind-driven water is minimized. Such temporarily enclosed space shall not be used for human habitation.

6. Flood-related Erosion Hazard Areas.

a. All new construction and substantial improvements within a flood-related erosion hazard area shall be reviewed to determine whether the proposed site alterations and improvements will be reasonably safe from flood-related erosion and will not cause or otherwise aggravate the existing flood-related erosion hazard; and

b. Where a proposed improvement is located within an area of flood related erosion or will increase the erosion potential, the improvement shall be relocated or adequate protective measures to be taken which will not aggravate the existing erosion hazard.
D. REPORTING: The Department is required to submit to the Federal Emergency Management Agency, FEMA, copies of the following:
1. A report of the number of permits approved and waivers applied for and granted in areas of special hazard, and
2. Copies of all Flood Proofing Certificates and Elevation Certificates for all projects completing final inspections.

E. DEPARTMENTAL PROCEDURES:
1. Express Permits
   No change in procedure. All Express Permits for work within the Flood Hazard Specific Plan Area will be issued with the following note:
   "All equipment and other service facilities must be designed and/or located above the lowest finished floor, so as to prevent water from affecting the components during conditions of flooding. Refer to FEMA Publication 348 for further details."
2. Grading Engineering Section:
   An evaluation and opinion as to whether or not a site is "SUBJECT TO MUDFLOW" within the Grading Hillside area shall be made by the consulting geologist and soil engineer. The detailed evaluation of the mudflow potential and recommendations to protect the property shall be included in the soil and / or geology report. The final determination as to whether or not a site is "SUBJECT TO MUDFLOW" shall be made by the Grading Division of the Department after review of the soil and / or geology report.
3. Building Plan Check:
   a. Plan Check Engineers shall check plans for compliance with the guidelines set forth in this Bulletin and the "Supplemental Correction Sheet for Flood Hazard Specific Plan - Structural."
   b. All appeals and waivers shall be microfilmed to be provided to FEMA representatives during an audit. A copy of the appeal and waiver shall be sent to the National Flood Insurance Coordinator, Department of Public Works.
   c. Mechanical and Electrical Plan Check Engineers shall require a note on a plan to require all equipment to be installed above the lowest finished floor, unless designed to operate while inundated by a flood.
4. Building Inspection:
   a. A licensed survey shall verify the elevation of the finished floor is as required on the approved plans. LAMC Appendix Section 3109
   b. A copy of the completed certificate (Elevation Certificate or Flood Proofing Certificate) shall be placed in:
      i. The Building Inspector's field pack,
      ii. Microfilmed with the completed Certificate of Occupancy, and
      iii. A copy shall be kept at the Assistant Inspection Bureau Chief's office for the biannual FEMA audit. Ordinance 172,081, Section §D.6.
5. Grading Inspection:
   The Grading Inspector may be requested to verify the site evaluation submitted to the Department on whether or not a site is "SUBJECT TO MUDFLOW." Some indicators of sites "SUBJECT TO MUDFLOW" are:
   a. Sites below slopes that are located within an area having evidence and/or history of past Mudflow problems.
b. Sites located within or at the base of concentrated drainage areas. It should be noted that an area subject to deep-seated or surficial landslide or slumping is not necessarily subject to Mudflow.

c. Where sufficient grading and/or other work has been performed to eliminate the Mudflow hazard to the site or where it has been demonstrated through approved reports that the Mudflow hazard does not exist, the Department will remove the "SUBJECT TO MUDFLOW" designation. Removal of the designation will be accomplished through attachment of the Department’s determination to the tract file copy of the Grading Pre-Inspection, GPI, sheet.
SUPPLEMENTAL CORRECTION SHEET
FOR
FLOOD HAZARD SPECIFIC PLAN - STRUCTURAL

Plan Check No. _________________________  PCIS# (s): ________________
Job Address: __________________________

This is intended to provide uniform application of the codes by the plan check staff and to help the public apply the codes correctly.

Revise plans and provide notes to show compliance with the following attached handouts:

- P/BG 2002-64 Flood Hazard Management Specific Plan Guidelines
- FEMA Elevation Certificate
- FEMA Flood Proofing Certificate

A. DEFINITIONS

For clarity, the following terms are defined as follows:

BFE means the Base Flood Elevation or the elevation above the mean sea level to the top surface of the design flood.

Depth means the vertical distance from grade at the exterior surface of the building.

Flood Hazard Specific Plan means the city ordinance 172,081.

HAG means the Highest Adjacent Grade or the highest point on the perimeter of the building.

LADBS means the Los Angeles Department of Building and Safety.

