

DISASTER MANAGEMENT IN THE CARMEL RIVER FLOODS

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ABSTRACT

Carmel-by-the-Sea is a city in California, population about 5,000, which became internationally famous a few years ago when Clint Eastwood was elected mayor. Carmel had been founded in 1776 by Father Junipero Serra who built a mission near the Carmel River. Carmel is near Monterey, of Cannery Row fame, and Pebble Beach, a golfers' paradise.

The Carmel River overflowed its banks during the night of 9 January 1995. There were no deaths or injuries. Some upriver residents who lived near the river were evacuated by firefighters and Sheriff's deputies; however, several hundred residents who lived 14 miles downriver were very angry that they received no alerting, no warning, and no evacuation by public safety agencies. Some were awakened by neighbors to find river water three feet deep in their living rooms. Firefighters and volunteers evacuated many of them by boat.

The Monterey County Board of Supervisors established a Carmel River Flood Task Force to investigate what had happened and determine what went wrong so that corrective actions could be taken. This paper discusses the work of the committees of the task force with particular attention to the Neighborhood Preparedness Committee. This was a small disaster, but from a research viewpoint it provided useful lessons-learned. This information was examined in order to determine if the disaster planning and the standard operating procedures for emergency operations centers of neighboring cities needed to be revised.

INTRODUCTION

After the January 1995 flood of the Carmel River, questions were asked by angry residents concerning lack of alerting and evacuation of downriver homes by Monterey County public safety agencies when the seriousness of the flooding upriver had been known for hours. The residents also questioned why no flood control projects had been undertaken after many years of study, and asked themselves why they were not better

• prepared for floods.

• The Carmel River Flood Task Force had four committees.

• Fact-finding Committee

• Levees and Infrastructure Committee

• Emergency Preparedness Committee

• Neighborhood Preparedness Committee

• The Task Force prepared its "Carmel River Flood Task Force Final Report" in May 1995. The County Administrative Office prepared its "Report on the Carmel River Flood of January 9th and 10th, 1995" for the Board of Supervisors meeting of February 28, 1995. The Task Force's information was based in part on the County's report but in the following discussions, some of the statements of the County seemed overly optimistic when compared to facts uncovered by the committees.

FACT-FINDING COMMITTEE

• This committee examined the factors that contributed to the January 1995 flooding disaster since preliminary newspaper reports alleged that:

- Monterey County's emergency operations center (EOC) was not activated early enough
- the appropriate decision-making personnel did not come to the EOC when it was activated
- no one was in charge in the EOC
- information from hydrologists about river heights and stream flow rates was ignored
- no evacuation order was given until residents finally managed to get word to the EOC that the river was overflowing and running down their street.

Emergency Operations Center

• "The emergency operations center was activated at a "cadre" (core members) level and functioned well during the flood." (county report)

• **Comment:** The Monterey County Herald, January 29, had a front-page headline "Mission Fields residents grill public officials at flood hearing". "Angry Mission Fields

residents vented their frustrations on public officials yesterday during the first public forum since their homes were flooded 2 1/2 weeks ago". With hindsight, many people felt that the EOC should have been activated on January 9 at least four hours earlier than 2355, and responsible decision-making personnel should have reported in as soon as possible. The facts were that some of the senior officials did not come to the emergency operations center during the emergency and did not arrive in person until the next morning after the emergency was over. (Carmel Pine Cone, January 12, back page).

Chapter 2.68 of the Monterey County Code, "Emergency Procedures and Organization" states that the Director of Emergency Services is tasked with the overall management, coordination, and control of emergency preparedness and response functions. The Director of Emergency Services shall designate the order of succession to that office, to take effect in the event the Director is unavailable to attend meetings or otherwise perform the duties of that office during an emergency (2.68.060 B). The order of succession on January 9 is unknown since those in the order of succession did not come to the EOC.

