REQUEST FOR PROPOSAL
FOR
SINGLE JURISDICTION LOCAL HAZARD MITIGATION PLAN UPDATE (LHMP)

WESTMINSTER POLICE DEPARTMENT
CITY OF WESTMINSTER

Released on
April 9th, 2026

Proposals are due
Thursday, May 7th, 2026 by 3:00PM

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CITY OF WESTMINSTER 2019 LOCAL HAZARD MITIGATION PLAN **24**

REQUEST FOR PROPOSALS FOR

Local Hazard Mitigation Plan Update (LHMP)

INTRODUCTION

Hazard mitigation planning reduces loss of life and property by minimizing the impact of disasters. It begins with state, tribal, and local governments identifying natural disaster risks and vulnerabilities that are common in their area. After identifying these risks, they develop long-term strategies for protecting people and property from similar events. Mitigation plans are key to breaking the cycle of disaster damage and reconstruction.

FEMA's Hazard Mitigation Grant Program provides funding to state, local, tribal, and territorial governments so they can develop hazard mitigation plans and rebuild in a way that reduces, or mitigates, future disaster losses in their communities. All state, local, tribal and territorial governments must develop and adopt hazard mitigation plans to receive funding for hazard mitigation project application.

On January 31, 2025, a grant award letter was sent to City of Westminster from FEMA to update and adopt a FEMA approved Hazard Mitigation Plan meeting the requirements outlined in 44 CFR Part 201 and the most current FEMA hazard mitigation plan guidance. The project completion date under the grant award is January 31, 2028.

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The City is seeking proposals from qualified companies/firms (Consultant) to lead the update of the City single jurisdictional Local Hazard Mitigation Plan Update ("LHMP"). The completed LHMP must comply with state and federal requirements. The LHMP will be used to apply for future infrastructure project grants.

Qualified consultants that would like to be considered must submit a response ("Proposal") to this Request for Proposals ("RFP") no later than 3:00 PM on May 7th, 2026. Proposals must meet the requirements outlined in this RFP.

CITY INFORMATION

The City of Westminster is located in northwestern Orange County, California, approximately 30 miles southeast of Los Angeles. The city encompasses 10.04 square miles and is bordered by Garden Grove, Huntington Beach, Fountain Valley, and Seal Beach. Westminster is part of the coastal plain region, characterized by relatively flat terrain with elevations ranging from 20 to 50 feet above sea level.

Westminster has an estimated population of approximately 90,000 residents as of 2024. It is a diverse community with a significant Vietnamese American population and is

home to Little Saigon, the largest Vietnamese community outside of Vietnam. The median household income in Westminster is about $70,000, and the city includes a mix of residential neighborhoods, commercial corridors, and light industrial areas.

The city is served by major transportation corridors, including Interstate 405, State Route 22, and Beach Boulevard (SR-39). Critical facilities within Westminster include City Hall, the Police Department, fire stations operated by the Orange County Fire Authority, schools, and healthcare facilities. Flood control channels managed by Orange County Public Works also play an important role in the city's infrastructure.

Westminster faces several natural and human-caused hazards. Flooding is a concern due to localized urban flooding caused by heavy rains and drainage limitations. The city is located near the Newport-Inglewood Fault Zone, making it vulnerable to earthquakes. Extreme heat events are becoming more frequent as a result of climate change. Westminster also faces risks related to drought and water supply vulnerability, as well as hazardous materials incidents associated with transportation corridors and industrial sites.

QUALIFICATIONS

Minimum Qualifications

- Valid California Professional license for the discipline of Work.
- Valid City of Westminster business license for the term of the Agreement, if selected.
- Demonstrated prior experience in preparing a LHMP for municipalities and other local governments of a similar size and scope and with similar amenities, communities, characteristics and services, with satisfactory references.
- Demonstrated experience in processing a LHMP though the Cal OES and FEMA approval process.
- Proficiency with applicable regulatory agencies' statutes, rules and regulations, or ability to subcontract a firm to provide such services.

Desirable Qualifications

- Knowledge and experience with the City of Westminster's standards and practices,
- Evidence of organizational commitment and experience planning for and working with community members with access and functional needs.

SCOPE OF SERVICES

Task 1: Project Management

This task includes general project management and administrative functions such as regular communications with City staff, coordination with police and fire partners, community services and other departments that are project stakeholders, record keeping and progress meetings and minutes with City staff.

Task 2: Safety Analysis

Based on the City's LHMP approved March 2016, , the Consultant will analyze existing conditions and historical trends and analyze the systemic and specific safety needs of the City. Consultant shall develop a geospatial identification of higher risk locations. The consultant shall identify disadvantaged communities in the City to ensure that the proposed citywide solutions in the LHMP are equitable and proportional in their benefits to the disadvantaged communities. A copy of the City's adopted LHMP is attached as **Exhibit E** to this RFP for reference.

Task 3: Engagement and Collaboration

The updated LHMP will be developed in collaboration with key stakeholders that may include community members, businesses, local transportation providers (OCTA), Westminster Police Department, Orange County Sheriff's Department, Orange County Fire Authority, Westminster School District, as well as advocacy groups promoting public health and safety. Safety Partners/Stakeholders will meet up to three times during the development of the plan, either in-person or virtually online at the discretion of the City.

The Consultant shall also organize and hold community workshops using an interactive format to gain insight and input from the City's residents on perceived hazards. The Consultant will reach out to disadvantaged communities in the City to ensure their participation.

Task 4: Policy and Process Changes

Utilizing the City LHMP dated March 2016, the Consultant will review the City's related planning documents, policies, plans, programs, standards, and institutional alignment with current best practices. The City's existing documents to be reviewed include but are not limited to: Westminster General Plan, California Strategic Highway Safety Plan (SHSP), Caltrans Local Roadway Safety Manual, Caltrans Standard Plans (current edition), Emergency Operation Plan, , and FEMA Local Hazard Mitigation Plan guidelines (current edition).

Task 5: Strategy and Project Selections

The Consultant will collaborate with the City and Safety Partners/Stakeholders to identify top emphasis areas and establish safety goals and strategies (including FEMA approved mitigation efforts) to implement new plan.

The Consultant will conduct a field review and perform a records search to collect any data or City characteristics that are missing or unavailable and to gain an understanding of the City's hazard threats.

The Consultant will establish measurable objectives and goals in the draft LHMP for City review. The goals and objectives will be used to measure progress over time after an Action Plan is developed or updated, including outcome data.

The LHMP will include a list of specific projects and strategies and description of programs of projects and strategies and explains prioritization criteria used. The list should contain interventions focused on infrastructure, behavioral, and/or operational safety. The consultant will also develop conceptual drawings and cost estimates for the recommended projects.

Task 6: Development of Final LHMP

Draft and Final Report: The Consultant will develop a draft LHMP based on the findings from Tasks 1-5 following the Local Hazard Mitigations guidelines from FEMA. The Consultant will meet with City staff to review the draft plan and then develop the Final LHMP which incorporates stakeholder and public comments to the public review draft, and revisions based on comments from the City, Cal OES and FEMA. The Consultant shall submit the Final LHMP to the City to enable the City to submit the LHMP to Cal OES and FEMA Region IX for review and approval, and the Consultant will prepare the final submission of the LHMP to both Cal OES and FEMA in the manner they and the City require. The Consultant shall submit the Final LHMP to the City eight (8) months after receipt of a formal Notice to Proceed (NTP) and shall make the presentation of the Final LHMP to the City Council. The Consultant is responsible for all plan revisions from Cal OES State Mitigation Officer, FEMA and the City until it is adopted by the Westminster City Council. The Consultant shall perform all services in a manner sufficient for completion of the LHMP within the time deadlines required by Cal OES requirements and the FEMA Grant.

The Consultant will work with City staff to determine the schedule of future updates, including the frequency and possible reporting elements.

Task 7: Closeout

The Consultant shall submit information about the value of work performed by minority and DBE subconsultants on the project and any other documentation requested by the City, Cal OES and/or FEMA.

I. DELIVERABLES

The Consultant shall:

1. Convene, at a minimum, three stakeholder meetings – including preparation of agenda and meeting minutes, plus a presentation to City Council.

2. Organize and conduct at least two community workshops in addition to stakeholder meetings.

3. Prepare the LHMP per Section III (Scope of Services) above, including:

    a. Preliminary LHMP (65% Complete)
    b. Draft LHMP (90% Complete)
    c. Final LHMP (signed and stamped)

The final LHMP shall be submitted and approved by Cal OES and FEMA and include supporting documentation; and thereafter submitted for approval and adoption by the City Council. The Project Timing and Milestones are set forth in Section IV.

The Consultant will provide the City with 3 hard copies of the Preliminary, LHMP, Draft LHMP and Final LHMP in color, and 2 flash drives with the complete plan (in Microsoft Word and pdf), maps, graphs, charts, tabs, and all supporting documentation.

II. ADMINISTRATIVE ELEMENTS

1. **Award of Contract and Execution.** Selection of a consultant pursuant to this RFP is at the City's sole discretion. If the City decides to award a contract under this RFP, the selected Consultant shall execute a written contract with the City in the form of the City's professional services agreement, and return the executed Contract to the City within fifteen (15) working days from the date of delivery of the Contract and related Contract Documents to the selected Consultant. Additionally, the Consultant shall also secure all insurance and City business license as herein specified, and provide them to the City, within that same 15-day period. Failure or refusal to timely enter into the Contract or to conform to any of the stipulated requirements shall be just cause for the rejection of the Consultant. In such event, the City may award the Contract to a lower ranked proposer or may reject any or all proposals. A sample Professional Services Agreement is included in this RFP as **Exhibit A**. The City reserves the right to modify the Contract based on the final negotiations with the selected Consultant, if any.

2. **Representatives.** The Consultant shall assign a responsible representative and an alternate to perform the assigned tasks. Both staff members shall be identified in the proposal. The Consultant's representative will be responsible for all duties from contract negotiations through project completion. If the primary representative is unable to continue with the project, then the alternate representative will become the primary representative. Any other changes in responsible representative must be approved, in advance, by the City. The City will have the right to reject other proposed changes in personnel and may consider any other changes in responsible personnel a breach of contract.

3. **Financial Management.** Entry into a contract is dependent upon the Consultant having an adequate financial management and accounting system as required by 48 CFR Part 31 and 2 CFR Part 200, and compliance with all other City and applicable federal requirements.

4. **Project Timing and Milestones.** The selected Consultant shall complete the project in eight months from the NTP. The Consultant shall submit the LHMP for City review at the preliminary (65% complete), draft (90% complete) and final (100% complete) stages, respectively. Performance milestones include the following estimated dates based on City of Westminster project dates:

Tentative Project Timeline	
Notice to Proceed	July 1st, 2026
Kickoff Meeting	July 16th, 2026
City Staff Workshop	August, 2026
Community Outreach/Workshops	September, 2026
Preliminary Draft LHMP (65% complete)	November 2026
Consolidated staff comments provided to Consultant	December 2026
Draft LHMP (90% complete)	January 2027
Public Draft LMHP/Submit to Cal OES	February 2027
LHMP Submitted to FEMA	Dependent on response from Cal OES
City Council Consideration/Adoption	Dependent on FEMA approval

III. PRE-PROPOSAL QUESTIONS; ADDENDA

For answers to questions or particulars regarding this Request for Proposal, all interested parties shall contact:

Karla Santillan
Business Services Manager
Westminster Police Department
8200 Westminster Blvd
Westminster, CA 92683
KSantillan@westminster-ca.gov
(714) 548-3722

All questions and requests for clarification must be in writing. All requests for information and questions will also be posted on the City's website at https://www.westminster-ca.gov/departments/finance/project-proposals-and-bids. The City will respond in writing to all questions and requests for clarification received by April 14th, 2026. Responses to requests for information and questions, and any changes, additions or deletions to this RFP will be issued by a written Addendum by the City and also posted on the City of Westminster's website at https://www.westminster-ca.gov/departments/finance/project-proposals-and-bids.

Interested consultants should check this web page daily for queries and new information and Addenda concerning this RFP. It is each proposer's sole responsibility to monitor this website for possible addenda to this RFP. Failure of a proposer to retrieve addenda from this site shall not relieve the proposer of the requirements contained therein. Additionally,

failure of a proposer to return signed addenda, when required, may be cause for rejection of his/her/its proposal.

No formal Pre-Proposal Meeting will be held.

IV.PROPOSAL SCHEDULE

The tentative RFP process schedule is as follows. All of the following dates are estimates, the City reserves the right to modify the schedule at any time. Any schedule change affecting the RFP submittal will be distributed by addendum in accordance with Section VIII of this RFP.

▪ Request for Proposal Solicitation	04/09/2026
▪ Pre-Proposal Question Deadline	04/14/2026
▪ Proposal Submittal Deadline	05/7/2026, 3:00 p.m.
▪ Consultant Interview (if conducted)	May 2026
▪ Contract Award by City Council (if any)	June 2026
▪ Contract Execution Date	June 2026
▪ Notice to Proceed	July 2026

V. SUBMITTAL REQUIREMENTS

1. **Submittal Deadline.** Proposals are due by **3:00 PM on May 7th, 2026,** and shall be submitted to the following:

Karla Santillan
Business Services Manager
Police Department
8200 Westminster Blvd
Westminster, CA 92683
ksantillan@westminster-ca.gov
(714) 548-3722

Proposals received after the date and time listed above will not be accepted or considered for this Project. Postmarks will not be accepted. Facsimiles and/or electronic transmissions will not be accepted. Proposals submitted to any person or location other than that specified above will not be accepted.

2. **Submittal Format.** The Proposal shall comply with the following requirements:

- One (1) original of the Proposal printed in color;
- Two (2) hard copies in color; and
- One (1) copy of the Proposal in a PDF format on a flash drive .

3. **Preparation Costs.** The City is not responsible for any costs or expenses incurred by

a firm or other consultant in responding to this RFP and will not reimburse firms for any costs or expenses incurred in preparing proposals in response to this RFP, whether or not they submit a proposal to the City, and whether or not an award of contract is made by the City. The costs to prepare and submit a proposal will be the responsibility of each Consultant.

4. **Property Rights.** All proposals received, and all information and documentation contained in any proposal submitted becomes the property of the City of Westminster, and shall not be returned. The City reserves the right to retain all proposals submitted, and to use any idea in a proposal regardless of whether the proposal was selected. Additionally, all property rights, including but not limited to copyright and publication rights of all information, reports and other documents and writings produced by the selected consultant in connection with services performed under this Agreement shall be vested in the City.

5. **Confidentiality/Public Records.** All proposals, and information and documentation contained in any proposal submitted, will become a public record and are subject to public inspection under the California Public Records Act (Government Code Sec. 6250 et seq.). Any language purporting to render the entire proposal confidential or propriety will be ineffective and will be disregarded. Provided, however, that proposals will not be subject to disclosure until a decision, if any, has been made to recommend a consultant to the City Council, to terminate this process, or to reject all proposals. Once that decision is made, all proposals are subject to public disclosure. The City shall not in any way be liable or responsible for the disclosure of any proposal or information or documentation contained in any proposal.

6. **Protests.** A proposer may protest this RFP process or a contract award only in accordance with the following procedures.

Protests by aggrieved proposers must be submitted in writing **no later than 5:00 pm** within five (5) working days after notification of proposed recommendation for award, if any. A "Notice of Proposed Award" is not an indication of City's acceptance of a proposal submitted in response to this RFP. **Protests received after this date and time will not be considered.**

Postmarks will not be accepted. Facsimiles and/or electronic transmissions will not be accepted. Proposals submitted to any person or location other than that specified above will not be accepted.

Protests should address all claimed errors in the RFP process, and should include all of the following information and documentation:

a. The date and action taken resulting in the protest; and

b. Identification of the material issue(s), including a detailed explanation of the basis of the protest, and the remedy sought; and

c. All relevant information and documentation supporting the protest.

The Business Services Manager will provide a written response to the complainant within five (5) working days following the informal meeting unless the complainant is notified more time is required.

7. **Federal Requirements.** This RFP is subject to federal funding requirements as set forth in Part 200 of Title 2 of the Code of Federal Regulations ("CFR"), and Appendix II to Part 200, including but not limited to 2 CFR § 200.326.

8. **Reservation of Rights.** The issuance of this RFP does not constitute an agreement by the City that any contract will actually be entered into by the City. Receipt of a proposal does not obligate the City to award a contract, or to enter into a contract. **The City expressly reserves the right at any time to take any or all of the following actions, to the extent permitted by law, and as deemed to be in the best interests of the City:**

   - To waive or correct any deviations, irregularities, defect or informalities in the RFP, any exhibit to the RFP, any RFP requirement, any proposal procedure, any selection process, and/or any Proposal.
   - To reject any or all Proposals, or any items or parts thereof.To reissue a Request for Proposals.
   - For any reason, to modify, amend or supplement all or any portion of this RFP, and/or any or all terms, conditions or portions of the RFP (including but not limited to, the selection procedures, deadlines for accepting proposals, the specifications or requirements for any materials, equipment or services to be provided under this RFP, qualifications, any Exhibit, and/or the requirements for contents or format of the Proposals, at any time and without prior notice.
   - To postpone opening of proposals for its own convenience.
   - The City recognizes that price is only one of several many criteria to be used in judging a product or service, and the City is not legally bound to accept the lowest priced RFP response, and to award the contract on the basis of the criteria set forth in this RFP in the best interests of the City.
   - To conduct pre-award discussions and/or pre-Contract negotiations with any or all responsive and responsible Consultants who submit RFP responses.
   - To procure any materials, equipment or services specified in this RFP by any other means.
   - To cancel or terminate this process at any time.
   - To inspect the Consultant's place of business prior to award or at any time during the term of the Agreement or any extension thereof, to determine the Contractor's capabilities and qualifications.
   - To verify the Consultant's submitted information by contacting any of Consultant's references.
   - To approve or disapprove the use of particular subcontractors.
   - To determine whether, in the City's sole opinion, a proposal meets the specifications and requirements of this RFP and reject any proposal that, in the City's sole opinion, fails to meet the detail or intent of the requirements.

Where only one responsive proposal is received, the City may negotiate price with the sole responsive consultant, or it may reject the proposal, conduct a new RFP process, or cancel the RFP.

The City may select the top one or more scoring proposers with which to negotiate, as deemed necessary by the City.

9. **Acknowledgment and Acceptance of Terms and Conditions and City Standard Consultant Services Agreement.** Submission of a proposal indicates acceptance by the proposer of the terms and conditions contained in the RFP, unless clearly and specifically noted in the proposal submitted and confirmed in the Contract between the City and the selected consultant, if any. A copy of the City's Standard Professional Services Agreement is included in this RFP as **Exhibit A** for review. The selected Consultant is required to obtain and maintain coverage for the listed insurance policies throughout the project, a City business license, and comply with all other provisions of this RFP and the Agreement. The City reserves the right to modify the form of the Agreement at any time prior to execution by all parties.