LAFHM means the Los Angeles Flood Hazard Map with information provided on the building permit application box #3, "Parcel Information."

Lateral Addition the increase of building footprint size in the horizontal plane.

LFF means the Lowest Finished Floor or the lowest occupied level of the building, regardless of use.

LFFE means the elevation of the Lowest Finished Floor. LFFE = BFE + freeboard.

Market Value means the value of the structure which alterations are proposed, including depreciation. This definition is not to be construed to mean the replacement cost.

Substantial Improvement means any repair, reconstruction or improvement of a structure, the cost of which equals or exceeds fifty-percent of the market value of the structure either, (a) before the improvement or repair is started, or (b) if the structure has been damaged, and is being restored, before the damage occurred. For the purposes of this definition, "Substantial Improvement" is considered to occur when the alteration of any wall, ceiling, floor, or other structural part of a structure commences, whether or not that alteration affects the external dimensions of the structure. The term does not include any project for improvement of a structure to comply with existing state or local health, sanitary or safety code specifications which are solely necessary to assure safe living conditions or any alteration of a structure listed on the National Register of Historic Places or a state inventory of Historic Places.

B. PERMIT APPLICATION

1. This property is located within the Flood Hazard Specific Plan area, Ordinance 172,801.

2. This property is partially located within the Flood Zones, (PI), superimpose the map shown at: http://gis.lacity.org/infola/mainmenu.htm to verify whether building is located within the boundaries of the Flood Hazard Specific Plan area.

3. Flood Zone is _______. Base Flood Elevation, BFE, (E=) is ________. and Depth of Flood (D=) is ________,”Box #3, Parcel Information” of the building permit application.

4. Ordinance 172,081, Section 5.C.1(b) requires (Soil)(Foundation)(Geology) report(s) for all projects creating occupied structures must be approved by City Grading Section for properties located within Floodways, Mudflow, Mudflow-prone areas, Flood Zones AH, AO, A1-A30, A99, AE, V, and V1-V30. Provide copy of approved report and Department approval letter. Show compliance with all the requirements of the reports and approval letter conditions.

C. PLANS

1. Place the following note on all plans for projects required to comply with the Flood Hazard
Specific Plan: "Licensed Survey is required to verify Lowest Finished Floor." LAMC Appendix Section 3109

2. The following note shall be placed on the plan: "Flood Proofing Certificate or Elevation Certificate shall be completed and submitted to the Building Inspector prior to Final Inspection." Ordinance 172,081, Section 6.D.6.

3. Exempt Projects: When remodeling and/or additions to existing buildings are not considered Substantial Improvements, then evidence (certified cost estimates) that the project is exempt shall be made part of the permit or approved plans. Ordinance 172,081, Section 6.D.6.

D. APPLICABILITY OF FLOOD HAZARD SPECIFIC PLAN.

1. All new construction and Substantial Improvements to private and public development shall comply with the Flood Hazard Specific Plan. Ordinance 172,801, Section 5.A.

2. Market Value of $_________ for the County Tax Assessor's value of the existing structure (improvements), excluding land value, was based on the information provided by the Los Angeles County Tax Assessor at http://assessor.map.co.la.us/website/ParcelMap/viewer.htm?Title=LACountyAssessor%27s%20Property%20Assessment%20Information%20System.

3. Historic Buildings: If improvements are for purposes of restoration or preservation only, then compliance with the regulations for the Flood Hazard Specific Plan may be waived when approved by LADEBS, Ordinance 172,081, Section 2. Definition of Substantial Improvement.

4. Correction of Existing Violations: When determining applicability of the Flood Hazard Specific Plan, the valuation of the cost of improvements necessary to correct existing violations identified by an inspection conducted by the City may be excluded from the analysis in item C.6. (below). Ordinance 172,081, Section 2. Definition of Substantial Improvement.

5. Upgrades to the building necessary to comply with the Americans with Disabilities Act or California State Code Title 24, may be excluded from the analysis in item C.6. (below). Ordinance 172,081, Section 2. Definition of Substantial Improvement.

6. Projects with Permit Valuation in excess of 50% of the building Market Value are considered "Significant Improvements," and shall comply with the regulations of the Flood Hazard Specific Plan, Ordinance 172,081.

7. Market Value for buildings with proposed work permit valuation between 40% and 60% of the Market Value determined by the County Tax Assessor's web site shall be verified by one of the following (Ref: FEMA publication #213):
   a. Itemized estimates from licensed contractors including depreciation (depreciation shall be based on rates established by the LA County Tax Assessor).
   b. Damage estimates from damage reports by Federal Emergency Management Agency, FEMA.
   c. A report by an appraiser certified in the state of California.

