

Chapter 4. PLANNING PROCESS

Section A. Documentation of the Planning Process

The Planning Process

MRWPCA LHMP Planning Committee

Public Involvement

Involvement of Outside Agencies

Review and Incorporation of Appropriate Existing Plans, Studies, Reports and Technical Information

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Section A. Documentation of the Planning Process

The Planning Process

The Local Hazard Mitigation Plan planning process consisted of several elements: the utilization of the expertise of personnel from different MRWPCA departments; the survey of existing data; and public participation. The process was implemented by the MRWPCA LHMP Committee, which undertook this process with the following goals in mind: identifying and profiling hazards; assessing vulnerability; setting local hazard mitigation goals and strategy; and planning for future maintenance of the LHMP.

MRWPCA LHMP Planning Committee

The core planning team is the MRWPCA LHMP Committee, which is composed of representatives of various agency departments. The members of the committee are as follows:

Jim Heitzman, Assistant General Manager

John Tiernan, Director of Administrative Services

Maria C. Sandoval, Safety Officer

Bret Boatman, Lead Field Maintenance

The committee developed a draft plan, in conjunction with local utilities and other experts. See Appendix 4-1, The Planning Process - List of Activities. Also public input was gathered as described below.

Public Involvement

The plan was presented to the MRWPCA Board of Directors for review at a regular meeting. All Board of Directors meetings are open to the public and the public was encouraged to comment on the plan. A survey of local residents on hazard mitigation goals and objectives was circulated via agency's web site and buildings. (Appendix 4-2, Questionnaire). The draft LHMP strategy was publicized for about a month to encourage public comment, and was posted on the agency's website (www.mrwPCA.org). The MRWPCA main office also had several copies, including an unbound document that could be photocopied upon request. Members of the MRWPCA Local Hazard Mitigation Plan Committee were invited to review and comment on specific sections, to comment on the draft plan, and to distribute the information through their various networks to encourage review.

Involvement of Outside Agencies

Outside agencies were welcome to participate in the planning process through the posting of LHMP drafts on the agency's website and at MRWPCA Board meetings. (See Appendix 4-3, Stakeholders list).

Review and Incorporation of Appropriate Existing Plans, Studies, Reports and Technical Information. (Appendix 4-4, List of References).

MRWPCA has already done extensive investigation into the safety of their facilities. Several reports have been completed documenting these investigations. The following plans were reviewed during the LHMP process: MRWPCA Business Response Plan; Seismic Vulnerability Evaluation, Wastewater Collection System, Monterey Regional Water Pollution Control Agency; Review of Potential Damage to Force Mains at 10 Pump Stations due to Long-Term Settlement for the Monterey Regional Water Pollution Control Agency; and a the Enhanced Spill Prevention Plan.

Business Response Plan

By the Monterey Regional Water Pollution Control Agency
August 2004

MRWPCA has procedures already in place for emergency response, including personnel training, the use of personal protective equipment, and response to major accidents involving injuries. Mitigation measures are already in place for: fire at the Monterey Regional Wastewater Treatment Plant (including threats posed by hazardous materials spills or explosions); earthquake at the facility; hazardous materials incidents, which could be caused by a natural hazard such as earthquake; power outage, which could be the result of an earthquake; or explosion. The Business Response Plan also outlines response to the manmade hazard of a bomb threat. These procedures are incorporated in the Local Hazard Mitigation Plan as appropriate.

Seismic Vulnerability Evaluation Wastewater Collection System Monterey Regional Water Pollution Control Agency Monterey, California

By Dames and Moore

August 19, 1998

The study concluded that life safety risk due to earthquake damage is low for the Wastewater Collection System (WCS). However, seismic upgrades to improve seismic performance and reduce losses and exposure should be considered. In the development of the LHMP, MRWPCA evaluated the benefits and costs of major soils and structural improvements to their facilities. Specific recommendations, which are designed to prevent or significantly limit damage, include: the implementation of a field exploration program to better quantify the fault-crossing hazard along the King City, Tularcitos-Navy and Chupines faults; the completion of structural analyses of the most critical pump stations; and the completion of geotechnical investigations and consideration of replacement alternatives and joint strengthening for selected portions of the interceptors. Appropriate recommendations have been incorporated into the LHMP.

