



# Fact Sheet

## Alhambra Creek Watershed Flooding & Downtown Revitalization

PRODUCED BY THE ALHAMBRA WATERSHED COUNCIL

### The Alhambra Watershed Council (AWC)

The Alhambra Watershed Council Group (AWC) was formed in response to the severe storms of 1997-98, which caused serious erosion and major flooding in the city of Martinez and other areas of the watershed. These events highlighted problems with existing land-use practices in the watershed, and the need for coordinated, watershed-wide planning to protect and conserve natural resources and the infrastructure and property of its human occupants. The Council's goal is to recommend solutions to watershed problems that benefit both the watershed and its users.

### Stakeholders

AWC is made up of diverse groups and interests – the stakeholders – in the watershed. Stakeholders include residents, ranchers, the City and County, community organizations, the regional and national park services, and many more.

### Alhambra Creek Watershed Management Plan

AWC produced a watershed plan with nine major goals and many recommendations in 2001. The plan promotes a balance between human use of the watershed and protection and preservation of the area's natural resources.

### The Alhambra Creek Watershed

The Alhambra Creek Watershed covers 16.5 square miles. Its major tributaries are Arroyo del Hambre, Alhambra Creek, Franklin Creek, and Vaca Creek. All surface runoff from the watershed eventually reaches the main stem of Alhambra Creek, passes through downtown, and empties into the Carquinez Strait.

### Flooding History

Martinez has had a history of flooding since its founding in 1849, with the most recent major flood events occurring in the winter of 1997-98. Downtown Martinez is built in the floodplain of the creek and falls within the 100-year floodplain established by FEMA (Federal Emergency Management Agency).

### Current Flood Frequency

Recent projects completed in 2001-2002 will reduce the frequency of flooding in the downtown area. These projects widened and realigned a section of the creek, restored floodplains, and provided overflow and wetland areas to accommodate higher peak flows. Before this work took place, most authorities put flooding frequency at about every 2 to 7 years. With these improvements, *flooding will still occur* about every 10 to 20 years. According to a recent report issued by the California Floodplain Management Task Force, "The chance of a 100-year flood during a 30-year mortgage is calculated at 26%." <sup>(1)</sup>

### Future Flooding

The amount of rain water that falls in the entire watershed and the speed with which that rain water reaches the creek determines if and when downtown floods. "As new development occurs, more hard surfaces, such as roads and roofs, accelerate and increase flood runoff, increasing the size and often the depth of the floodplain." <sup>(2)</sup> Flood protection gained by improvements such as the downtown creek project can be lost due to increased runoff from the upper watershed.

### Less Frequent Floods, but Increased Damage?

As the community has worked to decrease the frequency of flooding, it has also allowed continued development in the downtown floodplain. Downtown flooding will occur less often due to recent improvements to the creek, but without taking steps to protect people and property, floods will cause more damage.

# Goals

Using a Coordinated Resource Management Process that requires agreement from all stakeholders, AWC developed the following goals. See the **Alhambra Creek Watershed Management Plan (2001)** for a detailed list of goals and recommendations:

- REDUCE flood damage and conserve stormwater.
- PREVENT excessive erosion and conserve soil resources.
- REDUCE wildland fire damage.
- PROTECT AND IMPROVE water quality.
- ENCOURAGE coordination of city and county general and specific plans, using the watershed as a planning unit.
- SUPPORT economically and environmentally sustainable land uses, while protecting private property rights.
- PROMOTE a sense of watershed community.
- MAINTAIN AND RESTORE fish and wildlife habitat and native plant communities, consistent with environmentally and economically sustainable land use.
- MAINTAIN AND ENHANCE the quality of life by providing increased opportunities to appreciate and enjoy watershed resources.

For more information on flooding or other watershed-related concerns, or to obtain a copy of the plan, contact:

**Alhambra Watershed Council  
c/o Contra Costa Resource  
Conservation District  
925-672-6522 x110  
www.ccrcc.org**

## Costs of Living in a Floodplain

A 2003 news article on FEMA's funding problems listed jurisdictions in Solano, Contra Costa, and Alameda as having mandatory mortgage flood insurance. Of the 37 jurisdictions, Martinez had the third highest number of flood policies, with 568 policies and annual premiums totaling \$368,610. Only unincorporated Contra Costa County and the City of San Leandro had more. (Numbers are for residential mortgages only; commercial downtown mortgages and businesses were not included.)<sup>(3)</sup>



Flooding at Castro and Main Streets, January 1997 (Charlene West)

## What Can be Done to Reduce Flooding and Flood Damage?

- Reduce peak runoff by:
  - holding the water in detention basins or seasonal wetlands.
  - allowing more water to percolate into the ground by 1) limiting impervious surfaces 2) using pervious surfaces whenever possible 3) using vegetation that improves soil permeability.
- Create designated overflow areas and bypasses so that flood-prone areas are less vulnerable to flooding.
- Create more efficient ways to move water through flood-prone areas.
- Design development to withstand flooding with less damage and disruption.
- Minimize or avoid new development in the most flood-prone areas, such as floodplains. Remove or retrofit existing development in these areas.
- Restore and enhance the natural function of floodplains.

## Alhambra Creek: Lifeblood of our Watershed

Alhambra Creek, running through the heart of downtown, is the lifeblood of our watershed. It can bring flood water during heavy storms. But if we plan and develop our community with an understanding of how human activities interact with the surrounding environment, Alhambra Creek can be a beautiful riparian corridor and asset to the community.

1. *California Floodplain Management Report* (draft), Nov. 27, 2002.
2. *Contra Costa Times*, "Flood risk rises with new growth," Dec. 22, 2002.
3. *Contra Costa Times*, "FEMA loses flood insurance authority," Jan. 1, 2003.

### Watershed Terms

<b>Detention Basin</b>	An impoundment or excavated area for the short-term detention of stormwater runoff.
<b>Floodplain</b>	A strip of relatively flat and normally dry land alongside a stream, river, or lake that is covered by water during a flood.
<b>Impervious surface</b>	Surfaces such as pavement and asphalt that do not allow water to pass through. Pervious surfaces, such as vegetated areas or pervious pavement, allow water to infiltrate into the ground.
<b>Peak flow/runoff</b>	The maximum instantaneous discharge of a stream or river at a given location. Peak flows are greatly increased by impervious surfaces.
<b>Runoff</b>	Precipitation, snow melt or irrigation water that appears in surface streams, rivers, drains or sewers.
<b>Watershed</b>	The land area that drains to a particular stream, river, or bay, and bounded by the surrounding highest elevations, such as ridges.