VI.CONTENTS OF PROPOSAL

Required Information and Documentation be Submitted. Proposals shall include, at a minimum, the following information and documentation:

- Cover Letter
- Table of Contents
- Project Understanding/Approach/Scope of Services
- Local Staffing List
- Resumes
- Company Qualifications and Experience
- Schedule/Hours
- Contract Signatories
- References
- Conflict of Interest Statement
- Financial Responsibility
- Labor, Equipment and Materials
- Bankruptcies
- Past Litigation, Arbitrrations and Mediations
- Terminated Contracts
- Exceptions
- Fee Proposal
- Contract Signatories
- Unique Entity Identifier (UEI)
- Business Entity

The Proposal shall be a maximum of 25 pages, excluding cover page, cover letter, table of contents, resumes, completed exhibits or appendices and report dividers.

Cover Letter: The Cover Letter shall provide an executive summary of the Proposal and also designate the Consultant's authorized representative regarding this RFP and include a statement that this RFP shall be incorporated in its entirety as a part of the Consultant's proposal. **The Cover Letter shall not exceed two pages.**

Table of Contents: The table of contents shall list the sections of the Proposal with page numbers and information in each section, and a list of exhibits or appendices.

Project Understanding/Approach/Scope of Services: Describe the Consultant's understanding of the project identifying, any key issues that may need special attention. Describe how the Consultant will approach the scope of services and each task needed to complete the project, and include the conflict of interest statement as outlined in Section VII. Any task assumptions and/or exclusions shall be clearly identified.

Local Staffing List: The Proposal shall include an organizational chart showing the names, positions, responsibilities, and availability of the individual(s) that would be assigned to this Agreement, including subconsultants. The Proposal shall identify the individual(s) authorized to negotiate the contract on behalf of the Consultant and the Consultant's project manager, and explain the communication lines with City's Project Manager/Emergency Services Coordinator.

Resumes: Resumes of the Consultant's proposed staff and shall be provided as an exhibit or appendix to the Proposal.

Company Qualifications and Experience: The Proposal shall contain a summary of the Consultant's qualifications, including background and experience, including descriptions of previous projects completed by the Consultant's current employees of similar type, size and scope within the past five (5) years. Projects shall include date of contract; date of completion; client reference information including agency name, contact person name, telephone number and email address; original contract amount; final contract amount; whether any claims were filed by the consultant or agency in connection with the project; and if so, the outcome of any claims.

Schedule/Hours: The Proposal must include an anticipated schedule and number of hours necessary to complete each of the anticipated task/phase, anticipated milestone dates, meetings, document review periods and the overall project.

References: The Consultant shall provide a minimum of five (5) references from public agencies for whom the Consultant has prepared a LHMP within the last five (5) years. Information shall include, at a minimum:

- Agency name
- Scope of work and/or services provided, separately listed for the Consultant and for each Subconsultants, if any.
- Project outcome
- Design services, construction value, addenda/change orders
- Funding source
- Dates
- Staff assigned to referenced engagement that will be designated for work per this RFP
- Client project manager name, valid telephone number, and email

Conflict of Interest Statement. In the Proposal, the Consultant shall disclose any financial, business or other relationship with the City of Westminster (including City employees and City Council members) that may have an impact upon the outcome of the contract. The Consultant shall also list current clients who may have a financial interest in the outcome of this contract.

Financial Responsibility. The Proposal shall include a brief statement affirming that the Consultant and subconsultants have adequate financial management and accounting systems.

Labor, Equipment and Materials. The Proposal must include the Consultant's acknowledgment that the Consultant shall provide all necessary personnel, instruments, equipment, and materials to perform the described services.

Bankruptcies: The Proposal shall state "yes" or "no" whether, in the last five (5) years, the Consultant, and/or any principal having an interest in the Consultant or Proposal, has been in bankruptcy, receivership, and/or reorganization. If the answer is "yes", the Proposal shall provide the following information: (i) the type of proceeding (bankruptcy, receivership or reorganization); (ii) the name(s) of the parties to the bankruptcy, receivership or reorganization; (iii) whether voluntary or involuntary, (iv) the date of filing, (v) the case number and name of the bankruptcy court or other tribunal where filed, (vi) if bankrupcy, the type of bankruptcy); and (vi) the judgment or other outcome.

Past Litigation, Arbitrations and Mediations: The Proposal shall state "yes" or "no" whether, in the past five (5) years, the Consultant, and/or any principal having an interest in the Consultant or Proposal, has been a party to any arbitrations, lawsuits, settlement and/or mediations (whether in or out of court). If the answer is "yes", the Proposal shall provide the following information: (i) the type of proceeding (arbitration, lawsuit, settlement or mediation); (ii) the name(s) of the parties to each such proceeding; (iii) the name of the court or other tribunal; (iv) the names, addresses and telephone numbers of contact person for the parties; (v) a summary of the parties' claims and defenses; and (v) the outcome.

Terminated Contracts: The Proposal must state "yes" or "no" whether, in the past five (5) years, the Consultant or any principal having an interest in the Proposal (a) has ever had a contract terminated by the owner or a public agency; (b) has ever failed to complete a project for an owner or a public agency; and/or (c) has ever been terminated for cause, even if it was converted to a "termination for convenience." If the answer is "Yes" to any of these questions, the Proposal must include an explanation of the circumstances, including: ((i) the names of the Consultant or other principal involved; (ii) the type of contract or project; (iii) the owner or public agency's name, (iv) the names, addresses and telephone numbers of contact person for the owner or agency involved; and (v) a summary of the reason(s) for the termination or failure to complete the project.

Exceptions: Exceptions to any portion of the RFP and/or the City's standard professional services agreement must be clearly identified in the Proposal. Identification of exceptions does not constitute City concurrence and acceptance. Exceptions may be negotiated with the top-ranked firm.

Contract Signatories: The Proposal shall provide the names and titles of the signatories authorized to sign the Agreement and bind the Consultant as required by California law. An agreement submitted by a corporation must be executed by two signatories as

specified in California Corporation Code Section 313. An agreement submitted by a partnership must be executed by all partners comprising the partnership. An agreement submitted by a joint venture must so state and be signed by each joint venturer. An agreement submitted by a limited liability company must be signed by a duly authorized member of the limited liability company. The Consultant shall provide evidence satisfactory to the City, such as an authenticated resolution of its board of directors, a certified copy of a certificate of partnership acknowledging the signer to be a general partner, or a power of attorney, indicating the capacity of the person(s) signing any Agreement if an award is made pursuant to this RFP.

Unique Entity Identifier (UEI): Clearly indicate the Consultant's Unique Entity ID (UEI) assigned by SAM.gov.

Business Entity: Clearly indicate the Consultant's complete legal name, business entity type (i.e., a California corporation), state of formation, and principals. If the Consultant is operating under a fictitious business name, provide the complete name of the owner and complete fictitious business name.

VII. FEE PROPOSAL

The City of Westminster has been awarded a subrecipient grant to perform the update of the City's LHMP. Because there are limited funds available, and in order to assure that the City of Westminster is able to acquire professional services based on the criteria set forth in this RFP and federal requirements, the Proposal shall include a firm Cost Plus Fixed Fee proposal for all tasks associated with the LHMP development, which shall include all labor, travel, supplies, materials, insurance, licenses, other costs, and profit for the entire project. Proposing Consultants will be required to submit certified payroll records, as required. The Consultant shall provide a fee schedule outlining all applicable employee classifications and hourly rates for each task and subtask as well as any other direct costs. The proposal shall provide a breakdown of fees associated with each project task and associated review and approval stage.

The Consultant shall also take into consideration the following:

1. Compensation for services, and any optional tasks, provided will be on a not-to-exceed amount that shall include all costs, expenses, and profit.

2. Proposal pricing shall include any and all applicable license, insurance coverage, endorsements, bonding, labor, materials, supplies, equipment, and if necessary any wage compliance deemed necessary to perform the work or services as part of the project described in this RFP.

3. Fee proposal and billing rates shall remain effective for the term of the Agreement. Any anticipated billing/rate adjustments shall be clearly identified in the Proposal.

4. The Consultant's standard billing rates for all classifications of staff likely to be involved in the project shall be included with the fee proposal along with the mark-

up rate for any non-labor expenses and sub-consultants, if allowable. Any anticipated fee adjustments shall be clearly noted.

5. The City will negotiate the final fee with the top-ranked consultant, if necessary.

VIII. INTERVIEW

Top ranked consultant team(s) may be interviewed by the selection committee. Proposed key personnel from the Project Team may be requested to present the teams' and their qualifications at an interview.

IX.SELECTION PROCESS

Proposals will be evaluated on the basis of the response to all provisions of this RFP. The City may use some or all of the following criterion in its evaluation and comparison of proposals submitted. The criteria listed are not necessarily an all-inclusive list. The order in which they appear is not intended to indicate their relative importance. The City reserves the right to modify the evaluation criterion and percentage of score as deemed appropriate prior to the commencement of evaluation.

POTENTIAL EVALUATION CRITERIA
Completeness of Response (Pass/Fail) Responses to this RFP must be complete. Responses that do not include the proposal content requirements identified within this RFP and subsequent addenda and do not address each of the items listed below will be considered incomplete, may be rated a Fail in the Evaluation Criteria and may receive no further consideration.
Qualifications & Experience (35%) Experience and technical competence of the firm and key personnel on similar projects of equal complexity.
Organization & Approach (30%) Understanding and approach to the Work including, but not limited to, task breakdown, scheduling, and staffing.
References & Familiarity (20%) References and familiarity with state and grant procedures.
Financial Management and Account System Requirements (5%)

Cost Control and Budgeting Methodology. Proposer has a system or process for managing cost and budget. Evidence of successful budget management for a similar project.
Conformity (10%) Willingness to agree to all terms of the professional services agreement.

All proposals received as specified will be evaluated by City staff in accordance with the abovementioned. During the evaluation period, the City may do any or all of the following: generate a "short list" and conduct interviews with the top candidates; conduct on-site visits and/or tours of the candidates' places of business. Consultants should be aware that award may be made without consultant visits, interviews, or further discussion or negotiations.

Selection and award, if any, shall be based on the City's determination of the Consultant's demonstrated competence and on the professional qualifications necessary for the satisfactory performance of the services required, as reflected in the criteria listed above, and shall not be awarded solely based on cost.

The City will consider total compensation after the City is satisfied that the selected Consultant has demonstrated the competence and professional qualifications necessary for the satisfactory performance of the services required. Costs will be evaluated in order to determine if the services will be performed at fair and reasonable prices to the City.

If the City determines to award a contract, when the final selection is made and all of the terms of the Agreement have been established, a recommendation of award will be made to the Westminster City Council. The award of a contract (agreement), if any, is contingent upon the successful negotiation of terms, acceptability of fees, and formal approval by the City Council.

X. GENERAL CONDITIONS

A. Proposal Signatures

In its Proposal, the Consultant shall execute all documents requiring signatures, and shall cause to be notarized all documents that indicate such a requirement. The Proposal shall be signed by an individual who is authorized to legally bind the Consultant to the terms of the Proposal.

B. Business License Required

The Westminster Municipal Code requires all businesses operating in the City to pay a business license tax.

C. Labor Laws/Prevailing Wage Laws

All work performed in connection with execution of this contract work shall be performed in compliance with all applicable laws, Westminster City Charter,

ordinances, rules and regulations of federal, state, county or municipal governments or agencies (including, without limitation, all applicable federal and state labor standards, including the prevailing wage provisions of sections 1770 et seq. of the California Labor Code); and (b) all directions, rules and regulations of any fire marshal, health officer, building inspector, or other officer of every governmental agency now having or hereafter acquiring jurisdiction. The Consultant shall indemnify, defend and hold the City harmless from any and all claims, causes of action and liabilities based upon or arising from the failure of any work related to the Project to comply with all such applicable legal requirements, including, without limitation, any such claims, causes of action or liabilities that may be asserted against or incurred by the City with respect to or in any way arising from the Project's compliance with or failure to comply with applicable laws, including all applicable federal and state labor requirements including, without limitation, the requirements of California Labor Code section 1770 et seq.

California Prevailing Wage Rates: To the extent that any of the work and other services performed pursuant to this Agreement constitute a public work (as defined in California Labor Code section 1720) (the "Public Work"), the Consultant agrees that such Public Work shall comply with the requirements of California Labor Code sections 1770 et seq. The City makes no representation or statement that the project or any portion thereof, is or is not a "public work" as defined in California Labor Code section 1720.

In all bid specifications, contracts and subcontracts for any such Public Work, the Consultant shall obtain the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work in this locality for each craft, classification or type of worker needed to perform the Public Work, and shall include such rates in the bid specifications, contract or subcontract. Such bid specifications, contract or subcontract must contain the following provision: "It shall be mandatory for the consultant to pay not less than the said prevailing rate of wages to all workers employed by the contractor in the execution of this contract. The Consultant expressly agrees to comply with the penalty provisions of California Labor Code section 1775 and the payroll record keeping requirements of California Labor Code section 1771."

Federal Prevailing Wage Rates. To the extent applicable, labor on this project shall be paid no less than the minimum wage rates established by the U.S. Secretary of Labor or the State of California's Dept. of Industrial Relations under the Davis-Bacon Act. A copy of the Davis-Bacon Wages can be found here: http://www.wdol.gov/ or provided upon request. Where federal and/or state prevailing wage laws apply, Contractor shall comply in all respects with all applicable provisions of the California Labor Code, except that where the wage rates calculated pursuant to the respective Labor Code and the Davis-Bacon Act provisions are different, the Consultant must pay the higher rate.

D. Unique Entity Identifier (UEI):

The Proposal shall list its Unique Entity ID (UEI) assigned by SAM.gov.

E. Contract Award:

The selected Proposer shall enter into a written contract with the City, binding all terms and conditions of the Proposal and items negotiated prior to award of contract. The contract period shall be for the duration of the project unless modified in the terms of the Agreement executed with the City.

F. Non-Obligation

This RFP shall not be construed to create an obligation on part of the City to enter into a contract with a Consultant. The RFP is for solicitation of proposals only. As provided in Section X, the City reserves the right to reject any and all proposals or to accept the proposal that, in the supposition of the City, is of most value, or to terminate and cancel this procurement at any time without prior notice.

ATTACHMENTS:

Exhibit A: Sample Professional Services Agreement
Exhibit B: FEMA Grant
EXHIBIT C: Acknowledgment of Addenda
EXHIBIT D: Fee Proposal
EXHIBIT E: City of Westminster 2016 Local Hazard Mitigation Plan

EXHIBIT A

SAMPLE PROFESSIONAL SERVICES AGREEMENT

CITY OF WESTMINSTER
PROFESSIONAL SERVICES AGREEMENT
WITH _____

THIS PROFESSIONAL SERVICES AGREEMENT ("Agreement") is made and entered into this ____ day of _____, 202__ ("Effective Date"), by and between the CITY OF WESTMINSTER, a municipal corporation ("City"), and _____, a _____ ("Consultant").

RECITALS

A. City proposes to utilize the services of Consultant as an independent contractor to perform services on an as needed basis, as more fully described herein.

B. Consultant represents that it has that degree of specialized training and experience contemplated within California Government Code section 37103, and holds all necessary licenses to practice and perform the services herein contemplated.

C. City and Consultant desire to contract for the specific services described in Exhibit "A" and desire to set forth their rights, duties and liabilities in connection with the services to be performed.

D. No official or employee of City has a financial interest, within the provisions of sections 1090-1092 of the California Government Code, in the subject matter of this Agreement.

NOW, THEREFORE, for and in consideration of the mutual covenants and conditions contained herein, the parties hereby agree as follows:

1.0 SERVICES PROVIDED BY CONSULTANT

1.1 Scope of Services. City hereby retains Consultant to provide the professional services more particularly described in the Scope of Services attached hereto as Exhibit "A" and incorporated herein by reference.

1.2 Professional Practices. All professional services to be provided by Consultant pursuant to this Agreement shall be provided by personnel experienced in their respective fields and in a manner consistent with the standards of care, diligence and skill ordinarily exercised by professional consultants in similar fields and circumstances in accordance with sound professional practices. Consultant also warrants that it is familiar with all laws that may affect its performance of this Agreement and shall advise City of any changes in any laws that may affect Consultant's performance of this Agreement.

1.3 Performance to Satisfaction of City. Consultant agrees to perform all the work to the complete satisfaction of the City. Evaluations of the work will be done by the City Manager or his or her designee. If the quality of work is not satisfactory, City in its discretion has the right to:

a. Meet with Consultant to review the quality of the work and resolve the matters of concern;

b. Require Consultant to repeat the work at no additional fee until it is satisfactory; and/or

c. Terminate the Agreement as hereinafter set forth.

1.4 Warranty. Consultant warrants that it shall perform the services required by this Agreement in compliance with all applicable Federal, State and local laws and ordinances applicable to the services required under this Agreement including all employment laws related to minimum hours and wages; occupational health and safety; fair employment and employment practices; workers' compensation insurance and safety in employment. Consultant shall indemnify and hold harmless City from and against all claims, demands, payments, suits, actions, proceedings, and judgments of every nature and description including attorneys' fees and costs, presented, brought, or recovered against City for, or on account of any liability under any of the above-mentioned laws, which may be incurred by reason of Consultant's performance under this Agreement.

1.5 Non-Discrimination. In performing this Agreement, Consultant shall not engage in, nor permit its agents to engage in, discrimination in employment of persons because of their race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or military or veteran status, except as permitted pursuant to section 12940 of the Government Code. Such actions shall include, but not be limited to the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay, or other forms of compensation and selection for training, including apprenticeship. Consultant agrees to post in conspicuous places, available to employees and applicants for employment, a notice setting forth provisions of this non-discrimination clause.

Consultant shall, in all solicitations and advertisements for employees placed by, or on behalf of Consultant shall state that all qualified applicants will receive consideration for employment without regard to age, race, color, religion, sex, marital status, national origin, or mental or physical disability. Consultant shall cause the paragraphs contained in this Section to be inserted in all subcontracts for any work covered by the Agreement, provided that the foregoing provisions shall not apply to subcontracts for standard commercial supplies or raw materials.

1.6 Non-Exclusive Agreement. Consultant acknowledges that City may enter into agreements with other consultants for services similar to the services that are subject to this Agreement or may have its own employees perform services similar to those services contemplated by this Agreement.