Review of Potential Damage to Force Mains at 10 Pump Stations due to Long-Term Settlement for Monterey Regional Water Pollution Control Agency

By MMI Engineering

March 28, 2003

This study was done to reduce risk of potential sewerage spills that result from non-seismic issues. Specifically, the potential for damage to sewer force mains from long-term settlement of underlying soil was assessed. This assessment was done because a system vulnerability study completed in 1998 had identified the potential for sewage spillage because force main piping may not have adequate flexibility to accommodate settlement or movement of soil below the pipe. The current study concluded that the probability of a force main rupturing from the settlement of backfill during static (non-seismic) conditions was very low. In fact, it was determined that the disruption in service and cost associated with pump station upgrades were not warranted. Therefore, this problem will not be addressed in the LHMP.

Enhanced Spill Prevention Plan Submitted to Monterey Regional Water Pollution Control Agency

By CH2MHill in coordination with ADA Applied Decision Analysis, Inc.

April 18, 1997

Primary recommendations of this study to prevent sewage spills were to: 1) complete a review of the electrical control systems for the major pump stations to determine if there are enough independent operations between each of the control systems to ensure that failure of a single system or component cannot disable the entire station; 2) perform a feasibility study to determine if the use of supplemental containment is warranted, especially at pump stations where there are short detention times or sensitive environmental resources nearby, and where land is available; 3) update long-range plans for replacement or upgrade of key equipment and

systems at MRWPCA facilities (update should include an assessment of future demands on the system, the expected life and performance of equipment, the possibility of technical obsolescence, and the availability of parts); and 4) conduct a seismic vulnerability assessment of all pump stations and to identify areas of possible liquefaction that could impact MRWPCA pipelines. These recommendations have been evaluated and incorporated into the LHMP as appropriate.

Transportation Vulnerabilities Study, Monterey Regional Water Pollution Control Agency
G.S. Dodson & Associates, Consulting Engineers
July 17, 1998

This review of the existing transport system was done with the goal of reducing or preventing future spills. Recommendations include: 1) The Agency should retain an independent corrosion specialist to assess the condition of external corrosion on the Agency's transport system and to develop a long-term program for the maintenance of the corrosion protection system; 2) The useful life of the wastewater transport system forcemains can be extended beyond 100 years with proper corrosion protection; 3) The Agency's gravity interceptors should be televised to identify structural and joint problems and to verify the condition of the protective linings; and 4) Flexibility should be provided for the discharge forcemain at all pumping station structures. Prioritized Corrective Actions are as follows: Over the next two years, the Agency should retain corrosion specialist to assess District transport system and televise all gravity sewers. Over the next five years, the Agency should provide flexibility at the forcemain discharge from pumping stations and inspect all buried manholes and structures for damage to ferrous metals, liners, and coatings. These recommendations have been evaluated and incorporated into the LHMP as appropriate.

List of Appendices

- 4-1 MRWPCA Local Hazard Mitigation Plan List of Planning Activities**
- 4-2 MRWPCA Local Hazard Mitigation Plan Questionnaire**
- 4-3 Stakeholders List**
- 4-4 List of References**