8. Market Value verified by items C.7a, b, or c (above) shall be documented as an Attachment to the permit.

9. Projects with Permit Valuation less than 50% of the building Market Value are exempt from the Flood Hazard Specific Plan. This determination shall include the cost of altering or constructing any wall, ceiling, floor, or other structural part of a structure, whether or not that alteration affects the external dimensions of the structure. Ordinance 172,081, Section 5C.3.

10. All exemptions shall be documented in the PCIS Comment Screen as follows: "Significant Improvement Determination by LADEBS: (permit valuation ÷ Market Value = ___) project is exempt."

11. All parts of existing buildings shall be elevated when the Permit Valuation for remodeling and additions exceeds 50% of the building Market Value. Exception: Lateral Additions Only. Ordinance 172,081, Section 5C.3

12. Lateral Additions Only: If no work is proposed to the existing structure, except for an access doorway to the proposed addition, then only the proposed addition shall comply with the Flood Hazard Specific Plan when the Permit Valuation exceeds 50% of the Market Value. If the Permit Valuation is less than 50% of the Market Value, then the project is exempt and document exemption as in item C.10 (above). Ref: FEMA publication #213

E. CONSTRUCTION PLANS AND DETAILS

Provide the following specifications, plans and details:

1. Zones A, AO (AF), A1 (FW) thru A30 (FW), AR, AR/A1 thru AR/A30, AR/AF, AR/AH, AR/AO, V1 thru V30: Clearance and plan approval with stamp/signature is required from NFIP/CRS coordinator (213) 847-5210 or e-mail at rrojo@eng.lacity.org

2. In all other zones: The LFFE = __________ and the lowest elevation of utility/equipment for all residential structures shall be at least one foot
3. Occupied basements are not allowed below the LFF, except garages to store private vehicles and minor incidental storage. Ordinance 172,081, Definition of LFF.

4. On properties subject to Subsidence, the LFF shall be increased by the expected Subsidence in a ten-year period. (Ordinance 172,081, Section 5C.3c) Amounts of Subsidence shall be approved by the Grading Section of Building and Safety.

5. Underfloor spaces: A minimum venting of two openings with a total net area of not less than one square inch for every square foot of enclosed area below the LFF. The bottom of the openings shall be no higher than one foot above adjacent grade. Openings may be equipped with screens, louvers, or other automatic covering devices, provided these components permit the automatic entry and exit of flood waters. Ordinance 172,081, Section 5C.3d

6. Note on plan: “Flood-resistant materials shall be used for construction below elevation LFF = ______.” Ordinance 172,081, Section 5C.3d

7. Note on plan: “Electrical, heating, ventilation, plumbing, and air-conditioning equipment and other service facilities must be designed and/or located above the lowest finished floor, so as to prevent water from entering or accumulating within the components during conditions of flooding. Refer to FEMA publication 348 for further details.” Ordinance 172,081, Section 5C.3f

8. Flood-proofed non-residential projects only: Engineer/Architect shall sign the following note on plan, “Flood-proofing design complies with the regulations of the National Flood Insurance Program, Federal Emergency Management Agency.” Ordinance 172,081, Section 5C.3f

9. Provide complete plans, details and calculations demonstrating the proposed flood proofing of non-residential structure is adequate to withstand the flood depths, pressures, velocities, impact, uplift forces, and other factors associated with floods. Ordinance 172,081, Section 5C.3f

10. All manufactured homes and additions to manufactured homes shall be anchored to resist flotation, collapse, or lateral movement by one of the following methods Ordinance 172,081, Section 5C.3h:
   a. Option #1: Attach the main structural frame to the foundation for a lateral force of 0.25 psf and vertical force 15 psf, applied over the whole building footprint, or
   b. Option #2: Over-the-top ties at each of four corners and one additional tie per side less than 50’ long and two additional ties per side more than 50’ long. AND Frame ties at each of four corners plus four intermediate ties per side less than 50 long or five intermediate ties per side more than 50’ long. Each tie shall be designed for 4,800# uplift.

11. Pilings, when used as part of foundations for manufactured homes, shall be spaced a maximum of 10’ apart for all manufactured homes. Ordinance 172,081, Section 5C.3i

12. Mudflow areas and Mudflow-prone areas shall be designed based on reports by licensed engineers or geologist, approved by the LADB Grading Section. Ordinance 172,081, Section 5C.4c1

F. ADDITIONAL COMMENTS
Bureau of Engineering

Special Order

March 5, 2002

Special Order No. 004-0302

To All: Deputy City Engineers
       Senior Managers
       Group Managers

Subject: REQUIREMENTS FOR OBTAINING A WATERCOURSE PERMIT IN SPECIAL FLOOD RISK AREAS.

