

CITY OF OAKLAND
AGENDA REPORT

FILED
OFFICE OF THE CITY CLERK
OAKLAND
2004 FEB 11 PM 1:20

TO: Office of the City Manager
ATTN: Deborah Edgerly
FROM: Public Works Agency
DATE: February 24, 2004

RE: **INFORMATIONAL REPORT ON THE DECEMBER 29, 2003 STORM EVENT**

SUMMARY

This is an informational report on the impact of the storms of late December 2003 and Oakland's response. This report summarizes staff's investigation of the flooding that occurred after those storm events in the Lakeshore/Grand Avenue area, and reports on other storm-related problems within Oakland.

FISCAL IMPACT

Since this report is informational only, no fiscal impacts are included.

BACKGROUND

Portions of the Grand Avenue/Lakeshore area experienced flooding on December 29, 2003. This flooding impacted businesses and caused major disruptions in the area. The storm event that preceded the flooding introduced one inch of rain in one hour from 3-4 p.m. on December 29, 2003, after about 1.15 inches during the previous 16 hours. Statistically, it represented a storm event that only occurs once every 15 years. According to the area merchants, the water level peaked at around 4:00 p.m. rising to over 1 foot above the street. The water receded within 45 minutes of its peak.

Lakeshore Avenue is at the confluence of two major storm systems—one system along Lakeshore Avenue extending towards Piedmont, and another along Trestle Glen Road (Trestle Glen Creek System). Both these systems are owned and maintained by the Alameda County Flood Control District (District). Similarly, two major storm lines serve the Grand Avenue area--both extending to the Piedmont City border. These systems are owned and maintained by Oakland.

Built around the turn of the 20th century, these systems lack sufficient capacity to meet the current demand. Their design capacities are at about 50% of the current demand, which has increased over time due to further development and build-out of the watershed area. The December 29, 2003 storm represented approximately the current demand for this area. In addition, using a hydraulic modeling tool, staff has concluded that the flooding was exacerbated by three other factors: 1) accumulation of sediment within the culvert system, which further reduced the flow capacity of the system; 2) over-saturation of the soil in the watershed area, which allowed more runoff; and 3) lack of drainage network in the upper watershed area, which otherwise would have provided some storage capacity and attenuation of the runoff. Staff has confirmed that the water level in Lake Merritt was not a factor.

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Storm maintenance crews continuously clean and maintain inlets in the area, especially prior to the rainy season throughout the period from September to November of each year. The City has also a vigorous nightly street sweeping program for the Grand Avenue and Lakeshore Avenue business area. In the surrounding area, street sweeping is performed monthly without any parking restrictions.

After the 1997 flooding of the Grand Avenue/Lakeshore area, staff requested the District to study these major storm systems in the area and implement a solution to the flooding problem. As a result, the District will begin a major project to construct an additional culvert along Lakeshore Avenue this spring. A similar project is slated for the Grand Avenue area within the next several years. These additional culverts will be designed to provide protection against similar flooding in the future.

There were approximately 31 other locations within Oakland that also experienced flooding or other storm-related problems during this storm such as mudslide, erosion, etc. The cause of flooding in other areas was mostly due to concurrence of high tide levels affecting the water levels of the adjoining watercourses. Lack of proper storm drain infrastructure or aging and out-dated infrastructure also contributed to storm-related problems throughout Oakland. The following is a list of some of the locations:

- 65th and 64th Avenues and International Blvd.
- East 8th Street and 53rd Avenue (Affected by High Tide)
- Railroad Avenue & 85th Avenue (Affected by High Tide)
- 38th Avenue and East 12th Street
- 32nd Street and Mandela Parkway
- 96th Avenue and Holly Street
- 105th Avenue and International Blvd.
- 5th Avenue and Embarcadero – Jack London Square (Affected by High Tide)

The Maintenance Division provides sandbags and plastic sheeting to Oakland residents during the winter months to help protect their property from flooding and erosion. These items are available and can be picked up at various Fire Stations and at the Municipal Service Centers as shown on Attachment A.

Storm Drain Master Plan

The City is in the final stages of completing its comprehensive Storm Drain Master Plan study. Staff will present an informational report to the City Council in April 2004 summarizing the results and the study's recommendations for improvements. The Master Plan will assess the existing conditions of Oakland's storm drain infrastructure and recommend the needed maintenance practices and capital improvements to ensure that the infrastructure meets its current and future needs. A full implementation of the Master Plan will require a dedicated funding source.

RECOMMENDATION AND RATIONALE

Staff recommends acceptance of this informational report.

ACTION REQUESTED OF THE CITY COUNCIL

This is an informational report; no action is requested.

Respectfully submitted,



RAUL GODINEZ II, P.E.
Director, Public Works Agency

Prepared by:
Michael Neary
Engineering Division Manager

APPROVED AND FORWARDED TO THE
PUBLIC WORKS COMMITTEE:


for **OFFICE OF THE CITY MANAGER**

OAKLAND PUBLIC WORKS AGENCY

Sandbags and Plastic Sheeting Offered to Residents and Businesses

During the winter months, the Public Works Agency extends its service hours to make sandbags and plastic sheeting available to residents and businesses to help them protect their properties from storm-related damage.

Sandbags and plastic sheeting can be picked up Monday through Friday from 8:00 a.m. – 9:00 p.m. and Saturday and Sunday from 8:00 a.m. – 4:30 p.m. at the following locations:

Public Works Locations

MUNICIPAL SERVICE CENTER	7101 EDGEWATER DR.
MAINTENANCE SATELLITE OFFICE	5921 SHEPHERD CANYON RD.

Fire Station Locations

STATION 3	1445 – 14 TH STREET
STATION 6	7080 COLTON BLVD.
STATION 7	1006 AMITO AVENUE
STATION 8	463 – 51 ST STREET
STATION 10	172 SANTA CLARA AVENUE
STATION 12	822 ALICE STREET
STATION 16	3608 – 13 TH AVENUE
STATION 17	3344 HIGH STREET
STATION 20	1408 – 98 TH AVENUE
STATION 21	13150 SKYLINE BLVD.
STATION 24	5900 SHEPHARD CANYON ROAD
STATION 25	2795 BUTTERS DRIVE
STATION 26	2611 – 98 TH AVE.
STATION 28	4615 GRASS VALLEY RD.
STATION 29	1016 66 TH AVENUE

In an emergency or to report storm damage, Oakland residents should call the Public Works Agency's 24-hour winter hotline at (510) 615-5566.

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PUBLIC WORKS CMTE.
FEB 24 2004