Appendix

4-1 MRWPCA Local Hazard Mitigation Plan List of Planning Activities

| Date | Activity |
|------------|--|
| Annually | Business response Plan Training for all employees |
| 01/13/2005 | OACC meeting attended by Safety Officer, who is a member of the Council |
| 03/21/2005 | Meeting of LHMP Committee |
| 06/08/2005 | Meeting of LHMP Committee |
| 07/08/2005 | OACC meeting attending by Safety Officer, who is a member of the Council |
| 10/03/2005 | Meeting of LHMP Committee |
| 10/14/2005 | OACC Meeting Attended by Safety Officer, who is a member of the Council |
| 11/05/2005 | CERT Training for 2 Field Maintenance Lead personnel |
| 11/12/2005 | CERT Training for 2 Field Maintenance Lead personnel |
| 11/16/2005 | CERT Training for 2 Field Maintenance Lead personnel |
| 11/16/2005 | Tsunami Incident Planning Group Meeting attended by Safety Officer |
| 11/05 | Draft LHMP presented to MRWPCA Board of Directors |
| 11/05-1/06 | Public Comment Period |
| 01/06 | Public Meeting |
| 01/06 | LHMP adopted by the MRWPCA Board of Directors |
| 01/06 | Technical Advisory Committee |

Activities in italics are planned

Abbreviations:

| | |
|------|---------------------------------------|
| CERT | Community Emergency Response Training |
| LHMP | Local Hazard Mitigation Plan |
| OACC | Operational Area Coordinating Council |

Appendix 4-2 MRWPCA Local Hazard Mitigation Plan Questionnaire
Monterey Regional Water Pollution Control Agency
Local Hazard Mitigation Plan Questionnaire
2005

The Monterey Regional Water Pollution Control Agency (MRWPCA) is developing a Local Hazard Mitigation Plan to reduce the vulnerability of MRWPCA and its member entities to the effects of natural hazards.

This questionnaire is designed to help us understand your experience with natural disasters, the dissemination of information about these hazards and your preparedness for disasters. A plan is being developed to prioritize activities to assist those in the MRWPCA service area reduce their risk from natural disasters.

Your returned survey indicates your willingness to take part in the study. Your participation in this study is voluntary. All individual survey responses are strictly confidential, and are for research purposes only.

Your opinions are important to us. If you have questions regarding the survey, feel free to contact Maria C. Sandoval, Safety Officer, at 831-883-6112.

Thank you for your participation!

| Individual or Organization (Circle One) | Individual | Organization |
|--|---|--------------|
| Name (optional) | | |
| Telephone Number (optional) | | |
| Date Completed | | |
| Directions: | Please complete the survey and return it by Friday, January 6, 2006. You may drop it off, mail it or fax it. Drop Off Points: Regional Treatment Plant at 14201 Del Monte Blvd., Marina or the Administrative Office at 5 Harris Court, Building D, Monterey Mailing Address: 5 Harris Court, Building D, Monterey, Attention: Maria C. Sandoval, Safety Officer Fax Number: (831) 883-0516 | |
| Questions: | Maria C. Sandoval, Safety Officer Telephone: (831) 883-6112 Email: maria@mrwpca.com | |
| www.mrwPCA.org | | |

**Monterey Regional Water Pollution Control Agency
Local Hazard Mitigation Plan Questionnaire 2005**

NATURAL HAZARD INFORMATION

1. In the past 5 years, have you or someone in your household experienced a natural disaster such as an earthquake, flood, wildfire or other type of natural disaster?

Yes

No

If "NO" Skip to Question 2

If "YES", which of these natural disasters have you or someone in your household experienced? Please check all that apply

| | |
|-----------------|--------------------------|
| Coastal Storm | <input type="checkbox"/> |
| Drought | <input type="checkbox"/> |
| Earthquake | <input type="checkbox"/> |
| Flood | <input type="checkbox"/> |
| Landslide | <input type="checkbox"/> |
| Tsunami | <input type="checkbox"/> |
| Wildfire | <input type="checkbox"/> |
| Other (specify) | <input type="checkbox"/> |

2. How concerned are you about the following hazards:

| Hazard | Very Concerned | Concerned | Somewhat Concerned | Not Concerned |
|-----------------|--------------------------|--------------------------|---------------------------|--------------------------|
| Coastal Erosion | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Coastal Storm | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Drought | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Earthquake | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Expansive Soils | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Flood | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Land Subsidence | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Landslide | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Tsunami | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Wildfire | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| | | | | |
|---|--|--|--|--|
| Bomb Threat | | | | |
| Hazardous Materials | | | | |
| Public Utility Disruption | | | | |
| Other hazards that you believe the community should plan for: | | | | |

