July 2010

Councilwoman McAustin-

I am writing regarding the proposed review of the 2003 Hahamongna Watershed Park Master Plan—specifically, the portion of the plan recommending creation of playing fields and a parking area—an agenda item scheduled for July 12. As a geologist, frequent recreational user of Hahamongna Watershed Park, and Pasadena resident, I strongly oppose development of *any* kind within the watershed, including the proposed construction of athletic fields and parking facilities.

The geologic argument against development within the Hahamongna Watershed is strong. I am a geology professor at Mount San Antonio College and use Hahamongna as a shining local example when discussing flooding, debris flows, earthquake-induced liquefaction, and subsidence in my geology and natural disasters courses.

Flooding and debris flows: Seasonal rainfall significantly increases stream discharge in the San Gabriel Mountains and foothill areas, including Hahamongna. The average monthly discharge of the Arroyo Seco where it enters the Los Angeles River is 85.9 cfs but increases to 251.8 cfs in February (City of Los Angeles California Environmental Quality Act Initial Study, 2008). This drastic increase in stream discharge results in seasonal inundation of the park, saturating the thick sequences of unconsolidated alluvial deposits that compose the floor of the basin. In addition, the presence of hydrophobic soils after wildfire events poses substantial debris flow hazards. In contrast to flooding, debris flows are slurries of water and fine-grained sediment (clay, mud, silt) that carry coarse-grained sediment as large as boulders downslope. The Station Fire has left the San Gabriel foothills, including Hahamongna, vulnerable to debris flows, including the events that destroyed homes in La Canada earlier this year.

Earthquake-induced liquefaction: There is a high likelihood of liquefaction in areas like Hahamongna. Liquefaction occurs when groundwater is forced upward during an earthquake, giving solid ground fluid-like properties. Many geologic factors, including rock type, rock age, presence/absence of groundwater, slope angle, pre-existing geologic structures (faults, folded and tilted layers, etc.), and historic observations are used to forecast an area's potential response to ground shaking. In a nutshell, young, wet, unconsolidated sediment—an accurate description of the Hahamongna watershed rock type—is most prone to liquefaction. The California Geological Survey Seismic Zonation Hazards Program is an ongoing effort by the state Division of Mines and Geology to create maps illustrating how different areas will respond to ground shaking during earthquakes. The Pasadena Quadrangle clearly depicts the Hahamongna Watershed Park as a liquefaction zone, defined on the map as "Areas where historic occurrence of liquefaction, or local geological, geotechnical, and groundwater conditions indicate a potential for permanent ground displacements". Maps of much of Los Angeles County are available on the CGS Seismic Zonation Hazards website, but I have included a digital copy of the Pasadena Quadrangle for reference.

Subsidence: Subsidence (sinking) is a phenomenon common in unconsolidated sediment that disrupts infrastructure such as playing fields. As groundwater migrates through the sediment column and the level of the water table drops during the dry season, ground surfaces fluctuate. This is not a problem in areas that are undeveloped, but humanmade

structures that sit atop actively subsiding areas are subject to ongoing damage. I understand that part of the proposed plan includes using compacted fill to raise the elevation of the site from 1040' to 1050', but this will not halt subsidence in the hundreds of feet of unconsolidated sediment below.

I visited Hahamongna with my students this winter and spring after rainfall events to show them how floodplains develop, observe streamflow and sediment transport within stream channels, and discuss how the alluvial deposits in Hahamongna will likely respond in the event of an earthquake. For many of my students, this was the first time that they had ever seen surface water flowing through a natural stream channel. Soon after the winter field trip, another rainfall event occurred. Several of my students came to class shocked at what they saw on the news—footage of where they had walked only a few days earlier, now completely flooded and eroded after just one seasonal rain. I should mention that our field area was the approximate location of the proposed playing fields. No amount of engineering or landscape modification will stop the proposed playing field site from being inundated during debris flows and flood events, liquefying during ground shaking, or changing in elevation due to groundwater fluctuations. Clearly, any of these phenomena would render playing fields absolutely useless. It seems imprudent to use fiscal and human resources to build fields that will invariably be destroyed by geologic events that cannot be controlled.