1.7 Delegation and Assignment. This is a personal service contract, and the duties set forth herein shall not be delegated or assigned to any person or entity without the prior written consent of City. Consultant recognizes that the qualifications and experience of the personnel to

be used are vital to professional and timely completion of the services. The key personnel assigned to perform portions of the services shall remain assigned through completion of the Services, unless otherwise mutually agreed by the parties in writing, or caused by hardship or resignation in which case substitutes shall be subject to City approval. The key personnel for performance of the services under this Agreement are _____.

1.8 Subcontracting. Consultant shall not subcontract any portion of the work required by this Agreement without prior written approval by the City. Subcontracts, if any, shall contain a provision making them subject to all provisions of this Agreement, including without limitation, the indemnity and insurance obligations. Consultant acknowledges and agrees that the City is an intended beneficiary of any work performed by any subconsultant for purposes of establishing a duty of care between any subconsultant and the City.

1.9 Confidentiality. Employees of Consultant in the course of their duties may have access to financial, accounting, statistical, and personnel data of private individuals and employees of City. Consultant covenants that all data, documents, discussion, or other information developed or received by Consultant or provided for performance of this Agreement are deemed confidential and shall not be disclosed by Consultant without written authorization by City. City shall grant such authorization if disclosure is required by law. All City data shall be returned to City upon the termination of this Agreement. Consultant's covenant under this Section shall survive the termination of this Agreement.

2.0 COMPENSATION AND BILLING

2.1 Compensation. Consultant shall be paid in accordance with the fee schedule set forth in Exhibit "B" attached hereto and made a part of this Agreement. Consultant's total compensation shall not exceed _____ Dollars ($ _____.00).

2.2 Additional Services. Consultant shall not receive compensation for any services provided outside the scope of services in Exhibit "A" unless the City Manager or designee, prior to Consultant performing the additional services, approves such additional services in writing. It is specifically understood that oral requests and/or approvals of such additional services or additional compensation shall be barred and are unenforceable. Should Consultant perform any additional services which have not been approved, in writing, by the City, Consultant does so at its own risk and costs.

2.3 Method of Billing. Consultant may submit invoices to the City for approval on a progress basis, but no more often than once a month. Said invoice shall be based on the total of all Consultant's services which have been completed to City's sole satisfaction. City shall pay Consultant's invoice within forty-five (45) days from the date City receives said invoice. Each invoice shall describe in detail the services performed, the date of performance, and the associated time for completion. Any additional services approved and performed pursuant to this Agreement shall be designated as "Additional Services" and shall identify the number of the authorized change order, where applicable, on all invoices.

2.4 Records and Audits. Consultant shall maintain complete and accurate records with respect to costs incurred under this Agreement. All such records shall be clearly identifiable as relating to this Agreement and shall be maintained in accordance with generally recognized accounting principles. Consultant shall allow a representative of the City (including the California State Auditor if requested by the City pursuant to Government Code § 8546.7) during normal business hours to examine, audit, and make transcripts or copies of such records and any other documents created pursuant to this Agreement. Consultant shall retain and allow inspection of all work, data, documents, proceedings, and activities related to the Agreement for a period of three (3) years from the date of final payment under this Agreement. and shall be made available to City or its Project Manager for inspection and/or audit at mutually convenient times from the Effective Date until three (3) years after termination of this Agreement.

3.0. TIME OF PERFORMANCE

3.1 Commencement and Completion of Work. Unless otherwise agreed to in writing by the parties, the professional services to be performed under this Agreement shall commence within five (5) days from the Effective Date of this Agreement. Said services shall be performed in strict compliance with the Project Schedule approved by City as set forth in Exhibit "C" attached hereto and incorporated herein. The Project Schedule may be amended by mutual agreement of the parties. Failure to commence work in a timely manner and/or diligently pursue work to completion may be grounds for termination of this Agreement.

3.2 Excusable Delays. Neither party shall be responsible for delays or lack of performance resulting from acts beyond the reasonable control of the party or parties. Such acts shall include, but not be limited to, acts of God, fire, strikes, pandemics, material shortages, compliance with laws or regulations, riots, acts of war, or any other conditions beyond the reasonable control of a party. If a delay beyond the control of the Consultant is encountered, a time extension may be mutually agreed upon in writing by the City and the Consultant. The Consultant shall present documentation satisfactory to the City to substantiate any request for a time extension.

4.0 TERM AND TERMINATION

4.1 Term. This Agreement shall commence on the Effective Date and continue for a period of _____ months, ending on _____, 20__, unless previously terminated as provided herein or as otherwise agreed to in writing by the parties. This Agreement may be extended by two (2) additional one (1) year periods upon mutual written agreement of both parties.

4.2 Notice of Termination. The City has the right and privilege of canceling, suspending or abandoning the execution of all or any part of the work contemplated by this Agreement, with or without cause, at any time, by providing written notice to Consultant. The termination of this Agreement shall be deemed effective upon receipt of the notice of termination. In the event of such termination, Consultant shall immediately stop rendering services under this Agreement unless directed otherwise by the City.

4.3 Termination.

4.3.1 Termination Without Cause. In the event of termination without cause, City shall pay Consultant for reasonable costs incurred and professional services satisfactorily performed up to and including the date of City's written notice of termination. Compensation for work in progress shall be prorated based on the percentage of work completed as of the effective date of termination in accordance with the fees set forth herein. In ascertaining the professional services actually rendered hereunder up to the effective date of termination of this Agreement, consideration shall be given to both completed work and work in progress, to complete and incomplete drawings, and to other documents pertaining to the services contemplated herein whether delivered to the City or in the possession of the Consultant.

4.3.2 Termination for Cause. In the event of termination for cause, Consultant will be liable to City for all costs to cure the deficiencies, and all loss, cost, expense, damage, and liability resulting from such breach and termination. The City is entitled to withhold any payments otherwise owed to Consultant to the extent of such costs, losses, expenses, damages, and liability.

4.4 Documents. In the event of termination of this Agreement, all documents prepared by Consultant in its performance of this Agreement including, but not limited to, finished or unfinished design, development and construction documents, data studies, drawings, maps and reports, shall be delivered to the City within ten (10) days of delivery of termination notice to Consultant, at no cost to City. Any use of uncompleted documents without specific written authorization from Consultant shall be at City's sole risk and without liability or legal expense to Consultant.

5.0 INSURANCE

5.1 Minimum Scope. Prior to City's execution of this Agreement and Consultant's commencement of the services, Consultant shall secure, submit proof of, and shall thereafter maintain without interruption, until completion of and acceptance by the City of the services, such workers' compensation, commercial general and automobile liability insurance as shall protect Consultant, its subconsultants and the Additional Insured's herein, from any and all claims for damages for personal injury, including accidental death, as well as any and all claims for property damage which may arise from or which may concern operations under this Agreement, whether such operations be by or on behalf of Consultant, any subconsultant or anyone directly or indirectly employed by, connected with or acting for or on behalf of any of them.

5.2 Carrier Ratings. All liability insurance shall be issued by an insurance company or companies authorized to transact liability insurance business in the State of California with a policy holder's rating of A or higher and a Financial Class of VII or larger.

5.3 Minimum Limits. Consultant shall maintain minimum limits of insurance as follows:

5.3.1 Commercial General Liability. Consultant's commercial general liability insurance policy shall cover both bodily injury (including death) and property damage (including,

but not limited to, premises operations liability, products-completed operations liability, independent contractor's liability, personal injury liability, and contractual liability) in an amount not less than $1,000,000 per occurrence, an aggregate limit for products/completed operations in the amount not less than $2,000,000.

5.3.2 Automobile Liability Insurance. Consultant's automobile liability policy shall cover both bodily injury and property damage in an amount not less than $1,000,000 per occurrence and an aggregate limit of not less than $1,000,000. All of Consultant's automobile and/or commercial general liability insurance policies shall cover all vehicles used in connection with Consultant's performance of this Agreement, which vehicles shall include, but are not limited to, Consultant owned vehicles, Consultant leased vehicles, Consultant's employee vehicles, non-Consultant-owned vehicles and hired vehicles.

5.3.3 Workers' Compensation. The following is required in connection with the Worker's Compensation insurance:

a. Workers Compensation insurance with statutory limits as required by the Labor Code of the State of California.

b. Employers Liability with limits of $1,000,000 per Accident; $1,000,000 Disease per employee; $1,000,000 Disease per policy.

c. The policy shall include a written waiver of the insurer's right to subrogate against the City.

5.3.4 Professional Liability. Consultant shall maintain professional liability insurance appropriate to Consultant's profession with a limit of not less than $1,000,000 per claim and $2,000,000 in the aggregate. The retroactive date of the policy, if any, shall be prior to the start of the services. This insurance shall be maintained during the term of this Agreement and for at least three consecutive years following the completion of the services.

5.3.5. Additional Insurance. If the Consultant maintains broader coverage and/or higher coverage limits than the minimum amounts shown above, then the City requires and shall be entitled to the broader coverage for and/or the higher coverage limits maintained by the Consultant. Any available insurance proceeds exceeding the specified minimum limits of insurance and coverage shall be available to the City.

5.4 Notice of Cancellation and Renewals. The policies shall not be canceled unless thirty (30) days prior written notification of intended cancellation has been given to City by certified or registered mail (this obligation may be satisfied in the alternative by requiring such notice to be provided by Consultant's insurance broker and set forth on its Certificate of Insurance provided to City). Consultant agrees that upon receipt of any notice of cancellation or alteration of the policies, Consultant shall, within five (5) days, procure other policies of insurance similar in all respects to the policy or policies to be cancelled or altered. Consultant shall furnish to the City copies of any endorsements that are subsequently issued amending coverage or limits within fourteen (14) days of the amendment.

5.5 All Coverages. The insurance policy or policies shall also comply with the following provisions:

5.5.1 Scope of Insurances. Policies shall include premises/operations, products completed operations, independent contractors, owners and contractors' protection, explosion, collapse, underground hazard, broad form contractual, personal injury with employment exclusion deleted, and broad form property damage.

5.5.2 Waiver of Subrogation. The policy shall be endorsed to waive any right of subrogation against the City and its subconsultants, employees, officers, agents and directors for work performed under this Agreement.

5.5.3 Claims Made Basis. If policies are written on a claims made basis, the certificate should so specify and the policy must continue in force for one (1) year after completion of the services. The retroactive date of the coverage must also be listed.

5.5.4 Primary, Not Contributory. The policy shall specify that the insurance provided by Consultant will be considered primary and not contributory to any other insurance available to the City.

5.5.5 City Named Additional Insured. All policies, except Worker' Compensation and Professional Liability, shall name the City as an Additional Insured and shall contain the following language: "Solely with respect to work done by and on behalf of the name insured for the City of Westminster, the City of Westminster, and its officers, officials, employees and agents are added as additional insureds under this policy."

5.5.6 Combination of Insurances is Acceptable. The limits of insurance required herein may be satisfied by a combination of primary and umbrella or excess insurance. Any umbrella or excess insurance shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and non-contributory basis for the benefit of the City before the City's own insurance or self-insurance shall be called upon to protect it as a named insured.

5.5.7 Deductibles Exceeding $25K. Any deductible or self-insured retention shall be shown on the certificate of insurance. If the deductible or self-insured retention exceeds $25,000.00, it shall be approved in advance by City. Consultant is responsible for any deductible or self-insured retention and shall fund it upon City written request, regardless of whether Consultant has a claim against the insurance or is named as a party in any action involving City.

5.6 Certificates of Insurance, Additional Insured Endorsements and Deductibles. Prior to execution of the Agreement, and thereafter upon City's request, Consultant shall furnish City with original certificates of insurance and additional insured endorsements setting forth evidence of all insurance coverage required by this Article. Each certificate and endorsement shall be signed by a person authorized by that insurer to bind coverage on its behalf. The City shall continue to be an additional insured for completed operations for (1) year after completion of the work.

5.7 Consultant's Failure to Provide Required Insurance. Failure to maintain required insurance at all times shall constitute a default and material breach. In such event, Consultant shall immediately notify City and cease all performance under this Agreement until further directed by the City. In the absence of satisfactory insurance coverage, City may, at its discretion and sole option: (a) procure insurance with collection rights for premiums, attorneys' fees and costs against Consultant by way of set-off or recoupment from sums due Consultant; (b) immediately terminate or suspend Consultant's performance of the Agreement; (c) pay Consultant's premiums for renewal of Consultant's coverage; or (d) self-insure the risk, with all damages and costs incurred, by judgment, settlement or otherwise, including attorneys' fees and costs, being collectible from Consultant, by way of set-off or recoupment from any sums due Consultant. Upon demand, Consultant shall repay City for all sums that City paid to obtain, renew, reinstate, or replace the insurance, or City may offset the cost against any monies that the City may owe Consultant.

5.8 Verification of Coverage. City shall have the right to obtain complete and certified copies of Consultant's and subconsultants' insurance policies (including, but not limited to, the declarations page, form list and riders), endorsements or certificates required this Agreement, upon request (including, but not limited to, the declarations page, form list and riders).

5.9 No Limitation. Consultant's maintenance of insurance as required by this Agreement shall not be construed to limit the liability of the Consultant or its subconsultants to the coverage provided by such insurance, or otherwise limit the City's recourse to any remedy available at law or in equity.

5.10 Subconsultants Insurance. The Consultant shall include in all subcontracts a requirement that its subconsultants obtain and maintain, at a minimum, all insurance required by this Agreement. The City reserves the right to request certificates of insurance from the Consultant for its subconsultants. The Consultant acknowledges that regardless of insurance obtained by its subconsultants, the Consultant will be responsible to the City for any and all acts of its subconsultants.

6.0 INDEMNIFICATION

6.1 Indemnification and Hold Harmless. If Consultant is not a "design professional" under Civil Code 2782.8, then the requirements of this section 6.1 shall apply instead of the requirements of section 6.2, below. Consultant agrees to defend, indemnify, hold free and harmless the City, its elected officials, officers, agents and employees, at Consultant's sole expense, from and against any and all claims, actions, suits or other legal proceedings brought against the City, its elected officials, officers, agents and employees arising out of the performance of the Consultant, its employees, and/or subcontractors, of the work undertaken pursuant to this Agreement. The defense obligation provided for hereunder shall apply without any advance showing of negligence or wrongdoing by the Consultant, its employees, and/or authorized subcontractors, but shall be required whenever any claim, action, complaint, or suit asserts as its basis the negligence, errors, omissions or misconduct of the Consultant, its employees, and/or authorized subcontractors, and/or whenever any claim, action, complaint or suit asserts liability against the City, its elected officials, officers, agents and employees based upon the work performed by the Consultant, its employees, and/or authorized subcontractors under this

Agreement, whether or not the Consultant, its employees, and/or authorized subcontractors are specifically named or otherwise asserted to be liable. Notwithstanding the foregoing, the Consultant shall not be liable for the defense or indemnification of the City for claims, actions, complaints or suits arising out of the sole active negligence or willful misconduct of the City. This provision shall supersede and replace all other indemnity provisions contained either in the City's specifications or Consultant's Proposal, which shall be of no force and effect.

6.2 Indemnification and Hold Harmless for Design Professionals. If Consultant is a "design professional" under Civil Code 2782.8, then the requirements of this section 6.2 shall apply instead of the requirements of section 6.1, above. Consultant agrees to defend, indemnify, hold free and harmless the City, its elected officials, officers, agents and employees, at Consultant's sole expense, from and against any and all claims, actions, suits or other legal proceedings brought against the City, its elected officials, officers, agents and employees arising out of the negligence, recklessness, or willful misconduct of the Consultant, its employees, and/or subconsultants, in the performance of the work undertaken pursuant to this Agreement. The defense obligation provided for hereunder shall apply without any advance showing of negligence or wrongdoing by the Consultant, its employees, and/or authorized subconsultants, but shall be required whenever any claim, action, complaint, or suit asserts as its basis the negligence, errors, omissions or misconduct of the Consultant, its employees, and/or authorized subconsultants, and/or whenever any claim, action, complaint or suit asserts liability against the City, its elected officials, officers, agents and employees based upon negligence, recklessness, or willful misconduct in the work performed by the Consultant, its employees, and/or authorized subconsultants under this Agreement, whether or not the Consultant, its employees, and/or authorized subconsultants are specifically named or otherwise asserted to be liable. Notwithstanding the foregoing, the Consultant shall not be liable for the defense or indemnification of the City for claims, actions, complaints or suits arising out of the sole active negligence or willful misconduct of the City. In no event shall the cost to defend charged to Consultant exceed Consultant's proportionate percentage of fault. However, notwithstanding the previous sentence, in the event one or more defendants is unable to pay its share of defense costs due to bankruptcy or dissolution of the business, Consultant shall meet and confer with other parties regarding unpaid defense costs. This provision shall supersede and replace all other indemnity provisions contained either in the City's specifications or Consultant's Proposal, which shall be of no force and effect.

7.0 GENERAL PROVISIONS

7.1 Entire Agreement. This Agreement constitutes the entire agreement between the parties with respect to any matter referenced herein and supersedes any and all other prior writings and oral negotiations.

7.2. Amendments in Writing. This Agreement may be modified only in writing, and signed by the parties in interest at the time of such modification.

7.3. Priority of Documents. The terms of this Agreement shall prevail over any inconsistent provision in any other contract document appurtenant hereto, including exhibits to this Agreement.

7.4 Representatives. The City Manager or his or her designee shall be the representative of City for purposes of this Agreement and may issue all consents, approvals, directives and agreements on behalf of the City, called for by this Agreement, except as otherwise expressly provided in this Agreement. Consultant shall designate a representative for purposes of this Agreement who shall be authorized to issue all consents, approvals, directives and agreements on behalf of Consultant called for by this Agreement, except as otherwise expressly provided in this Agreement.

7.5 Project Managers. Consultant shall designate a Project Manager who shall represent it and be its agent in all consultations with City during the term of this Agreement. Consultant or its Project Manager shall attend and assist in all coordination meetings called by City.

7.6 Notices. Any notices, documents, correspondence or other communications concerning this Agreement or the work hereunder may be provided by personal delivery or mail and shall be addressed as set forth below. Such communication shall be deemed served or delivered: (a) at the time of delivery if such communication is sent by personal delivery, and (b) 48 hours after deposit in the U.S. Mail as reflected by the official U.S. postmark if such communication is sent through regular United States mail.

IF TO CONSULTANT:

_____
_____
_____
Tel: _____
Attn: _____

IF TO CITY:

City of Westminster
8200 Westminster Blvd.
Westminster, CA 92683
Tel: _____
Attn: _____

7.7 Attorneys' Fees. If litigation is brought by any party in connection with this Agreement, the prevailing party shall be entitled to recover from the opposing party all costs and expenses, including reasonable attorneys' fees, incurred by the prevailing party in the exercise of any of its rights or remedies hereunder or the enforcement of any of the terms, conditions, or provisions hereof.