3. Have you ever received information about how to make your family and home safer from natural hazards?

Yes

No

If "NO" Skip to Question 5

If "YES", how recently?

| | |
|--------------------------|--|
| Within the last 6 months | |
| Between 6 and 12 months | |
| Between 1 and 2 years | |
| Between 2 and 5 years | |
| 5 years or more | |

4. From whom did you last receive information about how to make your family and home safer from natural disasters?
Please check only one:

| | |
|-------------------------------|--|
| News media | |
| Government agency | |
| Insurance agent or company | |
| Utility company | |
| American Red Cross | |
| Other non-profit organization | |
| Not sure | |
| Other (please specify): | |

5. Who would you most trust to provide you with information about how to make your family and home safer from natural disasters? (Please check all that apply)

Newspapers:

| | |
|-------------------|--|
| Newspaper stories | |
| Newspaper ads | |

Television:

| | |
|-----------------|--|
| Television news | |
| Television ads | |

Radio:

| | |
|------------|--|
| Radio news | |
| Radio ads | |

Other methods:

| | |
|--------------------------------|--|
| Schools | |
| Outdoor ads (billboards, etc.) | |
| Books | |

Other methods (continued):

| | |
|----------------------------|--|
| Mail | |
| Fire Department/Rescue | |
| Internet | |
| Fact sheet / brochure | |
| Chamber of Commerce | |
| Public workshop / meetings | |
| Magazine | |
| Academic Institutions | |
| Other (please explain): | |

6. To assist in communicating information to Monterey County residents about how to better prepare for a natural disaster, which of the following phrases do you think is the easiest to understand?

| | |
|-------------------------------|--|
| Natural disaster readiness | |
| Disaster preparedness | |
| Emergency preparedness | |
| Natural hazard risk reduction | |
| Other (please explain): | |

**Monterey Water Pollution Control Agency
Local Hazard Mitigation Plan Questionnaire 2005**

LOCAL CAPABILITIES ASSESSMENT

7. In the following list of activities, check the box that applies to you. (Please check one answer for each preparedness activity). This information will be used to level of disaster preparedness in the MRWPCA service area.

| | Have Done | Plan to Do | Not Done | Unable to Do |
|---|------------------|-------------------|-----------------|---------------------|
| Acquired information on disaster preparedness? | | | | |
| Talked with members in your household / organization about what to do in case of a disaster? | | | | |
| Developed a "Family/Organization Emergency Plan" to decide what everyone would do in the event of a disaster? | | | | |
| Prepared a "Disaster Supply Kit" (Stored extra food, batteries, water, or other emergency supplies)? | | | | |
| Been trained in First Aid? | | | | |
| Completed Community Emergency Response Team (CERT) training? | | | | |
| Other issues regarding community disaster response capabilities that you believe are important: | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Appendix 4-3**Stakeholders List**

| First Name | Last Name | City |
|-------------------|------------------|---|
| Doug | Quetin | Air Pollution Control Office – MBUAPCB |
| Nick | Papadakis | AMBAG |
| Ramiro | Cortez | Boronda County Sanitation |
| Carlo | Cortopassi | County Service Area (14) Castroville |
| Dewey | Baird | Defense Language Institute |
| Ron | Langford | Del Rey Oaks, City of |
| | | Division of Environmental Health |
| Nick | Chiulos | Env Res Plcy |
| Kate | McKenna | LAFCO |
| Rob | Wellington | Law Offices |
| E. | Gomez | Marina Public Works Department |
| Christi | Di'lorio | Marina, City of |
| Holly | Price | MBNMS |
| | | MBUAPCD |
| Mike | Armstrong | MCWD |
| Mary Ann | Dennis | Monterey County Health Department |
| Dale | Ellis | Monterey County Planning Department |
| Reggie | Lee | Monterey County Planning Department |
| Ed | Muniz | Monterey County Public Works Department |
| Ron | Lundquist | Monterey County Public Works Department |
| Bill | Wojtkowski | Monterey, City of |
| Peggy | Shirrel | Moss Landing Sanitation District |
| David | Berger | MPWMD |
| Steve | Leiker | Pacific Grove Public Works Department |
| Jon | Biggs | Pacific Grove, City of |
| Tom | Reeves | Public Works Department |
| Roger | Briggs | RWQCB |
| Carl | Niizawa | Salinas, City of |
| Rob | Russell | Salinas, City of |
| Kelly | Morgan | Sand City, City of |
| Steve | Matarazzo | Sand City, City of |
| Diana | Ingersoll | Seaside Public Works Department |
| Lou | Dell'Angela | Seaside, City of |