In addition to my professional opinion about the unsuitable nature of Hahamongna for playing fields, I also oppose development of the watershed for personal reasons. I have been a Pasadena resident since 2007 and since that time have visited Hahamongna an average of 4 days per week during the fall, winter, and spring. I use the park for dog walking, running, mountain biking, photography, and as mentioned above, geology field trips with my students. Hahamongna is one of the *very* few open spaces left in Pasadena that has not been subject to development, and I speak for myself and many others when I say that constructing playing fields would be heartbreaking for those who appreciate the unspoiled wildness of the watershed. Although I am not an ecologist and would defer to my colleagues in the biological sciences to describe the impact that the proposed playing fields would have on the flora and fauna in the area, I imagine that the ecological effects of development within the watershed would be catastrophic.

In closing, I am entirely supportive of providing recreational venues such as athletic fields for the community. However, we also need untouched open spaces for other recreational endeavors such as hiking and wildlife viewing. Hahamongna Watershed Park exemplifies such an open space and is one of the few remaining areas of its kind. Considering its uniqueness, floral and faunal diversity, and geologic characteristics, I urge you to choose an alternate location for the proposed playing fields and leave Hahamongna as it is. Thank you for your careful consideration of this extremely important issue.

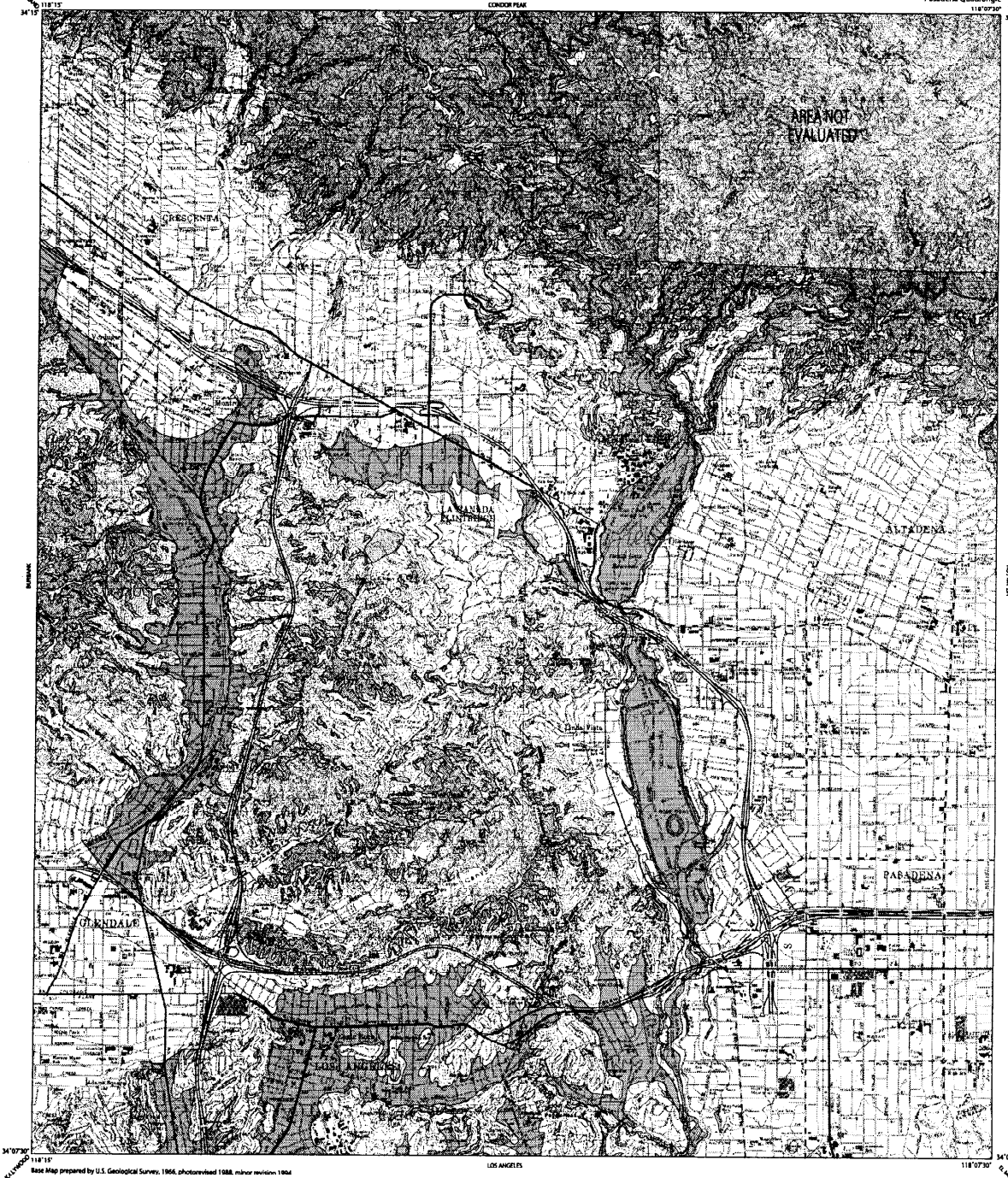
Sincerely,

Rebecca A. Walker
Professor of Earth Sciences, Mount San Antonio College

DIVISION OF MINES AND GEOLOGY
JAMES F. DAVIS, STATE GEOLOGIST

STATE OF CALIFORNIA-GRAY DAVIS, GOVERNOR
THE RESOURCES AGENCY-MARY D. NICHOLS, SECRETARY
DEPARTMENT OF CONSERVATION-STEVE ARTHUR, CHIEF DEPUTY DIRECTOR

SEISMIC HAZARD ZONES MAP
Pasadena Quadrangle



Base Map prepared by U.S. Geological Survey, 1966, photorevised 1988, minor revision 1994

SCALE 1:24,000

PURPOSE OF MAP

This map will assist cities and counties in fulfilling their responsibilities for protecting the public safety from the effects of earthquake-triggered ground failure as required by the Seismic Hazards Mapping Act (Public Resources Code Sections 2690-2699.6).

For information regarding the scope and recommended methods to be used in conducting the required site investigations, see DMG Special Publication 117, Guidelines for Evaluating and Mitigating Seismic Hazards in California.

For a general description of the Seismic Hazards Mapping Program, the Seismic Hazards Mapping Act and regulations, and related information, please refer to the draft User's Guide (see http://www.consrv.ca.gov/dmg/shezp/userguid/).

Production of this map was funded by the Federal Emergency Management Agency's Hazard Mitigation Program and the Department of Conservation in cooperation with the Governor's Office of Emergency Services.

IMPORTANT - PLEASE NOTE