(Reference: One-Stop Permit Manual Chapter 9)

General

A watercourse is defined as a natural stream of water flowing in a particular direction in a definite channel having a bed and banks. It need not flow continually, nor is it restricted as to property ownership (G011.3). This Special Order applies only to watercourses in areas designated by the City Engineer as Special Flood Risk Areas.

The purpose of this special order is to provide a uniform approach for issuing watercourse permits that are within the Special Flood Risk Areas. The Bureau of Engineering will be identifying areas within the City that pose a special flood risk. Until a complete list of flood risk areas is available, this Special Order will apply to the only currently designated Special Flood Risk Area, which is Mandeville Canyon. The Mandeville Canyon Special Flood Risk Area includes Mandeville Canyon Creek and all of the water courses tributary to Mandeville Canyon Creek north of Sunset Boulevard and south of Mulholland Drive.

Effective immediately, all Engineering staff is directed to enforce the following requirements and take into account mudflow hazards when reviewing watercourse permit applications in Special Flood Risk Areas.

Requirements

1. Identify whether the watercourse is within a Special Flood Risk Area. As new Special Flood Risk Areas are identified this will be accomplished by contacting the Stormwater Group and having them check to see if the watercourse is within a Special Flood Risk Area. If the watercourse is not in a Special Flood Risk Area, proceed with issuing the watercourse permit in accordance with the "Permit & Procedure Manual For Work in the Public Right-of-Way" and Special Order SO41-1273.

2. A field investigation by the review engineer will be conducted prior to issuance of a watercourse permit.

3. Applicants shall provide hydrology (Qburned and Qbullied calculated per Los Angeles County Sedimentation Manual) for the 50-year storm and hydraulics calculations prepared and signed by a Civil Engineer licensed in the state of California. The private engineer's analysis shall include the calculation of the water surface elevation in the natural watercourse based on the calculated Qburned and Qbullied flow. This water surface elevation should be a minimum of two (2) feet below the lowest member of any structure allowed within the watercourse. If this criterion cannot be met then a watercourse permit shall not be issued.
4. No structures, drainage devices, or any part thereof shall be constructed below the lowest bank of the watercourse or in the watercourse area defined by the bed and banks of the watercourse below a level of two feet above the calculated water surface elevation based on the Q_{burned} and Q_{bulked} flow. This includes piles, caissons, footings, etc.

5. In order to provide access for earth moving machinery and the unrestricted flow of debris, except as provided in No. 6 below, no structure shall overhang the watercourse area more than 1/3 of the narrowest reach of the watercourse area width. Overhanging structures shall not extend from both sides of the watercourse area within a single section.

6. Bridges necessary for general legal or emergency access to residences may be constructed over watercourses subject to the following additional conditions. No bridge shall be constructed without sufficient vertical and horizontal clearance for earth moving machinery to pass beneath it, unless unrestricted access to the watercourse is provided both upstream and downstream of the bridge. Width of bridge shall be limited to the minimum necessary for access, but in no case shall the width exceed 18 feet.

7. The permit engineer shall contact the Environmental Group for requirements in the preparation of any special environmental document.

8. Applicats will be required to submit a site/topography plan signed by a surveyor licensed in the state of California that shows the alignment, elevations, contours, toes and tops of slope of the watercourse and any adjacent watercourses, sumps, or local depressions. Footprints of any existing and proposed structures adjacent to the watercourse (i.e., cantilever decks or pedestrian/ driveway bridges) shall be clearly identified on the site plan.

9. Applicants shall provide the City of Los Angeles with a recorded waiver of damages, a covenant and agreement for maintenance of the watercourse, and vehicular access to the watercourse and any pertinent municipal facility (i.e., revetments, retention basins, debris basins, etc.) when required.

10. The permit engineer shall contact the Department of Building and Safety prior to issuance of a watercourse permit. When required, the permittee shall obtain the necessary permits from the Department of Building and Safety, The Los Angeles County Flood Control District, or the Corps of Engineers.

11. The applicant shall provide written notice to all residents of properties within a 500-foot radius from the subject property of the proposed construction.

(MDP WHH CWR)
YOUR PROJECT IS IN A SPECIAL FLOOD HAZARD AREA

Frequently Asked Questions

What are Special Flood Hazard Areas? Who determines where these areas are?