Appendix 4-4

List of References

California State Department of Water Resources, Drought Preparedness Section, National Drought Mitigation Center, www.water.ca.gov and www.drought.unl.edu/whatis/what.htm
These websites contain information on the history of droughts in California and drought definitions.

Enhanced Spill Prevention Plan submitted to the Monterey Regional Water Pollution Control Agency, prepared by CH2MHill, in coordination with ADA Applied Decision Analysis, Inc., April 18, 1997

This study to prevent sewage spills contains recommendations, including: a review of the electrical control systems for the major pump stations; a feasibility study to determine if the use of supplemental containment is warranted; update of long-range plans for replacement or upgrade of key equipment and systems at MRWPCA facilities; and a seismic vulnerability and liquefaction assessment of all pump stations.

Seismic Vulnerability Evaluation Wastewater Collection System, Monterey Regional Water Pollution Control Agency, Monterey, California, by Dames and Moore, August 19, 1998

The study concluded that life safety risk due to earthquake damage is low for the Wastewater Collection System (WCS). However, seismic upgrades to improve seismic performance and reduce losses and exposure should be considered.

Transportation Vulnerabilities Study, Monterey Regional Water Pollution Control Agency by G.S. Dodson and Associates, Consulting Engineers, July 1998

This review of the existing transport system was done with the goal of reducing or preventing future spills. Recommendations include: the retention of an independent corrosion specialist to assess the condition of external corrosion and to develop a long-term program for corrosion protection system maintenance; corrosion protection to extend the useful life of the wastewater transport system forcemains; televising of gravity interceptors to identify structural and joint problems; and flexibility for the discharge forcemain at all pumping station structures. The study also lists prioritized corrective actions.

State and Local Mitigation Planning, How-To Guide: Getting Started – Building Support for Mitigation Planning, September 2002, FEMA 386-1. The “How-To” Guides were developed by the Federal Emergency Management Agency (FEMA) to assist jurisdictions in the writing and implementation of their local hazard mitigation plans. They provide information needed to initiate and maintain a planning process that will result in safer communities.

State and Local Mitigation Planning, How-To Guide: Understanding Your Risks, Identifying Hazards and Estimating Losses, by the Federal Emergency Management Agency (FEMA), August 2001, FEMA 386-2

State and Local Mitigation Planning, How-To Guide: Developing the Mitigation Plan, Identifying Mitigation Actions and Implementation Strategies, by the Federal Emergency Management Agency (FEMA), April 2003, FEMA 386-3

State and Local Mitigation Planning, How-To Guide: Bringing the Plan to Life, Implementing the Hazard Mitigation Plan, by the Federal Emergency Management Agency (FEMA), August 2003, FEMA 386-4

State and Local Mitigation Planning, How-To Guide: Integrating Manmade Hazards into Mitigation Planning, by the Federal Emergency Management Agency (FEMA), September 2003, FEMA 386-7

www.gamma-rs.ch, Gamma Remote Sensing, This website contains information on land subsidence

Foundations in Problem Soils, Steven J. Greenfield and C.K. Shen, 1992

This book provides information on soil mechanics and foundation systems. Expansive soils, and other problem soils are discussed.

Understanding '100-year flood' by Carol Kimbrell,
www.lcra.org/featurestory/2003/2003_3_25_flood_sidebar.html)

This website provides general information on 100-year floods.