1) This map may not show all areas that have the potential for liquefaction, landsliding, strong earthquake ground shaking or other earthquake and geologic hazards. Also, a single earthquake capable of causing liquefaction or triggering landslide failure will not uniformly affect the entire area zoned.

2) Liquefaction zones may also contain areas susceptible to the effects of earthquake-induced landslides. This situation typically exists at or near the toe of existing landslides, downslope from rockfall or debris flow source areas, or adjacent to steep stream banks.

3) This map does not show Alquist-Priolo earthquake fault zones, if any, that may exist in this area. Please refer to the latest official map of earthquake fault zones for disclosures and other actions that are required by the Alquist-Priolo Earthquake Fault Zoning Act. For more information on this subject and an index to available maps, see DMG Special Publication 42.

4) Landslide zones on this map were determined, in part, by adapting methods first developed by the U.S. Geological Survey (USGS). A new generation of landslide hazard maps being prepared by the USGS (Wilson and Harp, in preparation) uses an experimental approach designed to explore new methods to assess earthquake-induced landslide hazards. Although aspects of this new methodology may be incorporated in future seismic hazard zone maps, the experimental USGS maps should not be used as substitutes for these official earthquake-induced landslide zone maps.

5) U.S. Geological Survey base map standards provide that 90 percent of cultural features be located within 40 feet (horizontal accuracy) at the scale of this map. The identification and location of liquefaction and earthquake-induced landslide zones are based on available data. However, the quality of data used is varied. The zone boundaries depicted have been drawn as accurately as possible at this scale.

6) Information on this map is not sufficient to serve as a substitute for the geologic and geotechnical site investigations required under Chapters 7.5 and 7.8 of Division 2 of the Public Resources Code.

7) DISCLAIMER: The State of California and the Department of Conservation make no representations or warranties regarding the accuracy of the data from which these maps were derived. Neither the State nor the Department shall be liable under any circumstances for any direct, indirect, special, incidental or consequential damages with respect to any claim by any user or any third party on account of or arising from the use of this map.

STATE OF CALIFORNIA
SEISMIC HAZARD ZONES

Delineated in compliance with
Chapter 7.8, Division 2 of the California Public Resources Code
(Seismic Hazards Mapping Act)

PASADENA QUADRANGLE

OFFICIAL MAP
Released: March 25, 1999

STATE GEOLOGIST

MAP EXPLANATION

Zones of Required Investigation:

Liquefaction
Areas where historic occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

Earthquake-Induced Landslides
Areas where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

DATA AND METHODOLOGY USED TO DEVELOP THIS MAP ARE PRESENTED IN THE FOLLOWING:

Seismic Hazard Evaluation of the Pasadena 7.5 minute quadrangle, Los Angeles County, California: California Division of Mines and Geology, Open-File Report 98-05.