Special Flood Hazard Areas (SFHA) are considered high flood risk areas that are expected to flood during a 100-year rain event. These areas are mapped by the Federal Emergency Management Agency (FEMA) and shown in Flood Insurance Rate Maps (FIRM).

Your property is flagged because it is believed to be in a SFHA.

Why are SFHA needed?

In 1968 the U.S. Congress created the National Flood Insurance Program (NFIP) with the intent to reduce future flood damage through community floodplain management ordinances, and required insurance protection for properties in high flood risk areas. In 1970, the City joined the NFIP program and committed to regulate development in the floodplains. The regulations affecting your project can be found in Ordinance 172081.

How will these floodplain management regulations affect my project?

In short, the lowest finished floor (LFF) and utilities of all new buildings and significant improvement (including remodeling) located in SFHAs must be elevated one foot higher than the expected base flood elevation (BFE). Certain flood hazard areas are considered floodways or passages to the 100-year flow, therefore, no new development will be allowed or may require special design criteria. In any case, all construction below the base flood level shall use flood-resistant materials.

Most importantly, no basements will be permitted in new buildings. Significant improvement projects (see definition) will be required to seal any existing basements.

What is considered a basement?

The NFIP's definition of "basement" includes any part of a building where the four corners of the floor are located below ground level. Even when a room may have windows and constitute living quarters, it is still considered a basement if the floor is below ground level on all sides. No basements will be permitted in SFHAs.

What can I do if I believe that the FEMA maps are wrong and my project is not in an SFHA?

You need to provide FEMA with technical information that indicates that your parcel/project has been inadvertently shown within the SFHA. This is done by completing an application for a Letter of Map Amendment (LOMA) or a Letter of Map Revision Based on Fill (LOMR-F). The request must include survey elevation of the lowest grade adjacent to the structure or the lowest enclosure level of the structure and certain other information, as described in the application package.

The instructions in the package will assist you in compiling the information needed to support a LOMA or LOMR-F request. For more assistance in compiling the required information, you may visit www.fema.gov/mit/map/firm_maps.htm.

How high do I need to elevate?

All new buildings must have the lowest finished floor (LFF) and utilities, elevated one foot above the base flood elevation (BFE). These elevations are determined differently depending on the information available in the FIRM maps.

If you are in a zone AE, AH, AI-30, or V1-30, the FIRM map indicates the BFE for the area. However, if your project is in a zone AO, or AO (AP), you must provide us with certified survey elevation of at least one corner of the proposed building (including additions) which is adjacent to the natural grade, and the elevation of the highest point of the curb. Please be aware that relative elevations will not be usable. The surveyor must use a City benchmark to run the survey. City benchmarks are available through the Internet at http://eng.losangeles.ca.gov/techdocs/benchmarks.

If no flood elevation or depth is provided in the FEMA maps, such as in SFHA A (undetermined hazard area), you may have to provide the City with a hydrologic study to determine the BFE affecting the project. In lieu of a new hydraulic study, you may provide other base flood analysis (from the Army Corps of Engineers, or other acceptable organization) that determines the BFE.

Elevation Certificates (EC) / Floodproofing Certificates (FC): At the end of the construction you must certify that the elevation or floodproofing conditions stated during the permit application were met. You must complete an EC or FC, whichever was required by the plan checker, and turned in to the building inspector at time of final inspection and before the Certificate of Occupancy is issued for the project.

Do the floodplain management regulations affect existing buildings?

These regulations affect existing buildings only when an existing building is substantially damaged or improved.

What constitutes "substantial improvement" or "substantial damage"?

"Substantial improvement" means any rehabilitation, addition, or other improvement of a building when the cost of the improvement equals or exceeds 50 percent of the market value of the building before start of construction of the improvement. The term includes buildings that have incurred "substantial damage." "Substantial damage" means damage of any origin sustained by a building when the cost of restoring the building to its pre-damaged condition would equal or exceed 50 percent of the market value of the building before the damage occurred. Substantial damage is determined regardless of the actual repair work performed. Substantial improvement or damage does not, however, include any project for improvement of a building to correct existing violations of State or local health, sanitary, or safety code specifications identified by local code enforcement officials as the minimum specifications necessary to assure safe living conditions. Also excluded from the substantial improvement requirement are alterations to historic buildings as defined by the NFIP.

What if all I want is to remodel my home without adding square footage?

Additions and remodeling projects are treated similarly. In order to make a determination of applicability (50% trigger), you will be asked to submit an Assessor's report (completed within the last 6 months) and a detailed assessment of the cost of the remodeling project.