7.8 Governing Law. This Agreement shall be governed by and construed under the laws of the State of California without giving effect to that body of laws pertaining to conflict of laws.

7.9 Venue. In the event of any legal action to enforce or interpret this Agreement, the parties hereto agree that the sole and exclusive venue shall be a court of competent jurisdiction located in Orange County, California.

7.10 Assignment. Consultant shall not voluntarily or by operation of law assign, transfer, sublet or encumber all or any part of Consultant's interest in this Agreement without City's prior written consent. Any attempted assignment, transfer, subletting or encumbrance shall be void and shall constitute a breach of this Agreement and cause for termination of this

Agreement. Regardless of City's consent, no subletting or assignment shall release Consultant of Consultant's obligation to perform all other obligations to be performed by Consultant hereunder for the term of this Agreement.

7.11 Independent Contractor. Consultant is and shall be acting at all times as an independent contractor and not as an employee of City. Consultant shall have no power to incur any debt, obligation, or liability on behalf of City or otherwise act on behalf of City as an agent. Neither City nor any of its agents shall have control over the conduct of Consultant or any of Consultant's employees, except as set forth in this Agreement. Consultant shall not, at any time, or in any manner, represent that it or any of its agents or employees are in any manner agents or employees of City. Consultant shall secure, at its sole expense, and be responsible for any and all payment of Income Tax, Social Security, State Disability Insurance Compensation, Unemployment Compensation, and other payroll deductions for Consultant and its officers, agents, and employees, and all business licenses, if any are required, in connection with the services to be performed hereunder. Consultant shall indemnify and hold City harmless from any and all taxes, assessments, penalties, and interest asserted against City by reason of the independent contractor relationship created by this Agreement. Consultant further agrees to indemnify and hold City harmless from any failure of Consultant to comply with the applicable worker's compensation laws. City shall have the right to offset against the amount of any fees due to Consultant under this Agreement any amount due to City from Consultant as a result of Consultant's failure to promptly pay to City any reimbursement or indemnification arising under this paragraph.

7.12 Conflicts with Independent Contractor. Consultant/consultant's duties and services under this Agreement shall not include preparing or assisting the public entity with any portion of the public entity's preparation of a request for proposals, request for qualifications, or any other solicitation regarding a subsequent or additional contract with the public entity. The public entity entering into this Agreement shall at all times retain responsibility for public contracting, including with respect to any subsequent phase of this project. Consultant/consultant's participation in the planning, discussions, or drawing of project plans or specifications shall be limited to conceptual, preliminary, or initial plans or specifications. Consultant/consultant shall cooperate with the public entity to ensure that all bidders for a subsequent contract on any subsequent phase of this project have access to the same information, including all conceptual, preliminary, or initial plans or specifications prepared by Consultant pursuant to this Agreement.

7.13 PERS Eligibility Indemnification. If Consultant or any employee, agent, or subconsultant of Consultant providing services under this Agreement claims or is determined by a court of competent jurisdiction or the California Public Employees Retirement System (PERS) to be eligible for enrollment in PERS as an employee of the City, Consultant shall indemnify, defend, and hold harmless City for the payment of any employee and/or employer contributions for PERS benefits on behalf of Consultant or its employees, agents, or subconsultants, as well as for the payment of any penalties and interest on such contributions, which would otherwise be the responsibility of City.

Notwithstanding any other agency, state or federal policy, rule, regulation, law or ordinance to the contrary, Consultant and any of its employees, agents, and subconsultants providing service under this Agreement shall not qualify for or become entitled to, and hereby

agree to waive any claims to, any compensation, benefit, or any incident of employment by City, including but not limited to eligibility to enroll in PERS as an employee of City and entitlement to any contribution to be paid by City for employer contribution and/or employee contributions for PERS benefits.

7.14 Cooperation. If any claim or action is brought against City relating to Consultant's performance or services rendered under this Agreement, Consultant shall render any reasonable assistance and cooperation which City might require.

7.15 Ownership of Documents. All findings, reports, documents, information and data including, but not limited to, computer tapes or discs, files and tapes furnished or prepared by Consultant or any of its subconsultants in the course of performance of this Agreement, shall be and remain the sole property of City. Consultant agrees that any such documents or information shall not be made available to any individual or organization without the prior consent of City. Any use of such documents for other projects not contemplated by this Agreement, and any use of incomplete documents, shall be at the sole risk of City and without liability or legal exposure to Consultant. City shall indemnify and hold harmless Consultant from all claims, damages, losses, and expenses, including attorneys' fees, arising out of or resulting from City's use of such documents for other projects not contemplated by this Agreement or use of incomplete documents furnished by Consultant. Consultant shall deliver to City any findings, reports, documents, information, data, in any form, including but not limited to, computer tapes, discs, files audio tapes or any other Project related items as requested by City or its authorized representative, at no additional cost to the City.

7.16 Public Records Act Disclosure. Consultant has been advised and is aware that this Agreement and all reports, documents, information and data, including, but not limited to, computer tapes, discs or files furnished or prepared by Consultant, or any of its subconsultants, pursuant to this Agreement and provided to City may be subject to public disclosure as required by the California Public Records Act (California Government Code section 7920.000 *et seq.*). Exceptions to public disclosure may be those documents or information that qualify as trade secrets, as that term is defined in the California Government Code section 7924.510, and of which Consultant informs City of such trade secret. The City will endeavor to maintain as confidential all information obtained by it that is designated as a trade secret. The City shall not, in any way, be liable or responsible for the disclosure of any trade secret including, without limitation, those records so marked if disclosure is deemed to be required by law or by order of the Court.

7.17 Conflict of Interest. Consultant and its officers, employees, associates and subconsultants, if any, will comply with all conflict of interest statutes of the State of California applicable to Consultant's services under this agreement, including, but not limited to, the Political Reform Act (Government Code sections 81000, *et seq.*) and Government Code section 1090. During the term of this Agreement, Consultant and its officers, employees, associates and subconsultants shall not, without the prior written approval of the City Representative, perform work for another person or entity for whom Consultant is not currently performing work that would require Consultant or one of its officers, employees, associates or subconsultants to abstain from a decision under this Agreement pursuant to a conflict of interest statute.

7.18 Responsibility for Errors. Consultant shall be responsible for its work and results under this Agreement. Consultant, when requested, shall provide clarification and/or explanation as may be required by the City's representative, regarding any services rendered under this Agreement at no additional cost to City. In the event that an error or omission attributable to Consultant occurs, then Consultant shall, at no cost to City, provide all necessary design drawings, estimates and other Consultant professional services necessary to rectify and correct the matter to the sole satisfaction of City and to participate in any meeting required with regard to the correction.

7.19 Prohibited Employment. Consultant shall not directly solicit for employment nor hire any employee of City while this Agreement is in effect. Notwithstanding the above, this provision shall not apply to any publicly advertised position to which an employee, without enticement or promises by Consultant, applies.

7.20 Order of Precedence. In the event of an inconsistency in this Agreement and any of the attached Exhibits, the terms set forth in this Agreement shall prevail. If, and to the extent this Agreement incorporates by reference any provision of any document, such provision shall be deemed a part of this Agreement. Nevertheless, if there is any conflict among the terms and conditions of this Agreement and those of any such provision or provisions so incorporated by reference, this Agreement shall govern over the document referenced.

7.21 Costs. Each party shall bear its own costs and fees incurred in the preparation and negotiation of this Agreement and in the performance of its obligations hereunder except as expressly provided herein.

7.22 Binding Effect. This Agreement binds and benefits the parties and their respective permitted successors and assigns.

7.23 No Third-Party Beneficiary Rights. This Agreement is entered into for the sole benefit of City and Consultant and no other parties are intended to be direct or incidental beneficiaries of this Agreement and no third party shall have any right in, under or to this Agreement.

7.24 Headings. Paragraphs and subparagraph headings contained in this Agreement are included solely for convenience and are not intended to modify, explain or to be a full or accurate description of the content thereof and shall not in any way affect the meaning or interpretation of this Agreement.

7.25 Construction. The parties have participated jointly in the negotiation and drafting of this Agreement and have had an adequate opportunity to review each and every provision of the Agreement and submit the same to counsel or other consultants for review and comment. In the event an ambiguity or question of intent or interpretation arises with respect to this Agreement, this Agreement shall be construed as if drafted jointly by the parties and in accordance with its fair meaning. There shall be no presumption or burden of proof favoring or disfavoring any party by virtue of the authorship of any of the provisions of this Agreement.

7.26 Amendments. Only a writing executed by the parties hereto or their respective successors and assigns may amend this Agreement.

7.27 Waiver. The delay or failure of either party at any time to require performance or compliance by the other of any of its obligations or agreements shall in no way be deemed a waiver of those rights to require such performance or compliance. No waiver of any provision of this Agreement shall be effective unless in writing and signed by a duly authorized representative of the party against whom enforcement of a waiver is sought. The waiver of any right or remedy in respect to any occurrence or event shall not be deemed a waiver of any right or remedy in respect to any other occurrence or event, nor shall any waiver constitute a continuing waiver.

7.28 Severability. If any provision of this Agreement is determined by a court of competent jurisdiction to be unenforceable in any circumstance, such determination shall not affect the validity or enforceability of the remaining terms and provisions hereof or of the offending provision in any other circumstance. Notwithstanding the foregoing, if the value of this Agreement, based upon the substantial benefit of the bargain for any party, is materially impaired, which determination made by the presiding court or arbitrator of competent jurisdiction shall be binding, then both parties agree to substitute such provision(s) through good faith negotiations.

7.29 Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original. All counterparts shall be construed together and shall constitute one agreement.

7.30 Signing Authority. The persons executing this Agreement on behalf of the parties hereto warrant that they are duly authorized to execute this Agreement on behalf of said parties and that by doing so the parties hereto are formally bound to the provisions of this Agreement.

7.31 Sanctions on Russian Parties. On March 4, 2022, Governor Gavin Newsom issued Executive Order N-6-22 (the EO) regarding Economic Sanctions against Russia and Russian entities and individuals. "Economic Sanctions" refers to sanctions imposed by the U.S. government in response to Russia's actions in Ukraine, as well as any sanctions imposed under state law. The EO directs state agencies to terminate contracts with, and to refrain from entering into any new contracts with, individuals or entities that are determined to be a target of Economic Sanctions. Accordingly, should the State determine Consultant is a target of Economic Sanctions or is conducting prohibited transactions with sanctioned individuals or entities, that shall be grounds for termination of this Agreement. The State shall provide Consultant advance written notice of such termination, allowing Consultant at least thirty (30) calendar days to provide a written response. Termination shall be at the sole discretion of the State.

[Signatures appear on following page.]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by and through their respective authorized officers, as of the date first above written.

CONSULTANT

_____ Date: _____
[Name and Title]

_____ Date: _____
[Name and Title]

CITY OF WESTMINSTER

_____ Date: _____
Christine Cordon, City Manager

ATTEST:

_____
Ashton Arocho, City Clerk

APPROVED AS TO FORM:

_____ Date: _____
Scott Porter, City Attorney

APPROVED AS TO INSURANCE:

_____ Date: _____
Jodie Griner, Risk Manager

DRAFT

APPROVED AS TO CONTENT:

_____ Date: _____

Name, Project Manager

DEPARTMENTAL APPROVAL:

_____ Date: _____

Name, Director of _____

DRAFT

EXHIBIT "A"

SCOPE OF SERVICES

EXHIBIT "B"

FEE SCHEDULE

DRAFT

EXHIBIT "C"

PROJECT SCHEDULE

DRAFT

EXHIBIT B
FEMA GRANT

U.S. Department of Homeland Security
FEMA Region 9
1111 Broadway, Suite 1200
Oakland, CA 94607

FEMA

January 31, 2025

Robyn Fennig
Assistant Director Hazard Mitigation
Governor's Authorized Representative
California Governor's Office of Emergency Services
3650 Schriever Avenue
Mather, CA 95655

Reference: Application Approval, HMGP DR-4699-1727-63
City of Westminster
City of Westminster SJLHMP - Plan Update
FIPS Code: 059-84550, Supplement #21

Dear Robyn Fennig,

We approve and issue Hazard Mitigation Grant Program (HMGP) funds for the City of Westminster, HMGP DR-4699-1727-63, City of Westminster SJLHMP - Plan Update.

The total project cost is $219,975.00. As shown in the enclosed January 27, 2025,Obligation Report - Supplement #21, we are obligating $164,981.25 for the 75 percent Federal share; the 25 percent non-Federal share is $54,993.75, We are obligating $10,920.00 for the 100% Federal share Subrecipient Management Costs. These funds are available in SmartLink for immediate and eligible disbursements. The following is a summary of the approved funding:

Funding Type:	Federal Share:	Non-Federal Share:	Total Project Cost:
Supplement #21	$164,981.25	$54,993.75	$219,975.00
Management Costs	$10,920.00	$0	$10,920.00

This HMGP project approval and obligation of funds are subject to the following conditions:

1. **Scope of Work (SOW)** – The City of Westminster will develop and adopt an updated FEMA approved Hazard Mitigation Plan to meet the requirements outlined in 44 CFR Part 201 and the most current FEMA hazard mitigation plan guidance.

2. **Project Completion Date** – The work schedule included with the project application indicates that the project will take 36 months to complete; therefore, the activity completion date is January 31, 2028. Please inform the sub-recipient that work completed after this

date is not eligible for federal funding, and that federal funds may be de-obligated for work completed outside the completion date when there is no approved time extension.

3. **Project Closeout** – Within 120 days of the award period of performance's expiration, all project funds must be liquidated and final closeout documentation for the project must be submitted to FEMA. Please note the project must comply with Code of Federal Regulations Title 2, Part 200 reporting requirements at the time of closeout.

4. **Standard Conditions** – This project approval is subject to the enclosed *Standard Mitigation Grant Program (HMGP) Conditions,* amended August 2018. Please note that federal funds may be de-obligated for work that does not comply with these conditions.

For financial or programmatic questions please contact Ethan Young, Grants Management Specialist by email at ethan.young@fema.dhs.gov, or phone 240-302-6960.

Sincerely,

KATHRYN J LIPIECKI

Digitally signed by KATHRYN J LIPIECKI
Date: 2025.01.31 12:04:07 -08'00'

Kathryn Lipiecki
Director, Mitigation Division
FEMA Region 9

Enclosures (#2):
Obligation Report - Supplement #21
Standard Mitigation Grant (HMGP) Conditions

CC: Melissa Boudrye: Resilience Branch Chief, California Governor's Office of Emergency Services
Concepcion Chavez: Technical Assistance Division Chief, California Governor's Office of Emergency Services
Ron Miller: Hazard Mitigation Assistance Branch Chief, California Governor's Office of Emergency Services
Joe Purvis: HM Grants Division Chief, California Governor's Office of Emergency Services
Ryan Massello: HM Quality Assurance Division Chief, California Governor's Office of Emergency Services
Robert McCord, Chief, Hazard Mitigation Assistance Branch, FEMA Region 9

FEDERAL EMERGENCY MANAGEMENT AGENCY
HAZARD MITIGATION GRANTS PROGRAM
Obligation Report w/ Signatures

Disaster No	FEMA Project No	Amendment No	State Application ID	Action No	Supplemental No	State	Recipient
4699	63 -P	0	1727	1	21	CA	Statewide

Subrecipient: Westminster
Subrecipient FIPS Code: 059-84550

Project Title : City of Westminster SJLHMP - Plan Update

Total Amount Previously Allocated	Total Amount Previously Obligated	Total Amount Pending Obligation	Total Amount Available for New Obligation
$164,981.25	$164,981.25	$0.00	$0.00

Project Amount	Subrecipient Management Cost Amount	Total Obligation	IFMIS Date	IFMIS Status	FY
$164,981.25	$10,920.00	$175,901.25	01/27/2025	Accept	2025

Comments

Date: 01/27/2025 User Id: SSCOTT39

Comment: Approved funding for DR-4699-1727-63P City of Westminster SJLHMP - Plan Update - Federal Share: $164,981.25 and Sub Recipie Management Costs :$10,920.00

Authorization

Preparer Name: STEVEN SCOTT

Preparation Date: 01/27/2025

HMO Authorization Name: ANDREA HARVEY

HMO Authorization Date: 01/27/2025

Authorizing Official Signature	Authorizing Official Title	Authorization Date
Authorizing Official Signature	Authorizing Official Title	Authorization Date

Standard Mitigation Grant Program (HMGP) Conditions

FEMA Region IX, August, 2018

The following list applies to Recipients and Subrecipients accepting HMGP funds from the Federal Emergency Management Agency (FEMA) of the Department of Homeland Security (DHS):

1. **Applicable Federal, State, and Local Laws and Regulations.** The Recipient/Subrecipient must comply with all applicable Federal, State, and Local laws and regulations, regardless of whether they are on this list or other project documents. DHS financial assistance Recipients and Subrecipients are required to follow the provisions of the State HMGP Administrative Plan, applicable Hazard Mitigation Assistance Uniform Guidance, and Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards located in Title 2 of the Code of Federal Regulations (CFR) Part 200, adopted by DHS in 2 CFR 3002.

2. **Financial Management Systems.** The Recipient and Subrecipient must maintain financial management systems to account for and track funds, as referenced in 2 CFR 200.302.

3. **Match or Cost Share.** Non-federal match or cost share must comply with 2 CFR 200.306, the scope of work (SOW), and any agreements among the Subrecipient, the Recipient, and FEMA.

4. **Budget Changes.** Unanticipated adjustments are permitted within the approved total cost. However, if costs exceed the federal share, the Subrecipient must notify the Governor's Authorized Representative (GAR) of overruns before implementation. The GAR shall submit a written request for approval to FEMA Region IX. The subaward must continue to meet HMGP requirements, including cost effectiveness and cost share. Refer to 2 CFR 200.308 for additional information.

5. **Real Property and Land.** The acquisition, use, and disposition must comply with 2 CFR 200.311.

6. **Equipment.** The acquisition, use, and disposition must comply with 2 CFR 200.313.

7. **Supplies.** Upon project completion, FEMA must be compensated for unused supplies, exceeding $5,000 (fair market value), and not needed for other federal programs. Refer to 2 CFR 200.314.

8. **Procurement.** Procurement procedures must be in conformance with 2 CFR 200.318-320.

9. **Monitoring and Reporting Program Performance.** The Recipient and Subrecipient must submit quarterly progress reports, as referenced in the 2 CFR 200.328 and State HMGP Administrative Plan.

10. **Records Retention.** In accordance with 2 CFR 200.333, financial/ programmatic records related to expenditures must be maintained at least 3 years after the date of Recipient's final expenditure report.