Review of Potential Damage to Force Mains at 10 Pump Stations due to Long-Term Settlement for Monterey Regional Water Pollution Control Agency, Monterey, California, by MMI Engineering, Inc., March 28, 2003

This study was done to reduce risk of potential sewerage spills that result from non-seismic issues. Specifically, the potential for damage to sewer force mains from long-term settlement of underlying soil was assessed. The study concluded that the probability of a force main rupturing from the settlement of backfill during static (non-seismic) conditions was very low.

Winter Storm, County of Monterey Office of Emergency Services,
www.co.monterey.ca.us/oes/winterstorm.htm

This website contains general information on winter storms and mitigation for them.

Tsunamis, County of Monterey Office of Emergency Services,
www.co.monterey.ca.us/oes/tsunamis.htm

This website provides information on tsunamis, including definitions, their history, and mitigation.

Probability of Earthquake Shaking Intensity, Monterey County Office of Emergency Services, Information Technology GIS Team

This map shows earthquake shaking intensities for the MRWPCA service area.

Flood Zones, Monterey County Office of Emergency Services, Information Technology GIS Team, This map This map shows flood zones for the MRWPCA service area.

Tsunami Evacuation Areas, Monterey County Office of Emergency Services, Information Technology GIS Team This map shows estimated tsunami run-up areas for 5-, 10- and 15- meter waves for the MRWPCA service area.

Wildland Fire Threat Categories Map, Monterey County Office of Emergency Services, Monterey Regional Water Pollution Control Agency, prepared by the Office of Emergency Services

This map shows wildland fire threat areas for the MRWPCA service area.

Business Response Plan by the Monterey Regional Water Pollution Control Agency, August 2004

The business response plan contains procedures for emergency response, including personnel training, the use of personal protective equipment, and response to major accidents involving injuries. It also includes mitigation measures for fire and hazardous materials incidents, power outage, and explosions. It also outlines response to the manmade hazard of a bomb threat.

Expanded Water Conservation and Standby Rationing Plan, by the Monterey Peninsula Water Management District and the California- American Water Company

conserve@mpwmd.dst.ca.us and monterey@calamwater.com

This paper explains the water conservation and rationing plan for the Monterey Peninsula. It is in response to periodic weather-related droughts that occur after consecutive years of low rainfall and conditions imposed by the State Water Resources Control Board. This document describes the program to mitigation for water supply shortages. It outlines Stages 1 and 2 (voluntary) conservation measures, along with Stages 3 (water rates increase with increased water use), Stage 4 (15% rationing water reduction), and Stage 5 (mandatory 20% reduction in water use). Stages 6 and 7 (for severe long-term drought) are also described.

Tsunami Hazard Mitigation, A Report to the Senate Appropriations Committee, prepared by the National Oceanic and Atmospheric Administration Pacific Marine Environmental Laboratory, National Oceanic and Atmospheric Administration, March 31, 1995 (www.pmel.noaa.gov)

This report covers the threat the west coast communities from destructive tsunamis generated by earthquakes in the Cascadia Subduction Zone. It identifies at-risk communities, inventories existing national resources, reviews recent technological advances and develops specific, practical recommendations. It also outlines the Tsunami Hazard Mitigation Plan, which is designed to modernize and integrate existing national capabilities by exploiting recent technological advances.

City of Seaside Emergency Operation Plan, Draft Working Copy, Revision 1.1.0 June 2004

This document describes the mitigation, preparedness, response and recovery plans for the City of Seaside, designed to help develop a comprehensive and fully functional emergency operations program. It also includes historical information on hazards in the Monterey Bay area.

Earthquake Glossary, USGS Earthquake Hazards Program, United States Department of the Interior, United States Geological Survey (USGS)

This is a listing of definitions of earthquake terms.

Chapter 1 <http://landslides.usgs.gov>, United States Department of the Interior, United States Geological Survey (USGS)

This website gives descriptions of different types of landslides and their history.

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