If the project meets the "significant improvement" criteria, the entire structure (existing and addition) will be required to comply...
with current building codes including floodplain management regulations. In some instances, only the addition needs to be elevated, however, usually second story additions and complete removal of an existing wall will "trigger" the elevation requirements of the existing structure.

Electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities must be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

Are commercial/Industrial structures treated differently?

Unlike residential structures, commercial or industrial type structures may floodproof in lieu of elevating their structures. If a project is allowed to floodproof in this fashion, the plans will have to be certified by an engineer/architect that the structure was designed and built to withstand or automatically withstand hydraulic forces up to the Base Flood level (plus one foot freeboard) without damaging the structure. During final inspection, a Floodproofing Certificate will also be required.

What about manufactured homes?

Manufactured homes will also need to be elevated and anchored to resist flotation, collapse, or lateral movement.

Subdivisions

All subdivisions must submit base flood elevation information, delineation of floodways, and provisions for evacuation routes in the event of a flood.

What do you need from me to quickly review my plans?

Different information may be required depending on the type of SFHA and the type of project being permitted. Below is a checklist of type of information that will be needed for plan-checking:

**PLANCHECK CHECKLIST**

1. First, confirm the flood designation of your project (you can call the flood zone information line at (213) 847-5220 or online at http://navigate.lacity.org/floodgis).
2. Second, determine if the project (addition + remodeling) is a substantial improvement.
3. Zone AE, AH, AI-30: Clearly indicate in the plans the proposed elevation of the lowest finished floor including utilities.
4. Zone AO: Obtain certified survey elevations of the natural grade adjacent to the existing and proposed addition (or new building). Provide at least one corner of the existing structure including any additions. Submit real elevations based on the City's benchmarks (relative elevations will not be accepted). Multiple structures will be required to have the information for each structure (in the case of new developments).
5. Zone A1: Hydraulic information from a reputable source, indicating the base flood elevation in the area.
6. Zone AO (AF) / Alluvial Fans: Provide an engineer's certification that the project is designed to withstand flood flow and scouring.
7. Zone A1-30 (FW) / Floodways: Submit a copy of a Conditional Letter of Map Revision from FEMA, confirming that the project will not increase the base flood level by more than one foot.
8. Zone VI-30 / Coasts: Provide engineer's certification that the project is designed to withstand wave action and hurricane wave wash; elevated and secured on anchored pilings or columns; and the lowest portion of the structural members of the lowest floor (excluding the pilings or columns) are located one foot above the base flood level.

**PROJECT SIGN-OFF**

- Pay review fees.
- Ensure all corrections are clearly shown on the plans.
- Commercial/Industrial projects only: Engineer/Architect certification of Floodproofing.
- Alluvial fans and coastal projects only: Engineer/Architect certification of structural design to withstand velocity (wave action) and scouring.
- Floodway projects only: City/State approved by FEMA.
- Submit all required sets of final plans to be stamped. Only the final version of the plans will be stamped.

**CERTIFICATIONS REQUIRED**

- Final Inspection - Submit copy of Elevation Certificate (EC) and/or Floodproofing Certificate (FC) in order to receive the Certificate of Occupancy. Fax copy to NFPI/CRS Coordinator Ms. Rosalia Rojo, fax No. (213) 847-5020, to check for accuracy before submitting to inspector.

Published by:

Department of Public Works
Bureau of Engineering
NFPI/CRS Coordinator
(213) 847-5210

Updated: April 23, 2003
Appendix C MAPS

Special Flood Hazard Areas
Repetitive Loss Properties (Citywide and by Council District)
City of Los Angeles
Council District 6
Councilmember Tony Cardenas
City of Los Angeles
Council District 11
Councilmember Cindy Miscikowski
City of Los Angeles
Council District 13
Councilmember Eric Garcetti
Appendix D  FMP COMMITTEE

Membership
2003 Meeting Minutes
I. CALL TO ORDER
Committee was called to order at 1:15 p.m.

1. ATTENDANCE
This year, the FMP Committee consisted of 21 members (33% citizens and 67% City Departmental representatives). A total of 12 members attended the meeting.

II. DRAFT FMP IMPLEMENTATION PROGRESS REPORT (IPR) - DISCUSSION

After self-introductions, the committee started the meeting with a question.

**Question (Q) 1:** What caused the active RLPs to become inactive?
**Answer (A) 1:** When a flood mitigation activity (or project) is taken (or built) by the property owner (or the City), the NFIP/CRS Coordinator gathers sufficient documentation to support a re-designation request. Once FEMA is satisfied with the documentation, the RLP may be re-designated as an inactive RLP property. Types of projects that apply include a new drainage system built by the property owner or the construction of a culvert or catch basin by the City. Although over the last two years, we have reports of 7 new RLPs in the City, the total number of “active” RLPs shows a downward trend.