11. **Enforcement and Termination.** If the Recipient or Subrecipient fails to comply with the award or subaward terms, whether stated in a Federal statute or regulation, the State HMGP Administrative Plan, subpplication, a notice of award, an assurance, or elsewhere, FEMA may take one or more of the actions outlined in 2 CFR 200.338, including termination or partial termination of the award or subaward outlined in 2 CFR 200.339.

12. **Allowable Costs.** Funds are to be used for allowable costs in compliance with 2 CFR 200.403, the approved SOW, and any agreements among the Subrecipient, Recipient, and FEMA.

13. **Non-Federal Audit.** The Recipient and Subrecipient are responsible for obtaining audits in accordance with the Single Audit Act of 1984, in compliance with 2 CFR 200.501.

14. **Debarred and Suspended Parties.** Recipients and Subrecipients are subject to the non-procurement debarment and suspension regulations implementing Executive Orders 12549 and 12689, and 2 CFR 180. These regulations restrict federal financial assistance awards, subawards, and contracts with parties that are debarred, suspended, or otherwise excluded from or ineligible for participation in the federal assistance programs or activities.

15. **Equipment Rates.** Rates claimed for use of Subrecipient-owned equipment in excess of the FEMA-approved rates must be approved under State guidelines issued by the State Comptroller's Office or must be certified by the Recipient to include only those costs attributable to equipment usage less any fixed overhead and/or profit.

16. **Duplication of Funding between Public Assistance (PA) and HMGP.** Funding for PA Section 406 and HMGP Section 404 are permitted on the same facility/location, but the activities identified under each program must be distinct with separately accounted funds. At closeout, FEMA may adjust the funding to ensure the Subrecipient was reimbursed for eligible work from only one funding source.

17. **Historic Properties and Cultural Resources.** In compliance with 2 CFR 800, if a potential historic property or cultural resource is discovered during construction, the Subrecipient must cease work in the area and take all reasonable measures to avoid or minimize harm to the discovered property/resource. During construction, the Subrecipient will monitor ground disturbance activity, and if any potential archeological resources are discovered, will immediately cease work in that area, and notify the Recipient and FEMA. Construction in the area may resume with FEMA's written approval after FEMA's consultation, if applicable, with the State Historic Preservation Officer (SHPO).

18. **NEPA and Changes to the Scope of Work (SOW).** To comply with the National Environmental Policy Act (NEPA), and other Laws and Executive Orders, any change to the approved SOW shall be re-evaluated before implementation. Construction associated with a SOW change, prior to FEMA approval, may be ineligible for funding. Acceptance of federal funding requires environmental permits and clearances in compliance with all appropriate federal, state and local laws, and failure to comply may jeopardize funding.

    Within their authority, the Recipient and Subrecipient must use of all practicable means, consistent with other essential policies, to create and maintain productive harmony for people and nature, and fulfill the social, economic, and other needs of present and future generations of Americans.

EXHIBIT C

ACKNOWLEDGMENT OF ADDENDA

Must be executed by proposer and submitted with the proposal (If no addenda has been issued, mark "N/A" under Addendum No. indicating Not Applicable and sign in the signature block)

Proposing Consultant's Name _____

The Proposing Consultant shall signify receipt of all Addenda here, if any:

Addendum No.	Date Received	Signature

EXHIBIT D

FEE PROPOSAL

EXHIBIT E

CITY OF WESTMINSTER 2019 LOCAL HAZARD MITIGATION PLAN

CITY OF WESTMINSTER

LOCAL HAZARD MITIGATION PLAN

FINAL DRAFT

Prepared for:

CITY OF WESTMINSTER
8200 WESTMINSTER BLVD.
WESTMINSTER, CA 92683

Prepared by:

Michael Baker INTERNATIONAL

3900 KILROY AIRPORT WAY, SUITE 120
LONG BEACH, CA 90806

DEVELOPMENT OF THIS PLAN WAS FUNDED BY A COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG) COMPONENT AWARD FOR THE 2008 DISASTER RECOVERY INITIATIVE (DRI) PROGRAM

March 2016

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CHAPTER 1 – INTRODUCTION

Natural hazards exist throughout time and have a life cycle of occurrence. This cycle is matched by a series of emergency management phases: preparedness, response, recovery, and mitigation. However, when natural hazards such as earthquakes, floods or windstorms are at their height, they pose severe risk to people and property. They can cause death, injuries or displace people from their homes, cause significant damage to the community, businesses, public infrastructure and environment, and cost tremendous amounts in terms of response and recovery dollars, further contributing to economic loss.

The City of Westminster is located in the Orange County, California, east of Interstate 405 (I-405) and south of California State Route 22. The city is bordered by Garden Grove to the north and to the east, Seal Beach to the west, and Fountain Valley and Huntington Beach to the south. Past hazard events such as the 1997 and 2011 windstorms, severe storms and two El Nino's caused localized flooding in 1983, 1995, 1997, 2004 and 2005, and 1933 Long Beach earthquake, which damaged much of the City and destroyed all of its brick buildings[1], underscores the necessity of hazard mitigation planning for the city.

Approximately 5 percent of Westminster is located in 100-year flood zones and the majority of the city lies within the 500-year flood zone. Although improvements have been made to some flood control channels in the city, flooding along these channels is anticipated. Also noteworthy is that the entire city is located in the Prado Dam inundation zone. A successful hazard mitigation plan includes a strategy that enables the implementation and sustaining of local actions that reduce vulnerability and risk from hazards, and reduce the severity of the effects of hazards on people and property. Historically, in many local jurisdictions, disasters are followed by repairs and reconstruction which simply restore the area to pre-disaster conditions, however, the replication of pre-disaster conditions results in a cycle of damage, reconstruction, and repeated damage. Such efforts may expedite a return to normalcy; hazard mitigation ensures that post-disaster repairs and reconstruction results in a true reduction of future hazard vulnerability.

While disasters cannot be prevented from occurring, their effects can be reduced or eliminated through a mitigation strategy that includes a well-organized public education and awareness effort, preparedness activities, and mitigation actions. For those hazards that cannot be fully mitigated, the community must be prepared to provide efficient and effective response and recovery. This Local Hazard Mitigation Plan (LHMP, Plan) outlines opportunities to increase Westminster's resiliency in the face of future natural hazards.

1.1 PLAN PURPOSE

As the cost of damages related to disasters continues to increase, the City of Westminster understands the importance of identifying effective ways to reduce vulnerability to disasters. This Plan assists Westminster in reducing vulnerability to disasters by identifying critical facilities, capabilities, resources, information, and strategies for risk reduction, while helping to guide and coordinate mitigation actions. The City of Westminster has created the Plan to ensure that hazard conditions are reflective of current conditions, that policies in the Plan are consistent with current City standards and/or other relevant federal, state, or regional regulations, and that the City has an updated Plan consistent with Federal Emergency Management Agency (FEMA) requirements.

[1] http://www.westminster-ca.gov/about/history.asp

The Plan provides a set of strategies intended to reduce risk from natural hazards through education and outreach programs; foster the development of partnerships; and implement risk reduction activities.

The City of Westminster Local Hazard Mitigation Plan:

- Establishes a basis for coordination and collaboration among participating agencies and public entities.
- Identifies and prioritize future mitigation projects.
- Assists in meeting the requirements of federal assistance programs.

The Westminster LHMP works in conjunction with other plans, including the City's General Plan and Emergency Operations Plan.

1.2 AUTHORITIES

FEMA

This plan complies with the Federal Disaster Mitigation Act (2000), Federal Register 44 CFR Parts 201 and 206, which modified the Robert T. Stafford Disaster Relief and Emergency Assistance Act by adding a new section, 322 - Mitigation Planning. This law, as of November 1, 2004, requires local governments to develop and submit hazard mitigation plans as a condition of receiving Hazard Mitigation Grant Program (HMGP) and other Mitigation project grants.

Hazard mitigation planning is governed by the Stafford Act, as amended by the Disaster Mitigation Act of 2000 (DMA 2000), and by federal regulations implementing the Stafford Act. DMA 2000 revised the Stafford Act to require state, local, and tribal governments to develop and submit to FEMA a mitigation plan that outlines processes for identifying the natural hazards, risks, and vulnerabilities of the jurisdiction. Plan approval by FEMA is a prerequisite to receiving federal hazard mitigation grant funds. (See 42 USC § 5165(a).)

To implement the mitigation planning requirements of the Stafford Act, FEMA promulgated 44 CFR Part 201, the federal regulations governing the planning process, plan content, and the process for obtaining approval of the plan from FEMA. The planning requirements set forth in the CFR, including plan revision requirements, are identified through the FEMA Regulation Checklist in the Local Mitigation Plan Review Tool.

STATE OF CALIFORNIA

In addition to the requirements listed above, the State of California has also enacted revisions to both California Government Code Sections 8685.9 and 65302.6 (commonly known as AB 2140 [Chaptered 2006]). Descriptions of these government code sections are provided below:

Cal. Gov't. Code §8685.9.

Notwithstanding any other provision of law, including Section 8686, for any eligible project, the state share shall not exceed 75 percent of total state eligible costs unless the local agency is located within a city, county, or city and county that has adopted a local hazard mitigation plan in accordance with the federal Disaster Mitigation Act of 2000 (P.L. 106-390) as part of the safety element of its general plan adopted pursuant to subdivision (g) of Section 65302. In that situation, the Legislature may provide for a state share of local costs that exceeds 75 percent of total state eligible costs.

Cal. Gov't. Code §65302.6.

(a) A city, county, or a city and county may adopt with its safety element pursuant to subdivision (g) of Section 65302 a local hazard mitigation plan (HMP) specified in the federal Disaster Mitigation Act of 2000 (Public Law 106-390). The hazard mitigation plan shall include all of the following elements called for in the federal act requirements:

(1) An initial earthquake performance evaluation of public facilities that provide essential services, shelter, and critical governmental functions.

(2) An inventory of private facilities that are potentially hazardous, including, but not limited to, multiunit, soft story, concrete tilt-up, and concrete frame buildings.

(3) A plan to reduce the potential risk from private and governmental facilities in the event of a disaster.

(b) Local jurisdictions that have not adopted a local hazard mitigation plan shall be given preference by the Office of Emergency Services in recommending actions to be funded from the Pre-Disaster Mitigation Program, the Hazard Mitigation Grant Program, and the Flood Mitigation Assistance Program to assist the local jurisdiction in developing and adopting a local hazard mitigation plan, subject to available funding from the Federal Emergency Management Agency.

In accordance with these requirements, this LHMP includes the information required by California Government Code Sections §8685.9 and §65302.6.

1.3 PLAN ADOPTION

The City of Westminster will adopt the LHMP via a resolution of the City Council following plan approval from FEMA. Figure 1.1 is the resolution used to adopt the 2015 Local Hazard Mitigation Plan.

1.4 PLAN USE

Each section of the Plan provides information and resources to assist plan users in understanding the hazard-related issues facing residents, businesses, and the environment. The structure of the Plan enables users to review each section as needed and allows the City of Westminster to review and update sections as new data is becomes available. The ease of incorporating new data into the Plan will result in a Plan that remains current and relevant to Westminster.

The LHMP is composed of the following chapters:

- Chapter 1: Introduction. The introduction describes the background and purpose of developing the Plan in addition to introducing the mitigation priorities and summarizing the planning process.
- Chapter 2: Community Profile. The community profile presents the history, geography, demographics, and socioeconomics of Westminster. It serves as a tool to provide a historical perspective of natural hazards in the city.
- Chapter 3: Hazards Assessment. This chapter provides information on hazard identification, hazard profiles, vulnerability and risk associated with natural hazards, and a vulnerability assessment of critical facilities in relation to the identified hazards.
- Chapter 4: Mitigation Actions. This chapter provides strategies and mitigation actions to reduce potential risks to Westminster's critical facilities, residents, and businesses.

- Chapter 5: Plan Maintenance and Capabilities. This chapter provides information on plan implementation, monitoring, and evaluation, and discusses the assets and capabilities available to achieve the proposed mitigation actions outlined in Chapter 4 as well as opportunities for continued public involvement.

1.5 MITIGATION PRIORITIES AND GOALS

The mission of the Westminster LHMP is to promote sound public policy designed to protect citizens, critical facilities, infrastructure, private property, and the environment from natural hazards. This can be achieved by increasing public awareness, documenting the resources for risk reduction and loss prevention, and identifying activities to guide the City toward building a safer, more sustainable community. The mission is a guideline that represents what the community wants to accomplish through the mitigation plan. Goals are broad statements that represent a long-term, community-wide vision. The planning team reviewed the goals from the County of Orange Hazard Mitigation Plan and decided to align the goals for Westminster with those of the County. The following goals have been established for the Westminster 2015 LHMP:

1) To protect life and property by making homes, businesses, infrastructure, critical facilities, and other property more resistant to natural hazards.
2) To increase public awareness through development and implementation of outreach programs focusing on the risks associated with natural hazards.
3) To improve natural systems by balancing watershed planning, natural resource management, and land use planning with natural hazard mitigation to protect life, property, and the environment.
4) To develop partnerships by strengthening communication and coordinating participation among and within public agencies, residents, nonprofit organizations, business, and industry to gain a vested interest in implementation.
5) To enhance emergency services/response through establishment of policy to ensure mitigation projects for critical facilities, services, and infrastructure.

1.6 HAZARD MITIGATION PLANNING PROCESS

This Plan is a result of a process involving City departments, stakeholder agencies, businesses, residents, and the community at large.

The LHMP planning team was comprised of the following City Departments. A complete list of stakeholders and more information about their participation in the LHMP planning team is given in Appendix A.

- City of Westminster City Manager's Office
- City of Westminster City Clerk's Office
- City of Westminster Police Department
- Orange County Fire Authority
- City of Westminster Community Services
- City of Westminster Community Development Department
- City of Westminster Building Department
- City of Westminster Public Works Department
- City of Westminster Administrative Services

Figure 1.1: City of Westminster 2016 Local Hazard Mitigation Plan Resolution

RESOLUTION NO. 4768

A RESOLUTION ADOPTING THE LOCAL HAZARD MITIGATION PLAN AND WESTMINSTER EMERGENCY OPERATION PLAN UPDATE

WHEREAS, the Department of Housing and Community Development (HCD) provided grant funding to the City of Westminster to complete a Local Single-Jurisdiction Natural Hazard Mitigation Plan to identify forward thinking mitigation strategies to keep our citizens safe from disasters; and

WHEREAS, HCD's grant to the City of Westminster also allowed for an update of the City's Emergency Operations Plan manual to current conditions; and

WHEREAS, the City of Westminster held two public hearings to obtain comments during the design and submission of the DRI application, as well as multiple public outreach meetings as detailed in Sections 1.1 and 1.2 of the Local Hazard Mitigation Plan; and

WHEREAS, the City has further met the Citizen Participation Plan requirements by releasing for Public Review the Draft Local Hazard Mitigation Plan on September 30, 2015 and conducting this public hearing tonight; and

WHEREAS, the completion of the Local Hazard Mitigation Plan and its approval will allow the City of Westminster to apply for various other emergency preparedness and hazard mitigation grants, both at the State and Federal levels.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF WESTMINSTER HEREBY RESOLVES AS FOLLOWS:

SECTION 1. The City has determined that the federal citizen Participation requirements have been met during the design of the DRI application, as well as the development of the LHMP itself.

SECTION 2. The City Council approves the Local Hazard Mitigation Plan and authorizes that Staff may make changes to the Plan pursuant to recommendations by FEMA.

SECTION 3. That this Resolution authorizes the City Manager to sign any documents related to the completion of the Local Hazard Mitigation Plan, including any grant applications that the City of Westminster is now eligible to complete because it has an approval LHMP.

SECTION 4. That this Resolution authorizes the City Manager or his designee to make any revisions to the City's Local Hazard Mitigation Plan, as suggested by FEMA guidance.

4768-1

PASSED, APPROVED AND ADOPTED this 9th day of March 2016, by the following vote:

AYES:	COUNCIL MEMBERS:	TA, CAREY, DIEP, RICE
NOES:	COUNCIL MEMBERS:	NONE
ABSENT:	COUNCIL MEMBERS:	CONTRERAS

TRI TA, MAYOR

ATTEST:

AMANDA JENSEN, CITY CLERK

APPROVED AS TO FORM:

RICHARD D. JONES, CITY ATTORNEY

STATE OF CALIFORNIA)
COUNTY OF ORANGE) ss.
CITY OF WESTMINSTER)

I, AMANDA JENSEN, hereby certify that I am the duly appointed City Clerk of the City of Westminster and that the foregoing resolution was duly adopted at a regular meeting of the City Council of the City of Westminster held on the 9th day of March, 2016.

Amanda Jensen
City Clerk

4768-2

At the onset of the planning process, the City of Westminster contacted a variety of local agencies to see if they would be interested in participating in the preparation of this LHMP. The agencies that were interested in doing so are the ones that were engaged in the project as part of the LHMP planning team.

Appendix A of this plan contains the sign in sheets and contact information for the individuals that participated during the LHMP planning team meetings. The LHMP team is responsible for the development, implementation, and maintenance of this Plan.

The LHMP team held four meetings (a kickoff meeting and three additional planning meetings) to discuss preparation of the LHMP. At these meetings, team members discussed the objectives of the plan, identified the hazards that pose a threat to Westminster, and prepared and reviewed mitigation strategies to reduce the City's vulnerabilities. The meetings were held on the following dates:

- Kickoff Meeting: October 1, 2014
- LHMP Team Meeting 1: November 12, 2014
- LHMP Team Meeting 2: January 21, 2015
- LHMP Team Meeting 3: March 11, 2015

Table 1.1 summarizes these meetings. Meeting materials and sign-in sheets from these meetings are provided in Appendix A.

Table 1.1: Meeting Summaries and Public Involvement Opportunities

Date	Purpose
October 1, 2014	Project Kickoff Meeting – Provided an introduction to the project, discussed overarching goals for the effort, discussed communication protocols, and identified points of contact.
November 12, 2014	LHMP Meeting #1 – Provided an overview of the LHMP process, identified hazards of concern, finalized critical facilities list, and prioritized hazards with LHMP team members.
January 21, 2015	LHMP Meeting #2 – Provided an overview of the hazard profiles and preliminary results of the risk assessment for each hazard and critical facility identified.
March 11, 2015	LHMP Meeting #3 – Reviewed the Administrative Draft Plan and prioritized mitigation activities.