Interagency Coordination And Communication

"Inter-agency coordination and communications functioned well during the emergency." (county report)

Comment: Many of the residents of Mission Fields who did not receive an evacuation warning do not agree with this conclusion of the report. In fact, the Carmel Pine Cone, January 12, had a front-page headline, "Flood victims blast county response; officials provide conflicting answers." "As a spokesman for the county Office of Emergency Services (OES) said that law enforcement was responsible for the evacuation call, Monterey County Sheriff Norm Hicks explained the evacuation order "was not my decision" but that of the OES."

The Monterey County Herald, January 15, had a front-page headline, "Flood warnings arrived too late." The (acting) emergency services coordinator, was quoted as saying he sent a fax at 10:30 p.m. Monday night to emergency agencies alerting them that the National Weather Service had issued a flood warning for the area, (EmerBull 5-4 in enclosure (2) county report). He then sent a second fax at 12:15 a.m. Tuesday saying that the Upper Carmel River has exceeded flood stage above Rosie's Bridge and flooding is expected, (EmerBull 5-3). This second fax was sent to the Sheriff, CHP, Carmel Valley Fire and Mid Carmel Valley Fire. However, because of confusion in the emergency operations center

it was not sent to the dispatcher at the California Department of Forestry (CDF) Emergency Command Center in King City nor to the Cypress Fire District which serves Mission Fields. Consequently, the residents of the Mission Fields area received no official warning of the flood which then poured into many of their homes.

Lessons learned: "California Department of Forestry (CDF) ECC (King City)" was added to the addresses of Emergency Services Bulletins beginning with EmerBull 5-17 on January 23, 1995. (Note: The improvement of communications and interagency coordination between the county and the CDF is vital to the protection of Monterey County cities from the danger of a fire similar to the Oakland/Berkeley East Bay Hills 1991 fire when 3000 houses were destroyed.)

The county's EOC needs to be physically manned by appropriate personnel. If the Director of the emergency operations center is out of town or actually unable to come to the EOC, the order of succession should produce someone. It would appear that no one was in charge and necessary decisions on such matters as alerting, warning, evacuation, manning, and requests for mutual aid were never made. (Note: Other cities have orders of succession with five alternates.)

The county EOC was not adequately manned. There were only two administrative staff present instead of the usual numerous helpers for updating situation status boards, documentation, updating resource status boards, messengers, answering the telephone, etc. The Public Information Officer was only there "part-time". Hydrologists were in and out and not present to provide technical advice when necessary. The Governor's Office of Emergency Services has an elaborate system for mutual aid for emergency managers to assist in the EOC. Additional emergency managers could have reported to the county EOC within a few hours since the OES Regional Office telephoned the EOC at 2300 and 0030 to request status reports. One of the requirements of cities and counties receiving FEMA grants is to participate in the State's mutual aid system. FEMA grants pay half of the salary of emergency managers.

Emergency Plans

"The emergency plans applicable to this emergency were limited to the Monterey County Multi-Hazard Emergency Plan. This Plan, distributed on a limited basis, was employed during the emergency." (county report)

Comment: The distribution was indeed on a limited basis. None of the twelve cities of Monterey County had

copies and none were available in county libraries for the public. (Actually, the Plan did not discuss the possibility of flooding in the areas which received the most damage.)

Evacuation

“Assessment of the county’s overall evacuation plans, policies, and procedures requires an examination of which agency or agencies bear the responsibility for initiating an on-scene evacuation. In the event of an evacuation, the principal responsibility for initiating an evacuation lies with the Sheriff. However, the practical decision to evacuate lies with the agencies having expertise with the type of incident, and it should be a joint decision involving all concerned.” (county report)

Comment: The basis of the Incident Command System is to have one person in charge in the emergency operations center. In an ideal world, the technical advisors (hydrologists) in the Planning Section would provide technical data on stream flow rates, river heights, and estimates of flooding to the Planning Section Chief. The planners would coordinate with Law Enforcement, Fire, and Public Works units in the Operations Section to prepare a plan for warning and evacuation of residents who might be flooded. The Director of the EOC would approve the plan and order the Operations Section Chief to implement the planned evacuation. This apparently was not done.