**Staff Report:**
Staff provided committee members a summary of the 2003 Implementation Progress Report and also of new regulations and programs that affect the FMP.

**DMA 2000**
The most significant new Federal Law is the Disaster Mitigation Act of 2000 (DMA 2000). Under DMA 2000, all municipalities are required to develop a multihazard mitigation plan by November 1, 2004, in order to be eligible for mitigation grant funds.

The FMP satisfies only the flood hazard portion of the multihazard plan. Other hazards that will be addressed in the new plan include seismic, fire, wind storms, tsunamis and terrorism (optional but highly encouraged to be added).

The Department of Emergency Preparedness (DEP) will take the lead in coordinating the development of the City’s multihazard mitigation plan. Larry Meyerhoffer indicated that the first meeting will take place on Tuesday Sept 30, 2003. Approximately 27 City departments, 15-20 private businesses, community/non-profit /volunteer organizations, as well as the County have been invited to join the planning task force. It is anticipated that the task force will grow as the Department of Neighborhood Empowerment approaches neighborhood council representatives to join the effort. There are plans to set up a web site to
allow public access during each planning step and also plan to hold public meetings similar to those held during the preparation of the FMP. DEP is currently applying for grant funding and is making a clarification whether homeland security funds may be used for planning, since the City will be addressing terrorism hazards in the plan. Getting a consultant on board is critical and the time frame is short.

FMP Revision
The City’s FMP was originally adopted in 2001 and is required to be revised every five years. Since the original due date was 2000, the updated FMP is due to FEMA in 2005. In order to complete the revision of the FMP, the committee will be asked to reconvene more often in a similar effort as the original planning effort.

Questionnaire Assessment:
Out of 60,000 mailed out we received over 1700 responses (3% response). The majority of the responses received (760 responses or 67%) indicated that there were no problems. Only 64 (6%) respondents indicate damage due to one of the primary flood hazards (Figure 4).

At this time, 75% of all responses received have been assessed. During the assessment, each reported flood event was categorized by its primary flood hazard category and by whether damage was experienced as a result. Figure 5 indicates the breakdown of the primary hazards reported. Primary flood hazards (as defined in the FMP) include flooding (ponding), dam/reservoir inundation, mud/debris flows, landslides, coastal/storm surge and tsunamis. The types of primary flood hazards reported the most were (1) ponding and (2) mud/debris flows. Figure 5 in page 4, indicates the primary flood hazard and the number of times that it was reported in the questionnaires.

The types of investigations were broken down into Tier 1 and Tier 2. Tier 1 refers to reports of actual damage. Tier 2 is primarily nuisance or impact without damage. Table 1 page 5 shows the agency (City, County or other) that will be asked to investigate and confirm the existence of flooding hazards that could lead to damage of life of property. Other agencies not specifically listed include the Santa Monica Conservancy and the City Department of Recreation and Parks.

Most agencies have only a few sites that they need to look into, however, other agencies have a significant number of sites that need to be investigated.

A significant number of investigations are required for any one agency to conduct on their own. Staff requests help from the committee to identify the best way to manage the number of investigation by agency members. One possible solution
is the creation of a sub-committee made up of FMP committee member agencies that have the most sites to investigate.

Q 2: Who does the public call when they experience damage? Would insurance companies have information on reported flood damage?
A 2: The average citizen could call a number of agencies to report damage such as Sanitation, City Administrative Office, Engineering, the County, insurance companies, FEMA, the list is endless. However, there is no agency that maintains a database of flood damage incidents in the City.

Q 3: Were most reports of flood damage in any one particular area? Or are these reports spread out?
A 3: The responses come from everywhere. When the investigations are completed, we will plot these incidents on a map.

Programs Progress
Appendix A includes a current description of the programs listed last year and being implemented.

Program 03 (Research and recommend the need to include a tsunami element in the City’s Emergency Response Master Plan) - The County has indicated that a tsunami element will not be prepared as originally envisioned, however, tsunami hazards are expected to be addressed in the County’s multihazard mitigation plan (DMA 2000). The City’s multihazard mitigation plan is also expected to address tsunami hazards. The scheduled completion for this program may need to be changed.

Program 04 (Continue to maintain and annually update the Dam and Reservoir Emergency Notification List) - Dam inundation maps will not be posted back on the Internet for an indefinite amount of time due to national security issues.

Other programs with TBD schedules are usually not scheduled because there is no funding or staff to initiate the effort. For example, Program 32 (revision of hillside area) has no lead agency. Our office will likely need to initiate this program in a cooperative level rather than as a fully funded program.