As part of the public engagement and outreach process for the LHMP, the City created an online survey for community members. A link to the survey was placed on the City's website, as well as distributed via its Facebook and Twitter pages. The survey asked about potential hazards facing Westminster, and what steps community members have taken or are interested in taking to reduce the threat from these hazards. The survey produced the following key outcomes:

- More respondents felt that it was very likely (19%) or somewhat likely (22%) that their home or neighborhood would be impacted by a disaster than those who felt such an event was not very likely (14%), but there was a high degree of uncertainty.
- Community members identified the top three hazards of greatest concerns, with earthquakes as the hazard that poses the greatest risk to their home or neighborhood, drought coming in second and disease/pest management hazards coming in third.
- Respondents were roughly split as to whether their home insurance coverage was sufficient to cover the threats from the potential hazards facing Westminster.

- Most residents have at least some disaster preparedness supplies, although a majority of respondents only had six of the eighteen recommended items (cooking and eating utensils, a can opener, ready-to-eat canned or nonperishable foods, a first aid kit or supplies, blankets or sleeping bags, and a flashlight with batteries).
- 19% of respondents indicated that they were familiar with the special needs of their neighbors, while 53% of the respondents indicated they were not.
- When asked what Westminster could do to improve resiliency in the community, respondents generally favored outreach and education over increased regulations.

A detailed summary of the online survey is included in Appendix B.

In conjunction with the online survey, the LHMP consultant attended four regularly scheduled public meetings at the City to discuss the hazard mitigation planning process. These meetings were publicized using the City's standard protocol, which involved notification in the local newspaper, placement of public notices at designated locations throughout the City (City Hall, Community Center, etc…) and placement of noticing information on the City's website. Table 1.2 summarizes these meetings and the general information discussed. A copy of the meeting presentation used for these meetings is provided in Appendix B.

Table 1.2: Public Outreach/Involvement Opportunities

Date	Meeting Summary
May 6, 2015	Planning Commission Meeting – Provided an overview of the hazard mitigation planning process, answered questions regarding the hazard profiles developed, and provided information on the online public opinion survey released at the beginning of May. No comments/questions from the public were received during the meeting. Approximately 5 members from the public attended the meeting.
May 13, 2015	Community Services and Recreation Commission Meeting – Provided an overview of the hazard mitigation planning process, answered questions regarding the hazards profiled during the process, and provided information on the online public opinion survey released at the beginning of May. No comments/questions from the public were received during the meeting. Zero members from the public attended this meeting.
May 15, 2015	Senior Citizen Action Team Meeting – Provided an overview of the hazard mitigation planning process and provided information on the online public opinion survey released at the beginning of May. No comments/questions from the public were received during the meeting. Zero members from the public attended this meeting.
May 18, 2015	Commission on Aging Meeting – Provided an overview of the hazard mitigation planning process and provided information on the online public opinion survey released at the beginning of May. No comments/questions from the public were received during the meeting. Two members from the public attended this meeting.
September 03, 2015	Release of Public Review Draft LHMP for 30 Day Comment Period
[Insert Date]	City Council Hearing to approve Final LHMP Document.

1.7 PUBLIC REVIEW DRAFT

On September 03, 2015, the Public Review Draft LHMP was completed and released to the general public for review and comment for a period of 21 days. No public comments were received during this period.

1.8 PLANS, STUDIES, AND TECHNICAL REPORTS USED TO DEVELOP THE PLAN

The following table (Table 1.3) shows the sections of the LHMP and the corresponding plans, studies, and technical reports (and websites, if applicable) used to develop certain discussions.

Table 1.3: Plans, Studies, and Technical Reports Used to Develop the Plan

LHMP Section	Corresponding Plan/Study/Technical Report
2.1 Physical Setting	- General Plan (April 1996) - U.S. Census Bureau (http://factfinder.census.gov)
2.2 History	- General Plan (April 1996)
2.3 Community Profile	- U.S. Census Bureau (http://factfinder.census.gov)
2.4 Economic Trends	- General Plan (April 1996) - Economic Outlook and Forecasts (2014) - U.S. Census Bureau (http://factfinder.census.gov)
2.5 Existing Land Use	- General Plan (April 1996)
2.6 Development Trends and Future Development	- General Plan (April 1996)
2.7 Evacuation Routes	- City staff/Hazard Mitigation Planning Team
2.8 Critical Facilities	- City staff/Hazard Mitigation Planning Team
3.1 Hazard Identification and Prioritization	- General Plan (April 1996) - City staff/Hazard Mitigation Planning Team - County of Orange Hazard Mitigation Plan (October 2010)
3.2 Climate Change Considerations	- California Adaptation Planning Guide (September 2012)
3.3 Vulnerability/Risk Assessment Method	- City staff/Hazard Mitigation Planning Team
3.4 Hazard Profiles	- General Plan (April 1996) - County of Orange Hazard Mitigation Plan (October 2010)
3.4.1 Drought	- Westminster Urban Water Management Plan (2010)
3.4.2 Seismic Hazards	- General Plan (April 1996) - County of Orange Hazard Mitigation Plan (October 2010) - U.S.G.S. Richter Scale and Modified Mercalli Intensity Scale (2014) - U.S.G.S. Fact Sheet 2008-3027, http://pubs.usgs.gov/fs/2008/3027/ - U.S.G.S. Earthquake Hazards Program data, http://earthquake.usgs.gov/earthquakes/states/California/history.php
3.4.3 Flood Hazards	- General Plan (April 1996) - County of Orange Hazard Mitigation Plan (October 2010) - California 2013 State Hazard Mitigation Plan (2013) - Megadroughts in North America (2009) - California Drought of 2007-2009 (2010) - Major Floods and Droughts in California (1990)
3.4.4 Hazardous Materials	- General Plan (April 1996) - County of Orange Hazard Mitigation Plan (October 2010) - Cal EMA Regional Information Management System (RIMS) Spill Database, http://calema.ca.gov/HazardousMaterials/Pages/Historical-HazMat-Spill-Notifications.aspx - Charlotte A. Smith, RPh, MS, Journal of the Pharmacy Society of Wisconsin, Nov/Dec 2002, p.17.
3.4.5 Extreme Heat	- Cal Adapt (2013)

LHMP Section	Corresponding Plan/Study/Technical Report
3.4.6 Severe Weather	- County of Orange Hazard Mitigation Plan (October 2010) - National Weather Service, "A History of Significant Weather Events in Southern California Organized by Weather Type," February 2010.
3.4.7 Disease and Pest Management	- County of Orange Hazard Mitigation Plan (October 2010) - County of Riverside Multi-Jurisdictional Hazard Mitigation Plan (June 2012) - California West Nile virus activity (2014) - California Public Health Department – Influenza (2015)
3.4.8 Dam Failure	- General Plan (April 1996) - County of Orange Hazard Mitigation Plan (October 2010) - University of California, Davis, Engineering Department, http://cee.engr.ucdavis.edu/faculty/lund/dams/Dam_History_Page/Failures.htm
3.5 Summary of Vulnerability	- U.S. Census Bureau (http://factfinder.census.gov) - Hazard zone geospatial data (multiple sources)
3.5.1 Significant Hazards	- General Plan (April 1996) - County of Orange Hazard Mitigation Plan (October 2010) - City staff/Hazard Mitigation Planning Team
3.5.2 Facilities Most at Risk	- City staff/Hazard Mitigation Planning Team - Hazard zone geospatial data (multiple sources)
3.5.3 Potential Losses	- City staff/Hazard Mitigation Planning Team - City insured values
4.1 Hazard Mitigation Overview	- City staff/Hazard Mitigation Planning Team - County of Orange Hazard Mitigation Plan (October 2010) - FEMA National Flood Insurance Program (NFIP) - FEMA How-to Guides #3 and #5 (386-3 and 386-5), STAPLE/E criteria (Social, Technical, Administrative, Political, Legal, Economic, and Environmental)
4.2 Hazard Mitigation Actions	- City staff/Hazard Mitigation Planning Team
4.3 Capabilities Assessment	- General Plan (April 1996) - City staff/Hazard Mitigation Planning Team - Westminster Urban Water Management Plan (2010) - Westminster municipal code

CHAPTER 2 – COMMUNITY PROFILE

2.1 PHYSICAL SETTING

Westminster is located in the northwest portion of Orange County, approximately three miles from the Pacific Ocean. Based on the California Department of Finance 2015 estimates, the city's population is approximately 92,106 residing within the city's 10 square miles. The daily commuter and business population is much larger. The City is bisected by State Route 39 (Beach Boulevard), which runs north to south through the city, dividing it into an eastern and western region. Garden Grove is also adjacent to the east side of the city. Additionally, Westminster surrounds three unincorporated areas of Orange County, collectively known as Midway City. Midway City is located within Westminster's sphere of influence. Figure 2.1 depicts Westminster's regional location.

The city is located in the Orange County portion of the Los Angeles Basin, in the coastal plain of the Peninsular Ranges Geomorphic Province. This region is bordered to the south and southwest by the Pacific Ocean and to the north and east by the Puente Hills, Santa Ana Mountains, and San Joaquin Hills. Westminster is fully urbanized, and the largest land use in the city is residential, totaling 3,046 acres (45 percent of the city's total land area), which comprises mainly low density residential uses (2,258 acres).

2.2 HISTORY

The land that is now Westminster was inhabited by the Oak Grove people more than 8,000 years ago, who remained in the area until the climate became too dry and the vegetation too scarce. The region remained uninhabited until the Gabrielino Indians moved there from the desert and numbered over 200,000. Illnesses such as smallpox, measles, and diphtheria significantly reduced the Indian population. In the 1850s, with California's admission into the Union, the United States Land Commission was set up to review claims that arose from original Spanish land grants. An American named Abel Stearns saw this as an opportunity to buy a share of the Rancho Las Bolsas. He became the sole owner of the rancho and changed the name to Stearns Rancho. In 1870 a Presbyterian reverend named Lemuel Webber purchased part of Stearns Rancho and founded a temperance colony named Westminster. Westminster was the second colony in Orange County to be founded deliberately but did not focus on a particular product economy or ethnic group like Anaheim, the first colony founded.

The 1880s was a decade of continuing development for Westminster. As an agricultural community, it had overcome swamps and tulles and a rainy season that flooded the area due to the lack of any drainage system. The Drainage Act of 1881 turned thousands of acres in this region into productive soil and yielded the most thriving celery fields in the world. The Santa Fe and Southern Pacific railroads brought settlers from the Missouri River to the West Coast, enabling a population and land boom across Southern California. By 1942, the population had reached 2,500, but World War II brought more changes, which impacted the growth of Westminster as young men left the area to join the armed forces and the Japanese left Orange County.

Figure 2.1: Regional Vicinity Map

Westminster became an incorporated city in 1957, formed from the community of Westminster and a second community called Barber City. A third community, Midway City, chose not to join the newly incorporated city and remains an unincorporated community today, served by the County of Orange.

Since then, Westminster has flourished into a thriving urban city. The city's land use pattern has changed significantly from the original agricultural community established in the 1800s to primarily urban and suburban land uses (typical of auto-oriented communities throughout the Orange County region). The most prevalent land uses in the community are residential, commercial, public facilities/schools, and open space areas. As development continues in the city, it is anticipated that new structures and remodeling of existing structures will be brought into compliance with the most current regulations and standards, where applicable, which should assist in the reduction of potential hazards in the city.

Today, Westminster's residential and commercial sectors continue to grow and the city now is fully urbanized. The City's Chamber of Commerce advocates business growth and development and supports programs that make the City an attractive choice for both new and relocating companies.

2.3 COMMUNITY PROFILE

Tables 2.1, 2.2, and 2.3 provide an overview of the City's population data, ethnicity, and education levels based on the 2010 US Census.

Table 2.1: Westminster Population Data

Total Population	89,701
Males	44,354
Females	45,347
Median Resident Age	38.0
Median Household Income	$54,780
Per Capita Income	$22,603
Median House Value	$462,100

Source: http://factfinder.census.gov. Accessed November 6, 2014.

Table 2.2: Westminster Race and Ethnicity

Race and Ethnicity	Number	Percent of Population
White (non-Hispanic)	32,037	35.7%
Black	849	0.9%
American Indian	397	0.4%
Asian	42,597	47.5%
Pacific Islander	361	0.4%
Other Race	10,229	11.4%
Two or More Races	3,231	3.6%
Hispanic or Latino (of any race)	21,176	23.6%
Population Percentages do not add up to 100% due to double counting		

Source: http://factfinder.census.gov. Accessed November 6, 2014.

Table 2.3: Westminster Educational Attainment

Education Attainment (Age 25 and Over)	Number	Percent of Population
Less than 9th Grade	7,534	12.6%
9th to 12th Grade	8,192	13.7%
High School Graduate	14,411	24.1%
Some College, No Degree	12,557	21.0%
Associate Degree	5,142	8.3%
Bachelor Degree	8,910	14.9%
Graduate or Professional Degree	3,050	5.1%
		Percent of Population does not equal 100% due to rounding

Source: http://factfinder.census.gov. Accessed November 6, 2014.

2.4 ECONOMIC TRENDS

According to the *Economic Outlook and Forecasts*, Orange County's economy along with the rest of Southern California has improved substantially since the darkest days of the 2007-2008 economic crisis. These improvements include increases in job formation, a brisk rate of progress in economic activity, and improvement in the housing sector. The Economic Resources section of Westminster's General Plan (1996) indicates that the city has been characterized by rapid gains in employment relative to gains in population growth and occupied housing during the last two decades of the twentieth century. Until the mid-1970s, Orange County had fewer local jobs per occupied housing unit than the average for Southern California. During the 1970s, the Orange County economy changed from a suburban residential area to a self-generating economy. Orange County has produced demand for housing in excess of actual increases in occupied housing. In 2000, Westminster's median annual household income was $49,450, nearly 16 percent lower than the median income for Orange County at $58,820.[2] As of 2010, the median household income for Westminster had increased to $54,780, while Orange County's overall median household income had skyrocketed to $75,566, leaving Westminster 27.5 percent lower than the county median. The housing dichotomy is likely a driving factor behind this disparity.

Particularly relevant to economic growth occurring in Westminster is the population increase in the Asian community as it pertains to expenditure potential captured along the city's Bolsa Corridor area. While Orange County represented only 13 percent of population growth in Southern California, it captured 18.3 percent of the area's Asian population growth in the late twentieth century. Nearly one-third of this growth is represented directly by the Vietnamese community.

Employment levels in Orange County have grown steadily since the latter half of the twentieth century; however, nonagricultural wage and salary employment decreased in the early 1990s. The greatest decrease in employment across Orange County was in durable goods manufacturing, closely followed by retail trade. The historical patterns of office development in Orange County (described for distinct geographic locations in terms of office building permit issuances) indicates that the City of Westminster represented just 1.2 percent of new

[2] *U.S. Census Bureau 2000 Census data. 2014. http://factfinder.census.gov.*

office space developed countywide in the decade from 1981 to 1991. Historically, Westminster has not been considered a prime office development location. The city, however, possesses a number of tactical attributes, which usually would support a greater level of prime office development within city limits, including a central geographic location to surrounding employment force and a circulation network serving Orange County and Southern California businesses; excellent freeway access from two major freeways (I-405 and State Route 22) bisecting the City along its western and northern boundaries; and close proximity to a variety of housing (specifically, executive housing).

Major office concentrations in the city are located along Westminster Boulevard and Bolsa Avenue. The concentration of space along these corridors is removed from major freeway routes serving the region. The proximity of these office centers suggests that the project tenants serve a localized trade area (e.g., Asian community served by majority of office tenants along Bolsa Corridor) or are non-service oriented (e.g., business support non-dependent upon proximity to regional corridors, financial and administrative centers). Few office projects (only three) in the city are provided freeway visibility and access in contrast to many more in neighboring communities.

Retail floor space in Westminster appears to be sufficient to meet existing and future needs of city residents in the absence of significant future population increases. The city's retail sales potential totals over 150 million dollars annually. The city's retail sector, though, is characterized by a moderate oversupply of merchandising outlets serving the consumer potential of both city residents and visitors. The moderate oversupply of retail space and the strong representation in every significant category of retail potential make any noticeable increase in retail development unlikely in this region.

One of the most notable positive developments in the Orange County region and the state of California overall is the remarkable improvement in home values leading up to the year 2014. The median single-family home price in Orange County was $642,000 in August 2014 compared to a low of $425,000 in December 2008 (during the depth of the recession). Although home values have not yet reached their July 2007 peak, the turnaround over the last several years has been quite spectacular for this region. The outlook for Southern California's labor market has also improved along with regional housing values.

2.5 EXISTING LAND USE

Existing land use information was taken from the Westminster General Plan, Land Use Element, and the Westminster Zoning Map. The General Plan and Zoning Map are the principal policy documents that regulate land use in Westminster. Figure 2.2 presents the adopted Land Use Map, which divides Westminster into 12 land use designations. Table 2.4 identifies the General Plan land use designations and descriptions of the typical uses allowed within each designation. The General Plan addresses the use and development of private land, including residential and commercial areas.

Westminster's land use pattern has changed significantly from the original agricultural community established in the nineteenth century. The city's land use pattern and density of development is typical of Southern California suburban communities, which experienced the majority of their expansion and growth during the 1950s, 1960s, and 1970s. Before Westminster experienced its greatest growth (in the early 1960s) agricultural lands generally comprised a quarter of the city. Vacant lands, almost nonexistent today, totaled over 780 acres in 1963. Today's built urban environment, however, consists of one- and two-story single-family homes, strip commercial centers, and various parks and open space lands. The largest single structure in the city is the

Westminster Mall, and only a few buildings are more than three stories, with the city's tallest structure standing at six stories.

According to the General Plan Land Use Element (1996), residential land use totals approximately 2,872 acres (43.6 percent of the city). Of this residential land use, approximately 2,237 acres are designated low-density residential, 343 acres are designated medium-density residential, and 293 acres are designated high-density residential. Commercial uses in Westminster comprise 813 acres (12.3 percent) of the city and industrial uses comprise 184 acres (2.8 percent). Schools and public facility uses comprise 385 acres (5.8 percent) while parks and open space uses total 239 acres (3.6 percent). Approximately 170 acres (2.6 percent) of Westminster comprises planned development sites. The city has almost no vacant land to speak of.