For additional information on seismic hazards in this map area, the rationale used for zoning, and additional references consulted, refer to DMG's World Wide Web site (http://www.consrv.ca.gov/dmg/).

Jomsky, Mark

From: Badaruddin, Kareem S (314A) [kareem.s.badaruddin@jpl.nasa.gov]
Sent: Monday, July 12, 2010 12:07 PM
To: Jomsky, Mark
Cc: Marco Quezada
Subject: My Comments for consideration at the Pasadena City Council Meeting, Monday, July 12

Dear Pasadena City Council Members,

I am writing to reaffirm AYSO Region 13's support of the City of Pasadena's plans to construct new athletic fields.

Since the City committed to build new fields in the 2003 Hahamonga Watershed Park Master Plan, little has changed from AYSO Region 13's perspective; the new Robinson Park turf field has not been made available to us (nor do we expect access to it), and we do not expect to be given access to the new Villa Parke field. Even were we given some access to these new fields, we could still well make use of more field space.

AYSO's mission is one of community development, as we require the contribution of the community to operate our program. More field space will be good for our program and will be good for Pasadena.

Regards
Kareem Badaruddin
Regional Commissioner
AYSO Region 13

07/12/2010
ITEM # 11

Jomsky, Mark

From: Ann Scheid [scheid@usc.edu]
Sent: Monday, July 12, 2010 3:24 PM
To: Jomsky, Mark
Subject: Agenda Item #11- July 10

Dear Mark,

Please distribute this message to the council members before tonight's meeting, if possible.
Thanks,
Ann Scheid

Dear Councilmembers:

As a member of the Hahamongna Watershed Park Advisory Committee and of the Recreation and Parks Commission I hope that you will carefully consider the issues presented by the proposed soccer field development in Hahamongna. Of course we need playing fields; it is a need that may never be completely satisfied. But we also need open space and natural habitat; is it necessary to destroy one to have the other? Playing fields belong in neighborhoods, and if in the Arroyo then only in the Central Arroyo. I echo our Chair Tim Wendler's suggestions to look for alternatives all over the city.

Pasadena's Arroyo Seco is one of the most beautiful and precious natural features in the region. Following the Native Americans, who found food and water in the Arroyo, the first American settlers chose this place for its abundant water and scenic beauty.

Those first Pasadenans subdivided the Arroyo, harvesting its trees and practicing agriculture. But even then, there was a movement to preserve the Arroyo, spurred on by Teddy Roosevelt, who visited in 1903 and declared that it should remain unspoiled. Within a decade a movement began to acquire the Arroyo lands for parkland, and in 1918 Myron Hunt produced a plan that has remained the basic blueprint for the Arroyo ever since: the Lower Arroyo was to remain natural and undeveloped with hiking and equestrian trails; the Central Arroyo was to be devoted to recreational uses; and the Upper Arroyo north of Devil's Gate was to retain the natural oak grove on the west with a spreading basin known as "Pasadena Lake" above the dam.

Since then, many threats have nearly destroyed the vision. Pasadenans effectively fought the construction of the Pasadena Freeway through Pasadena's portion of the Arroyo in the late 1930s. The flood control channel cut through in the 1940s destroyed the natural habitat for plants and animals, leaving the Arroyo almost a barren desert. Recent efforts in the Lower Arroyo have recreated a stream/woodland habitat. Meanwhile the Central Arroyo has been packed to capacity with facilities serving various interest groups, uncoordinated both as to use and design.

Now Hahamongna, once part of Pasadena, barely re-acquired from the county, and the last remaining vestige of what once was, is up for grabs. Yes, there has been mining in Hahamongna, yes, parts of it are degraded, but this place is the largest remnant left of the original Arroyo landscape. Described in 1913 as a beautiful oak grove suitable for picnics and outings, Hahamongna retains the quality that the rest of the Arroyo has lost. Respecting this quality and restoring it where needed will yield benefits not just for recreation but also for the planet.

Or have we forgotten that we face a crisis? Global warming is no longer in the headlines, but that doesn't mean that the crisis is over. It is only intensifying, and it is so great that we may feel powerless to stop it. Pasadena has signed on to do something about it. Do we really mean it?

Ann Scheid
500 South Arroyo Boulevard