LEVEES AND INFRASTRUCTURE COMMITTEE

This committee’s mission was to consider and recommend remedial solutions to prevent disastrous flooding in the future. After review of previous studies it recommended that a Flood Control Zone and Community Benefit Assessment Districts be established. The purpose would be to provide funding for flood control planning activities and implement flood control projects. Funding is necessary for maintenance and operation of an alert system for providing flood warnings along the Carmel River.

Some actions recommended in 1989 to remove south bank levees have now been implemented. Some agricultural fields have been converted to riparian and wetlands habitat and some levees have been removed to create floodways to protect residential areas. It was also recommended that Monterey County and Carmel-by-the-Sea support a coordinated effort to improve the storm drainage system in the Rio Park area to prevent the flooding of homes in the Mission Fields area. Other recommendations about assessment districts have not yet been approved.

EMERGENCY PREPAREDNESS COMMITTEE

The committee reviewed the operation of public and private agencies before, during, and after the flood. A number of recommendations were made. The committee recommended that the County Office of Emergency Services develop a uniform system of precautionary warning and alerting of residents and businesses to the possibility of flooding. Electronic monitoring equipment to determine river height and flow should be bought and installed. Visual depth markers should be installed at strategic locations to allow residents to recognize for themselves the potential for flooding.

Sandbags and other emergency supplies should be stockpiled. The present communications system should be redesigned and consolidated if feasible. A system needs to be developed for the Monterey County Sheriff’s Department to coordinate traffic control for evacuations with the California Highway Patrol. The Sheriff should develop a system to protect flooded areas from looters. “Restricted” signage, citizen patrols and deputies might be appropriate.

NEIGHBORHOOD PREPAREDNESS COMMITTEE

This committee studied the problems of residents and neighborhoods along the Carmel River. The basic assumption was that the normal emergency response organizations may be overwhelmed in a severe flood. Each household and neighborhood should be prepared and organized to fend for themselves and assist one another. Each household should have emergency supplies, such as flashlights, a battery-operated radio, drinking water, food, first aid kit, candles, etc. Family members should be trained in first aid and know how to turn off their gas, electricity, and water utilities. Evacuation plans must be developed. Each family should prepare their home for floods, earthquakes, wildland fires and other disasters. Valuables and personal treasures should be safeguarded. Home flood walls or elevating the home may need to be considered.

Neighborhoods should consider forming homeowners associations and disaster teams. They should have block captains, a river watch coordinator and a neighborhood disaster coordinator. Each neighborhood should conduct a survey of residents to locate people who are old, frail, or disabled, and families with young children. The survey should also identify people with special skills, such as nursing, and locate families with emergency equipment such as chain saws, cellular phones, and 4-wheel drive vehicles. The committee developed a “Flood and Disaster Guide”, see Appen-

dix A. This Guide includes suggested lists of emergency supplies, emergency telephone numbers and evacuation information.

CARMEL RIVER FLOOD OF MARCH 1995

The Carmel River flood of January 9-10, 1995, was a disaster where the response had many problems some of which were caused by confusion in the emergency operations center and lack of training of key personnel. Although the Carmel River valley residents whose homes were flooded believed that another flood might not occur for another 20 years, an even more severe flood came within two months. The Route 1 highway bridge over the Carmel River was washed away and the Monterey Peninsula cities of Carmel-by-the-Sea, Pacific Grove, Monterey, Seaside, and Marina were isolated from the rest of the county for more than 24 hours. The county activated its emergency operations center and declared a local emergency at 0700 on March 11, 1995. The EOC remained in full continuous operation until 0200 on March 14, 1995. Residents of the Carmel River valley were evacuated and there were no injuries or deaths. Water depths inside homes were higher in the March flood than in the January flood. The overall response of the appropriate agencies, however, was much improved because of the beneficial training they had received as a result of the January flood.