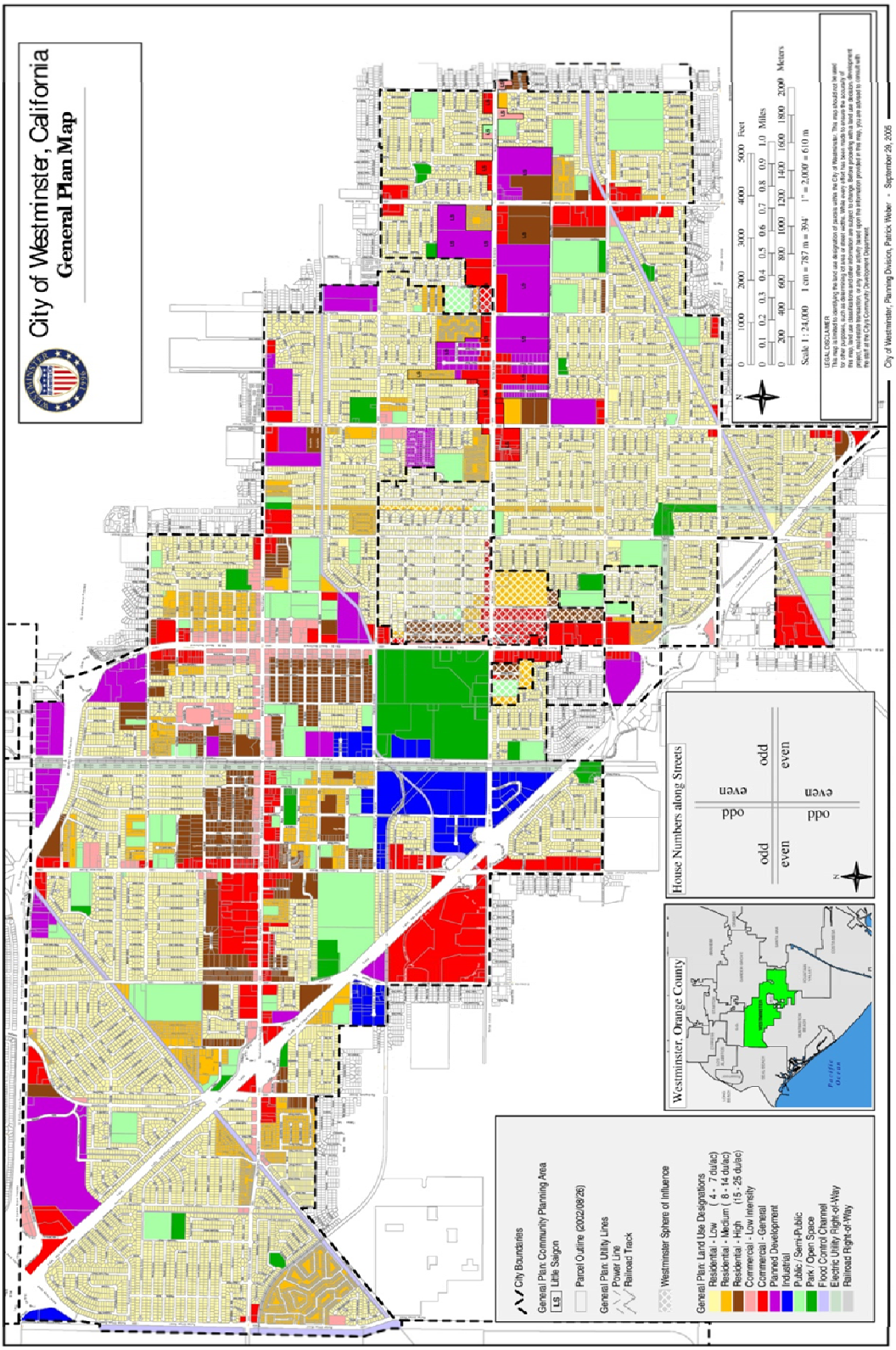
Using these land use designations, the City of Westminster has some capability to reduce risks to lives and property from natural and man-caused hazards. For example, more open space uses could be designated in areas of higher hazard risk to prevent damage to developed property. Similarly, understanding where residential and commercial land uses are in relation to hazard risk is a key component to implementing mitigation strategies.

Table 2.4: Land Use Designations

Land Use Designation	Development Intensity		Description
	Density	Floor Area Ratio	
Residential - Low	4-7 du/ac	N/A	Designated for single-family detached residential dwelling units.
Residential - Medium	8-14 du/ac	N/A	Designated for single-family attached units, duplexes, and small scale (3-5 units) apartment and condominium developments.
Residential - High	15-25 du/ac	N/A	Designated for apartment and condominium developments.
Commercial - Low Intensity	N/A	0.33:1	Designated for a variety of commercial uses, but generally located in areas where lot sizes create constraints to parking and on-site circulation.
Commercial - General	N/A	0.33:1	Designated for all facets of retail and wholesale commercial activity.
Planned Development	Varies	Varies	Designated for mixed-use or single-use development, based upon performance standard goals. FARs and density limits may be exceeded in this designation with compliance of performance standards.
Industrial	N/A	0.50:1	Designated for manufacturing, warehousing, research, and development uses.
Public/Semi Public	N/A	N/A	Designated for a full range of public uses including civic center, schools, fire stations, and other public uses; also includes churches.
Park/Open Space	N/A	N/A	Designated for open space uses such as cemetery, pocket parks, and City-maintained parks and open spaces.
Flood Control Channel	N/A	N/A	Designated for flood control facilities in the city.
Electric Utility Right-of-Way	N/A	N/A	Designated for electric utility easements/facilities located in the City.
Railroad Right-of-Way	N/A	N/A	Designated for railroad right-of-way facilities located in the City.

Source: City of Westminster, 2005. General Plan Land Use Map.

Figure 2.2: City of Westminster Land Use Map



2.6 DEVELOPMENT TRENDS AND FUTURE DEVELOPMENT

Although a majority of the city is considered built out, numerous development projects are under way or in the planning stages in the City. Table 2.5 identifies current development activities in the city.

Table 2.5: Current Development Activities as of December 2, 2014

Permit Number	Address	Description	Area S.F.	Status
Under Construction				
B00-083-663	14801 Beach Blvd.	Cemetery Columbarium	NA	Final Inspection Approved
B00-084-376	1017 Westminster Mall	Youth School T.I.	2,769	Final Inspection Approved
B00-082-170	14522 Goldenwest St.	Mosque T.I.	12,561	TCO issued
B00-084-230,31,32	Tract 17611-Brookhurst	3 New Model Homes	7,337	MEP Final Inspections
B00-083-431	7200 Plaza St.	Family Resource Center	3,835	MEP Final Inspections
B00-078-959	13833 Beach Blvd.	Office Bldg- Thomas Dao	13,827	Drywall Inspection
B00-080-117	7772-7776 13th	Triplex	4,765	Drywall Inspection
B00-083-283-286	5981 Westminster	Service Station/Car Wash	6,432	Roof Inspection
B00-084-201	14381 Magnolia	Addition to Church	2,489	Stucco Inspection
B00-084-013	14472 Chestnut	Temple	14,060	Framing
B00-083-652	14381 Olive St.	City Corporate Yard	16,925	Underground Plumbing
B00-084-207	22 locations citywide	City Parks	Varies	22 Permits Issued
B00-084-610	14532 Beach	Popeyes Restaurant	2,509	Permit Issued
In Plan Check				
B00-083-655	7351 Hazard Ave.	PD Training Center	29,009	Ready to be issued
B00-084-120	14451 Cedarwood, MCSD	CNG Fueling Equipment		Ready to be issued
B00-082-275	7262 20th St	Duplex	2,939	Ready to be issued
B00-084-250	15512 Brookhurst	Chase Bank	3,948	Ready to be issued
B00-083-242	14615 Magnolia St.	New Retail Center	11,050	Ready to be issued
B00-083-237,38,39	7601-7603 23rd St.	(3) Single Family	6,393	Bldg Div. Approved.
B00-083-330	7782-7788 16th	Four Plex	8,768	Applicant P/U 3rd PC
B00-083-650	7611 Westminster Blvd.	Retail Remodel	3,600	Applicant P/U 2nd PC
B00-084-203	7871 Westminster Blvd.	Vocational Beauty School	8,178	Applicant P/U 1st PC
B00-084-475	7474 Garden Grove	Bodycote Metal Building	16,800	Applicant P/U 1st PC
B00-084-734,35,36	6561 Walt St.	(3) Single Family	8,522	Applicant P/U 1st PC
B00-084-745	7831 18th St.	4 unit Townhouse	5,338	Applicant P/U 2nd PC
B00-084-841	8500 Bolsa	Church Educational Bldg.	14,129	Applicant P/U 1st PC
B00-084-840	15482 Goldenwest	Dunkin Donuts	2,251	Melad P/U 2nd PC

Source: City of Westminster. 2014.

2.7 CRITICAL FACILITIES

The LHMP Team identified 14 critical facilities for incorporation in the hazard vulnerability/risk analysis (see Table 2.6, Westminster Critical Facilities List). These facilities include a police station, fire stations, several City-owned properties, and other facilities that provide important services to the community. Damage to these facilities caused by a hazard event has the potential to impair response and recovery from the event and may lead to disruption of services. This list includes critical facilities owned and operated by the City or agencies that work closely with the City, which are outside of the City's control.

In addition to the Critical Facilities list, the LHMP Team also identified "Facilities of Concern", which are the schools located within the community, as well as "Facilities of Interest" which are private properties that may contain sensitive populations within the City. A detailed list of all facilities identified by the LHMP Team is provided in Appendix A, which also includes maps showing facilities in vulnerable areas and facility replacement costs, among other information. The risk assessment prepared for this plan is based solely on the facilities listed in Table 2.6 that are under the City's control.

Table 2.6: Westminster Critical Facilities List

Map #	Facility
1	Westminster City Hall
2	City Senior Center
3	Police Department/Emergency Operations Center
4	Municipal Corporation Yard/Police Department Training Facility
5	Family Resource Center
6	Westminster Rose Center
7	Miriam Warne Community Building
8	Fire Station 64
9	Fire Station 65
10	Fire Station 66
11*	Fire Station 25
12	I-405 Overpass at Valley View Street
13	I-405 Overpass at Westminster Boulevard
14	SR-22 Overpass at Beach Boulevard

**Fire Station 25 is in Midway City, which is in the City of Westminster's sphere of influence.*

The LHMP Team identified replacement and contents values for a majority of the facilities (based on the City's insured values); these represent the total potential loss value for each facility. If a facility is completely destroyed in a hazard event, the replacement and contents values indicate the cost to replace the facility. Depending on the year the facility was built, the cost to repair a damaged facility may be more than the replacement value. While the replacement and content values are used throughout this Plan to estimate potential losses, it is noted that the actual cost to recover from a hazard event will depend on the type and magnitude of

the event. The City did not conduct a risk assessment or potential losses for critical facilities that are outside of the City's control.

2.8 EVACUATION ROUTES

State Route 39 (Beach Boulevard), a State Operated Facility, runs north-south, and is one of the most important emergency access/evacuation routes for the City of Westminster. The route bisects the city and also runs through the center of Midway City. State Route 39 intersects State Route 22 at the north border of the city as well as I-405 to the south. Also, the Westminster Boulevard bridge at Bolsa Chica Road provides a route across the channel just to the west of Bolsa Chica Road at the northwest border of the city. Several routes with bridges across the Santa Ana River also provide for ingress and egress for the region, although located outside the city's boundaries. Several other key roadways could also be used as evacuation routes in the event of an emergency. Figure 2.3, Critical Facilities and Evacuation Routes, identifies the locations of critical facilities and designated evacuation routes in the City. The list of evacuation routes in Westminster includes the following:

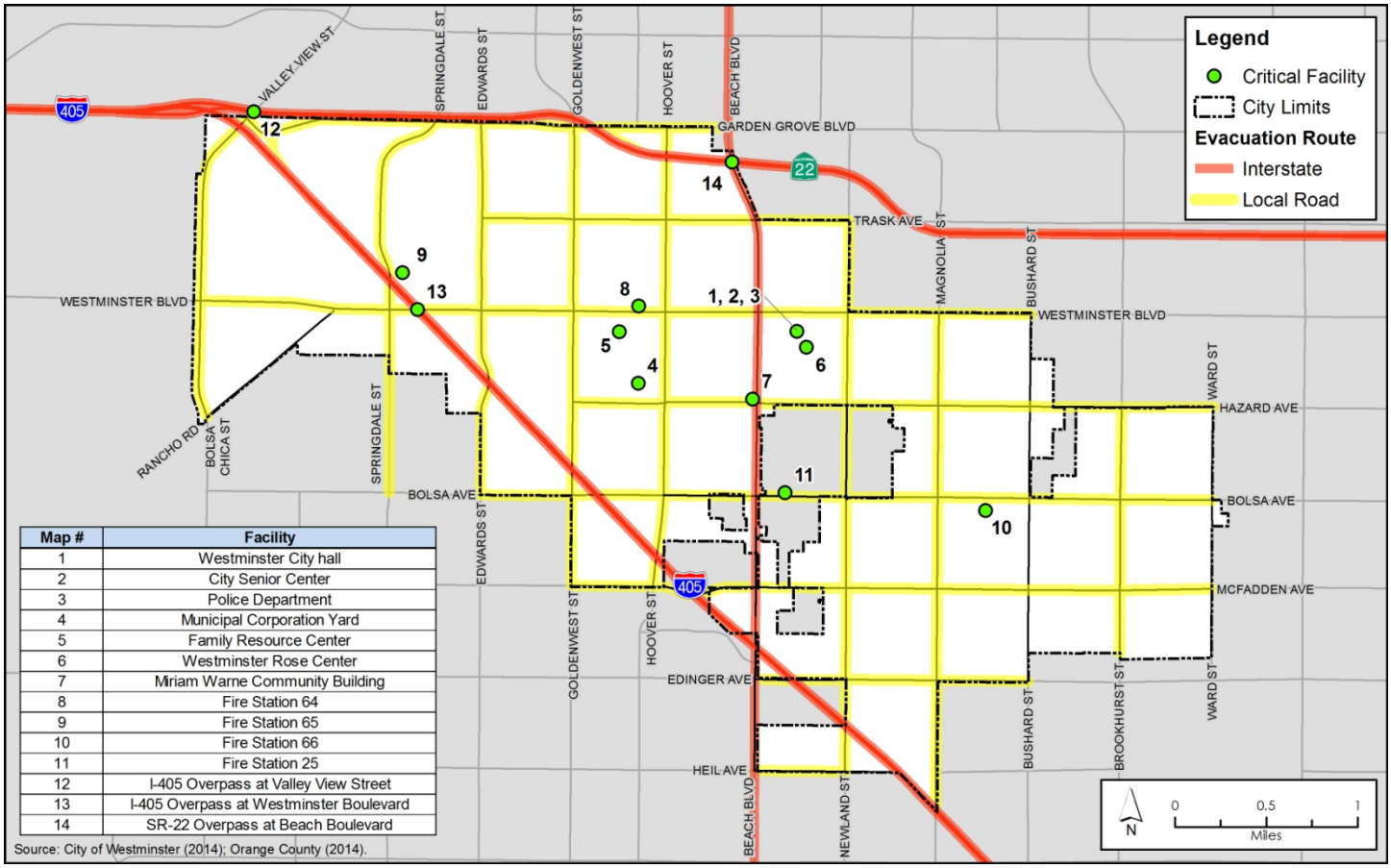
North-South Routes

- Bolsa Chica Road
- California State Route 39 (Beach Boulevard)
- Magnolia Street
- Brookhurst Street
- Goldenwest Street
- Springdale Street
- Edwards Street
- Hoover Street
- Newland Street
- I-405 (San Diego Freeway)

East-West Routes

- California State Route 22
- Garden Grove Boulevard
- Trask Avenue
- Westminster Boulevard
- Hazard Avenue
- Bolsa Avenue
- McFadden Avenue
- Edinger Avenue
- Heil Avenue

Figure 2.3: Critical Facilities and Evacuation Routes



Map #	Facility
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Source: City of Westminster (2014); Orange County (2014).

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CHAPTER 3 – HAZARDS ASSESSMENT

3.1 HAZARD IDENTIFICATION AND PRIORITIZATION

HAZARD IDENTIFICATION

Using the *County of Orange Hazard Mitigation Plan* (adopted October 2010) and the FEMA hazard mitigation planning guidance as a reference, the LHMP Team discussed a comprehensive list of natural hazards during the first milestone meeting on November 12, 2014. This discussion resulted in identification of the hazards that pose a potential risk to the City of Westminster. Table 3.1 summarizes the LHMP Team's discussion for each of the natural hazards and shows which were identified for inclusion in this LHMP. Hazards that have been excluded from further consideration are shaded gray in Table 3.1. This table is consistent with the hazards identified as part of FEMA's hazard mitigation planning guidance.

Table 3.1: City of Westminster Hazard Identification, 2014

List of Hazards	Identified in 2010 County Plan	Include in City LHMP	Discussion Summary
Agricultural Pests	No	No	There are no agricultural uses in the city.
Avalanche	No	No	Not applicable.
Coastal Erosion/Bluff Failure	No	No	Not applicable due to the distance from the coast.
Coastal Storm	No	No	Not applicable due to the distance from the coast.
Dam Failure	Yes	Yes	The city is susceptible to inundation caused by dam failure of Prado Dam along the Santa Ana River. The LHMP Team decided to include this hazard, given the potential impact to the City.
Disease and Pest Management	No	Yes	Vectors, such as mosquitoes, are a growing issue of concern in Orange County.
Drought	Yes	Yes	The City depends on groundwater and imported surface water, both of which are susceptible to drought.
Seismic Hazards (Ground Shaking and Liquefaction)	Yes	Yes	Westminster is located in an area susceptible to earthquake ground shaking and liquefaction.
Expansive Soils	No	No	Although the soils within the City have expansion potential, the City's Building and Safety Department has not experienced any issues with expansive soils to date. In addition, the Uniform Building Code effectively mitigates impacts that would occur if expansive soils were present. As a result this LHMP does not include expansive soils.
Extreme Heat	No	Yes	Extreme temperature events, such as heat waves, are especially hazardous in Mediterranean climates like those experienced in Westminster as residents are generally unprepared for the extremes.
Flood	Yes	Yes	Flooding in Westminster occurs as a result of surface water runoff from the mountainous areas northeast and southeast of the city.