Q 4: Does the fact that programs are not implemented affect flood insurance for those areas?
A 4: No. The City’s overall rating under the Community Rating System determines the insurance premium discounts.

V. MOTIONS
Motion 1: Approve 2003 FMP-IPR with the understanding that the multihazard mitigation plan will address tsunami hazards by September 1, 2004, and the
FMP will incorporate the status of the City and County tsunami plan in the next progress report.

Discussion: Members of the FMP committee expressed concern that the City will not prepare a tsunami element in the City’s Emergency Response Master Plan. A suggestion was made that the FMP address tsunami hazards, however, staff reminded the committee that when the FMP was prepared, a decision was made that tsunamis were of such catastrophic nature, that they needed to be addressed separately. The FMP recognizes that flooding hazards are associated with tsunamis, however, the FMP is not meant to address tsunami hazards.

The committee agreed that the City could not ignore the existence of tsunami hazards, thus, the committee expects to see the County and City’s multihazard mitigation plans address tsunami hazards. Next year’s FMP-IPR will include a discussion on the progress or completion of the tsunami element of the multihazard mitigation plan.

Motion 2: Create a subcommittee made up of B&S, Tom Grant (CAO) is the Chair, Bureau of Sanitation, Bureau of Street Maintenance (if agrees to join), Bureau of Sanitation and Mr. Joel Henderson, representing citizens. The goal is to complete the investigations and report results to the committee by September 2004. The first meeting will take place prior to November 1, 2003. During the first meeting, members will agree on the frequency of subsequent meetings. Investigations are to be completed by September 1, 2004.

A key player is Street Services, who is not represented in the committee. Staff will invite representatives from Street Services to participate in the committee.

VII. ADJOURNMENT
The FMP committee adjourned at about 2:30 p.m.
# SEPTEMBER 23, 2003
## SIGN-IN

### CITIZEN COMMITTEE MEMBERS

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<td>JH</td>
<td>Henderson</td>
<td>Joel</td>
<td>Laurel</td>
<td>Canyon Neighborhood Association</td>
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### DEPARTMENTAL COMMITTEE MEMBERS

<table>
<thead>
<tr>
<th>Initial</th>
<th>Last Name</th>
<th>First Name</th>
<th>Department</th>
<th>Phone</th>
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<tbody>
<tr>
<td></td>
<td>Durrell</td>
<td>Tonya</td>
<td>Department of Public Works</td>
<td>(310) 785-2300 ext. 201</td>
</tr>
<tr>
<td></td>
<td>Meyerhofer</td>
<td>Larry</td>
<td>Emergency Preparedness Department</td>
<td>(213) 978-2243</td>
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<tr>
<td></td>
<td>Poursabahn</td>
<td>Siavosh</td>
<td>Department of Building and Safety</td>
<td>(310) 977-6216</td>
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<td>Hsu</td>
<td>Larry</td>
<td>Department of Public Works</td>
<td>(213) 111-1111</td>
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<tr>
<td></td>
<td>Ernst</td>
<td>Captain Timothy</td>
<td>Fire Department</td>
<td>(213) 485-6034</td>
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<tr>
<td></td>
<td>Van Buren</td>
<td>Herman</td>
<td>City Planning Department</td>
<td>(213) 978-1367</td>
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<tr>
<td></td>
<td>Grant</td>
<td>Tom</td>
<td>Office of the City Administrative Officer</td>
<td>(213) 485-4483</td>
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<tr>
<td></td>
<td>Duggan</td>
<td>John</td>
<td>Department of Recreation and Parks</td>
<td>(213) 473-7035</td>
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<tr>
<td></td>
<td>Bapna</td>
<td>Vik</td>
<td>LA County Department of Public Works</td>
<td>(626) 458-4363</td>
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<tr>
<td></td>
<td>Shah</td>
<td>Jawahar</td>
<td>Department of Public Works</td>
<td>(213) 473-8171</td>
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<tr>
<td></td>
<td>Hancock</td>
<td>Laurie</td>
<td>Community Development Department</td>
<td>(213) 473-3660</td>
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<td></td>
<td>Ruta</td>
<td>Lucia</td>
<td>Department of Public Works</td>
<td>(213) 978-0209</td>
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<td></td>
<td>Doty</td>
<td>Jim</td>
<td>Department of Public Works</td>
<td>(213) 847-8684</td>
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<td></td>
<td>Raasch</td>
<td>Daryl</td>
<td>Harbor Department</td>
<td>(310) 732-3686</td>
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