CONCLUSION

This is a story with a happier ending than might have been expected. The disaster of the January flood had galvanized both governmental and non-governmental agencies into taking corrective action and training. The performance in the March flood demonstrated what might be accomplished by coordinated cooperative efforts.

The former members of the Neighborhood Preparedness Committee of the Carmel River Flood Task Force held a meeting on August 1, 1996, and organized a "Carmel River Residents Flood Preparedness Committee." The new committee intends to coordinate flood preparedness activities of the various homeowner associations along the river, to sponsor neighborhood emergency response team training, and to have an annual "Flood Disaster Awareness Week" in November before the rainy season begins.

REFERENCES

Monterey County Administrative Office, "Report on the Carmel River Flood of January 9th and 10th, 1995" prepared for the Board of Supervisors meeting February 28, 1995.

Carmel River Flood Task Force, "Final Report", prepared for the Monterey County Board of Supervisors and Residents of the Carmel River 100-Year Flood Plain, May 1995

Monterey County Administrative Office, "Report on the Monterey County Floods of March 9-15, 1995" prepared for the Board of Supervisors meeting October 10, 1995.

APPENDIX A

Post This Prominently in Your Home

CARMEL RIVER NEIGHBORHOODS FLOOD AND DISASTER GUIDE

EMERGENCY TELEPHONE NUMBERS

911 - EMERGENCY (if life or property are threatened)

DISASTER INFORMATION

647-7911 - Sheriff's Non-Emergency Line

755-5010 - Disaster Situation Information
(OES)

RECORDED MESSAGES

755-3991 - Disaster Conditions (OES)

649-1993 - Carmel River Conditions
(Water Management)

EMERGENCY INFORMATION RADIO FREQUENCIES

primary: KSCO - 1080 AM

secondary: KBOQ - 95.5 FM

KTOM - 1380 AM / 100.7 FM

KOCN - 104.9 FM

also: local TV News

NOAA Weather Radio 162.55 MHz

IF YOU NEED TO EVACUATE, DO THESE THINGS

If an Evacuation order is given, leave home within 20 minutes and take these things:

prescriptions/medications/eyeglasses

money/checks/credit cards

insurance papers: home, flood, health, car

irreplaceable photographs & keepsakes

keys: home, car, safe deposit, business

personal address book

driver's license

pets, leash, pet food

clothing & toilet items

home inventory information

IF TOLD YOU HAVE MORE TIME TO EVACUATE, CONSIDER:

1. removing other items of value - collections, family heirlooms, computers
2. elevating items, in case of flood
3. turning off electricity, gas and water

**If told you must evacuate, do so quickly. Any delay threatens the safety of your family and rescue workers.
Assume once you leave you will not be allowed back.**

**EMERGENCY SUPPLIES
to keep stocked and handy**

battery-operated flashlights and radios, with extra batteries, plus candles and matches
several fire extinguishers
drinking water and nutritious food that needs no cooking
medicines, first aid kit, and personal hygiene items
clothing for an evacuation, including warm jackets/raingear
basic tools (knife, screwdrivers, pliers, hammer, rope, etc.)
keep vehicle fueled
battery-operated weather radio, scanner, cellular telephone

MAKE A FAMILY EVACUATION PLAN

Plan escape routes from your house and designate where to meet outside
Determine where you could find each other if the family does not evacuate together
such as at relatives, friends, or evacuation center
If you have children, know the school's evacuation plan
Register at the official evacuation center so others can locate you

PREPARE YOUR HOME AND YOURSELF

Organize your home with floods and other disasters in mind:
Keep valuable items up high, not down low
Identify your most important portable valuable items (pictures, documents, insurance papers, keys, etc.) and keep them accessible; where possible, keep copies of these items at a safe location away from your home
Prepare a home inventory, and store a copy in a safe place away from your home
For homes especially vulnerable to floods, seek professional guidance to prepare or modify your home

Review First Aid and Survival Guide, pages B1-B12, in your Telephone Book

Prepared by the Neighborhood Preparedness Committee of the Carmel River Flood Task Force - April 1995

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