TO: HONORABLE CITY COUNCIL
FROM: CITY MANAGER DEPARTMENT: PUBLIC WORKS
DATE: MARCH 18, 2002 CMR:184:02
SUBJECT: STATUS REPORT ON PROPOSED CHANGES TO TIDAL FLOODPLAIN BOUNDARY

This is an information report and no Council action is required.

BACKGROUND
Congress established the National Flood Insurance Program (NFIP) in 1968 to provide flood insurance to residents and businesses in flood-prone communities that elect to participate in the program. In return, the Federal Emergency Management Agency (FEMA) imposes requirements on the participating community, including the codification of federal floodplain management regulations into local ordinances. Palo Alto initially elected to take part in the NFIP in 1979.

FEMA has delineated Palo Alto’s Special Flood Hazard Areas (SFHA) on its Flood Insurance Rate Maps (FIRM) for those areas subject to flooding in the one percent flood. The one percent flood has a one percent chance of occurring in any given year. It is sometimes referred to as the 100-year flood, because it is the flood that would be equaled or exceeded on an average of once every hundred years, measured over a long time period.

There are two basic requirements applicable to properties in a FEMA-designated SFHA: flood insurance and special building requirements. The flood insurance requirement is not administered by the City. Federally-backed lending institutions are mandated by law to require borrowers to obtain flood insurance for all loans issued for structures within an SFHA. City staff is responsible for enforcing the special building requirements, which have been incorporated into Chapter 16.52 (Flood Hazard Regulations) of the Palo Alto Municipal Code. These requirements apply to new construction and “substantial improvement” of existing structures within an SFHA. The primary special building requirements involve constructing the lowest floor of a structure at or above the expected flood level, installing adequate vents in foundation walls, placing building utilities above the flood level, and use of water-resistant building materials.
FEMA has identified two distinct flood hazards in Palo Alto: creek flooding and tidal flooding. Several areas of the City are subject to flooding caused by the overtopping of local creeks in the event of a one percent flood. In addition, a large area on the eastern side of the city is subject to tidal flooding in the event of failure or overtopping of the Bayfront levees during a one percent tide on San Francisco Bay. Approximately 2,400 Palo Alto properties are located within the tidal floodplain designated on the FEMA Flood Insurance Rate Maps (see Attachment A).

**DISCUSSION**
The tidal floodplain was mapped by a FEMA consultant in 1980. Since the one percent tide level is expected to reach an elevation of eight feet above sea level, the boundary of the tidal floodplain should be the eight-foot ground contour. This is where the edge of the ponded floodwaters would meet the ground (i.e. similar to a bathtub ring). After receiving several inquiries from the public about the accuracy of the FIRM, staff used topographic information collected for the City’s Geographic Information System (GIS) to map the eight-foot ground contour (see Attachment A). The accuracy of the GIS mapping was verified through a spot check of elevations in the field. Upon comparing the GIS data with the FIRM, staff has concluded that the floodplain boundary has been drawn incorrectly on the FIRM. Using staff’s modified floodplain boundary, 290 properties currently within the floodplain would be excluded and 170 properties outside the current floodplain would be added.

FEMA has a standard procedure, the Letter of Map Revision (LOMR) process, for requesting changes to the FIRM. Staff intends to submit a LOMR application to FEMA, requesting that it change the tidal floodplain boundary to reflect the City’s mapping data. The proposed map change would result in a net reduction of 120 in the number of properties located within the floodplain. Prior to sending the LOMR application, however, staff will conduct outreach to the affected property owners. First, staff will send a letter to all the property owners informing them of the proposed mapping change and inviting them to a public meeting to learn more about the issue (see Attachment B). At the public meeting, the floodplain maps will be displayed and explained, and staff will answer questions about the proposed mapping changes and the implications of having a property within a designated floodplain. Following the meeting, there will be a 30-day appeal period, during which time property owners will have the opportunity to challenge the City’s data using site-specific elevation data provided by a licensed surveyor. Following the appeal period and the resolution of any appeals, staff will submit the LOMR application to FEMA. It is expected that FEMA will respond to the City’s application within approximately 60 days. Once the City receives the approved LOMR from FEMA, staff will notify the affected property owners through individual letters. In addition, the map changes will be publicized through news releases, an item in the City Manager’s Weekly Memo, and an informational report to Council.

**TIMELINE**
The process to change the tidal floodplain boundary on the FIRM is expected to follow the following timeline:

March 18, 2002  Informational report to City Council
March 20, 2002  Letters mailed to affected property owners
April 2002  Public meeting on proposed mapping changes
            Start of 30-day appeal period
May 2002  End of appeal period
            Submittal of LOMR application to FEMA
July 2002  Expected receipt of approved LOMR from FEMA
August 2002  Public outreach on mapping changes

ATTACHMENTS
Attachment A:  Map of existing and proposed tidal floodplain boundary
Attachment B:  Sample letters to property owners affected by proposed mapping changes

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