List of Hazards	Identified in 2010 County Plan	Include in City LHMP	Discussion Summary
Hailstorm	No	No	There has been no significant damage from previous storms.
Hazardous Materials Spills	Yes	Yes	Properties in the city containing hazardous materials are medical/medical R&D facilities and pharmacies such as the Kindred Hospital Transitional Care Facility; automotive-related uses (car wash, repair facilities); industrial businesses (gas, welding and safety supply, etc.), and aviation-related businesses (electrical power systems, avionics and mechanical systems, etc.). The LHMP Team decided to include a discussion of this hazard given the amount of hazardous materials located within and transported through the City.
Hurricane	No	No	Not applicable.
Land Subsidence	Yes	No	Westminster has no historical occurrences of land subsidence.
Landslide and Mudflow	Yes	No	The City of Westminster is essentially flat and therefore is not exposed to landslide or mudflow hazards.
Human Caused Hazards	No	No	Except for hazardous materials spills, the intent of this plan is to focus on natural hazard risk, per FEMA requirements.
Severe Winter Storm	No	No	Not applicable.
Tornado	No	No	Tornados and water spouts are possible, but very rare. A discussion regarding severe weather has been provided and tornadoes are discussed within this profile.
Tsunami	Yes	No	Not applicable due to the distance from the coast.
Volcano	No	No	The city is not located within a region of active volcanism.
Wildfire	Yes	No	The City is urban, flat, and surrounded by other urban jurisdictions. There are no wildland urban interfaces in the city.
Wind	No	No	Regular wind does not cause significant damage.
Windstorm	Yes	Yes	The City is prone to severe windstorms (Santa Ana winds) that commonly cause tree falls or damage associated with falling limbs.
Sea Level Rise	No	No	Not applicable due to the distance from the coast.
Climate Change	No	Yes	Climate change is not profiled as a distinct hazard, but rather a phenomenon that could exacerbate hazards. Climate change will be considered as a factor for relevant identified hazards.

HAZARD PRIORITIZATION

The LHMP Team used a Microsoft Excel-based tool to prioritize the identified hazards by assigning each hazard a ranking based on probability of occurrence and potential impact. These rankings were assigned based on group discussion, knowledge of past occurrences, and familiarity with the City's infrastructure vulnerabilities. Four criteria were used to establish priority:

- Probability (likelihood of occurrence)
- Location (size of potentially affected area)
- Maximum Probable Extent (intensity of damage)
- Secondary Impacts (severity of impacts to community)

A value of 1-4 was assigned for each criterion. The four criteria were then weighted based on the LHMP Team's opinion of each criterion's importance. Table 3.2 presents the results and includes only those hazards that achieved a "medium" or "high" score. Table 3.3 provides additional detail regarding how the probability, affected area, and impact categories are weighted and how the total score is calculated for this ranking worksheet. Table 3.2 is consistent with the hazards identified by the LHMP team and differs in the following way from Table 3.1:

- Table 3.2 identifies liquefaction and seismic hazards separately.
- Table 3.2 identifies severe weather, which includes wind and rain related hazards.

Table 3.2: Westminster Hazard Ranking Worksheet

Hazard Type	Probability	Impact			Total Score	Hazard Planning Consideration
		Affected Area	Primary Impact	Secondary Impacts		
Drought	4	4	4	4	64.00	High
Seismic Hazards	4	4	4	4	64.00	High
Liquefaction	3	4	4	4	48.00	High
Flood	4	3	3	3	48.00	High
Hazardous Materials	3	2	4	4	38.40	Medium
Extreme Heat	3	3	3	3	36.00	Medium
Severe Weather (wind/rain)	3	3	3	3	36.00	Medium
Disease/Pest Management	2	4	2	2	22.40	Medium
Dam Failure	1	4	4	4	16.00	Medium

Note: Scores are based on a scale of 1 to 4, where 4 is the highest score, and 1 is the lowest score. See Table 3.3 for more information.

Note: Total score is based on an equation that weights categories by importance. See Table 3.3 for more information.

Table 3.3: Westminster Hazard Ranking Worksheet Legend

Probability	Importance	2.0
Based on estimated likelihood of occurrence from historical data		
Probability		Score
Unlikely (Less than 1% probability in next 100 years or has a recurrence interval of greater than every 100 years.)		1
Somewhat Likely (Between 1 and 10% probability in next year or has a recurrence interval of 11 to 100 years.)		2
Likely (Between 10 and 100% probability in next year or has a recurrence interval of 10 years or less.)		3
Highly Likely (Near 100% probability in next year or happens every year.)		4

Affected Area	Importance	0.8
Based on size of geographical area of community affected by hazard		
Affected Area		Score
Isolated		1
Small		2
Medium		3
Large		4

Primary Impact	Importance	0.7
Based on percentage of damage to typical facility in community		
Impact		Score
Negligible - less than 10% damage		1
Limited - between 10% and 25% damage		2
Critical - between 25% and 50% damage		3
Catastrophic - more than 50% damage		4

Secondary Impacts	Importance	0.5
Based on estimated secondary impacts to community at large		
Impact		Score
Negligible - no loss of function, downtime, and/or evacuations		1
Limited - minimal loss of function, downtime, and/or evacuations		2
Moderate - some loss of function, downtime, and/or evacuations		3
High - major loss of function, downtime, and/or evacuations		4

Total Score = Probability x Impact, where:
Probability = (Probability Score x Importance)
Impact = (Affected Area + Primary Impact + Secondary Impacts), where:
Affected Area = Affected Area Score x Importance
Primary Impact = Primary Impact Score x Importance
Secondary Impacts = Secondary Impacts Score x Importance

Hazard Planning Consideration			
Total Score	(Range)	Distribution	Hazard Level
0.0	12.0	0	Low
12.1	42.0	6	Medium
42.1	64.0	3	High

Notes: The probability of each hazard is determined by assigning a level, from unlikely to highly likely, based on the likelihood of occurrence from historical data. The total impact value includes the affected area, primary impact, and secondary impact levels of each hazard. Each level's score is reflected in the matrix. The total score for each hazard is the probability score multiplied by its importance factor times the sum of the impact level scores multiplied by their importance factors. Based on this total score, the hazards are separated into three categories based on the hazard level they pose to the communities: High, Medium, and Low.

Based on this ranking exercise with the LHMP Team and follow-up discussion with City staff, City staff confirmed the following identified hazards and corresponding planning considerations for this Plan (Table 3.4).

Table 3.4: Westminster Prioritized Hazards

Identified Hazard	Hazard Planning Consideration
Drought	High
Seismic Hazards	High
Liquefaction (Included in Seismic Hazards)	High
Flood	High
Hazardous Materials	Medium
Extreme Heat	Medium
Severe Weather (wind/rain)	Medium
Disease/Pest Management	Medium
Dam Failure	Medium

3.2 CLIMATE CHANGE CONSIDERATIONS

Climate change is expected to exacerbate existing hazards in the city. As such, the LHMP Team determined that it would be best to discuss climate change considerations throughout all applicable hazard profiles.

To address potential climate change impacts, the City has identified climate change considerations within each hazard profile. This discussion is intended to supplement, but not replace, the Probability of Future Occurrence discussion.

3.3 VULNERABILITY/RISK ASSESSMENT METHOD

The critical facilities listed in Section 2.7 were mapped in GIS and overlaid with mapped hazard areas to determine which assets are located within each hazard area. Hazard area and critical facility overlays were conducted for seismic hazards (liquefaction), flood, hazardous materials, and dam failure.

Hazard and critical facility overlays were not conducted for drought, extreme heat, severe storms, or disease/pest management. These hazards affect the entire city and therefore all facilities listed in the critical facility inventory could be potentially susceptible to damage from them.

Each hazard profile in the following section includes a Vulnerability/Risk Assessment section that presents the results of the method described above. Replacement and contents values for the facilities that fall within the hazard areas are tallied in each vulnerability table to estimate the total potential losses to each facility. It should be noted that the actual losses will depend on the type and extent of the hazard event.

3.4 HAZARD PROFILES

This section contains City of Westminster profiles for the hazards identified in Table 3.4 (drought, seismic hazards, flood, hazardous materials, extreme heat, severe weather, disease/pest management, and dam failure). For organizational purposes, liquefaction is examined as part of the seismic hazards section. The profiles

include a vulnerability analysis and risk assessment using the methods described in the Vulnerability/Risk Assessment Section.

3.4.1 DROUGHT

According to the California Office of Emergency Services, there are two common types of drought. The most commonly referred to form of drought is meteorological drought: a period of below normal precipitation. The second form of drought is hydrologic drought, a period of below average runoff from water sources. There is no established universal definition to identify when a drought begins or ends. The declaration of a drought is considered within the context of the needs for water resources.

Location and Extent of Drought

According to the City of Westminster 2010 Urban Water Management Plan, the City of Westminster's existing water supply is a blend of locally pumped groundwater and imported surface water.

The city's groundwater source (the Orange County Groundwater Basin) is managed by the Orange County Water District (OCWD) and comes from a natural underground aquifer that is replenished with water from the Santa Ana River, local rainfall, imported water storage, and the Groundwater Replenishment Program (GWR). The groundwater basin is 350 square miles in area and lies beneath north and central Orange County from Irvine to the Los Angeles border, and from Yorba Linda to the Pacific Ocean. Westminster has 10 active groundwater wells and two eight-million gallon reservoirs located in the city.

Some of the city's imported water originates in the San Francisco-San Joaquin Bay Delta in Northern California and is delivered via the State Water Project into Southern California. Other imported water originates from the Colorado River and is delivered via the Colorado River Aqueduct. Both import sources are brought to Westminster by the Municipal Water District of Orange County (MWDOC) via the Metropolitan Water District of Southern California (MET). MWDOC is one of 28 member agencies in MET's service area that in turn serves 300 retail agencies, such as the City of Westminster. Westminster has three active import water connections. The blend percentage of import vs. groundwater changes on an annual basis depending on the overdraft conditions of the basin.

Drought affects potable water supply in the city in two ways. First, localized drought reduces the amount of water that percolates into the Orange County Groundwater Basin while also increasing water demand for local landscaping needs. Second, drought conditions in the southwest US results in a reduced snowpack in the Colorado Rockies and the Sierra Nevada, which in turn, reduces the amount of surface water available for import into the city.

Past Occurrences

Although the definition of drought has varied over time and defining drought can be challenging across a large geography, California has experienced numerous severe droughts over the past century. The most severe drought on record began in 2012 and continues through the writing of this document (2015). During the current drought, much of the state, including the City of Westminster, is in a state of "exceptional drought." "Exceptional drought" is the most severe of five drought distinctions identified by the United States Drought Monitor. Table 3.5 identifies the historical droughts that have occurred in California from 1855 through the present. Figure 3.1 illustrates the severity of the current drought.

Table 3.5: Historic Droughts in California

Date	Area Affected	Notes
1827-1916	Statewide	Multiyear: 1827-29, 1843-44, 1856-57, 1863-64 (particularly extreme), 1887-88, 1897-1900, 1912-13.
1917-21	Statewide except central Sierra Nevada and north coast	Simultaneous in affected areas, 1919-20. Most extreme in north.
1922-26	Statewide except central Sierra Nevada	Simultaneous in effect for entire state only during 1924, which was particularly severe.
1928-37	Statewide	Simultaneously in effect for entire state, 1929-34. Longest, most severe in state's history.
1943-51	Statewide	Simultaneously in effect for entire state, 1947-49. Most extreme in south.
1959-62	Statewide	Most extreme in Sierra Nevada and central coast.
1976-77	Statewide, with the exception of southwestern deserts	Driest 2 years in state's history. Most severe in northern two-thirds of state.
1987-1992	Statewide	Moderate, continuing through 1989. Most extreme in northern Sierra Nevada.
2000-2002	Statewide	Most severe in southern California.
2007-2009	Statewide	12th driest three-year period on record at the time. Most severe in western San Joaquin Valley.
2012-2015	Statewide	Most severe California drought on record.

Sources: USGS. 1990. http://geochange.er.usgs.gov/sw/impacts/hydrology/state_fd/cawater1.html; Cook et al. 2009 - http://www.ldeo.columbia.edu/res/div/ocp/pub/cook/2009_Cook_IPCC_paleo-drought.pdf; CA Department of Water Resources. 2010. http://www.water.ca.gov/waterconditions/drought/docs/DroughtReport2010.pdf.

Probability of Future Occurrence

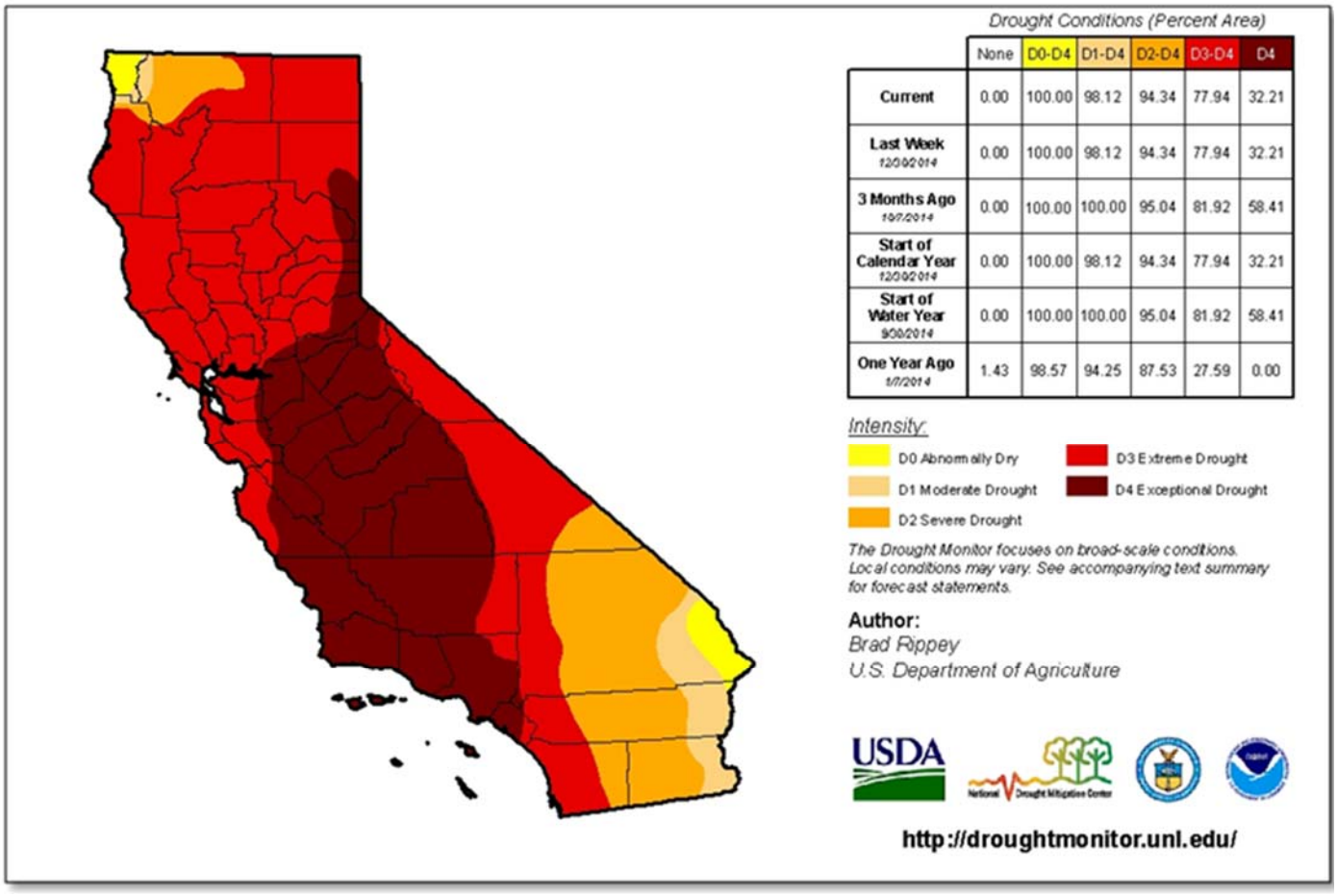
The historical prevalence of severe droughts in California as well as the severe drought conditions the city and the state are currently facing indicates that there is a high probability of future occurrence.

Climate Change Considerations

There is a close link between climate change and increased drought frequency and severity. Although precise localized impacts of climate change on water resources remain less certain, even in the absence of changes in precipitation patterns, higher temperatures resulting from increased greenhouse gas concentrations are expected to lead to higher evaporation rates, reductions in stream flow, and more frequent droughts.[3] Based on the current data and modeling, it is anticipated that future drought conditions will become more intense and reduce the City's adaptive capacity.

[3] Climate Change and Water Supply Security: Reconfiguring Groundwater Management to Reduce Drought Vulnerability. California Energy Commission's Climate Change Center White Paper. July 2012. http://www.energy.ca.gov/2012publications/CEC-500-2012-017/CEC-500-2012-017.pdf

Figure 3.1: California Drought Conditions, 2015



Vulnerability/Risk Assessment

As described above, the City of Westminster obtains potable water from locally pumped groundwater and imported surface water supplies. The city, and the county as a whole, is vulnerable to drought. The 2010 Urban Water Management Plan sets forth a path for the city to reduce per capita water use 20 percent by 2020, which would make the city more resilient to drought. Additionally, regional sources of water storage and water production through desalination are currently being considered. However, the entire city remains highly vulnerable to drought. Since droughts are not likely to cause physical or structural damage to critical facilities, potential losses were not quantified.

3.4.2 SEISMIC HAZARDS

This section describes seismic hazards, identifies the extent and location of hazard exposure in the city, and describes the city's vulnerability and risk. This section also identifies primary (ground shaking) and secondary (liquefaction) impacts associated with seismic hazards. Although liquefaction was identified as a distinct hazard in the hazard prioritization process, for organizational purposes it is included in this section.

Seismic Hazards Explanation

Seismic hazards occur as the result of sudden release of energy in the earth's crust. Caused by movement along fault lines, earthquakes vary in size and severity. The focus of an earthquake is found at the first point of movement along a fault line (which may be beneath the surface), and the epicenter is the corresponding point above the focus at the earth's surface.

Damage from an earthquake varies with the local geological conditions, the quality of construction, the energy released by the earthquake, the distance from the earthquake's focus, and the type of faulting that generates the earthquake. Earthquake-related hazards include primary impacts (ground shaking) and secondary impacts (liquefaction). This hazard profile discusses ground shaking and liquefaction, since these are the most likely impacts anticipated as a result of an earthquake.

Ground Shaking

Ground motion/shaking is the primary cause of damage and injury during earthquakes and can result in surface rupture, liquefaction, landslides, lateral spreading, differential settlement, building and infrastructure failure, which could lead to fire and other collateral damage. Typically, areas underlain by thick, water-saturated, unconsolidated material will experience greater shaking motion than areas underlain by firm bedrock, but, in some cases, topographic relief may intensify shaking along ridge tops, where landslides may develop.

Fires and structural failure are the most hazardous results of ground shaking. Most earthquake-induced fires start because of ruptured power lines and gas lines or electrically powered stoves and equipment. Structural failure is generally a result of age, quality, and type of building construction.

The size and magnitude (M) of an earthquake is measured in various ways. The Moment Magnitude scale determines the amount of ground displacement or shaking that occurs near the epicenter. This scale is shown in Table 3.6.

Table 3.6: Moment Magnitude Scale

Magnitude (M)	Earthquake Effects
3.4 or less	Recorded, but not felt or only felt by some at rest
3.5 to 4.9	Felt by most. Objects may be disturbed or broken.
5.0 to 5.9	Heavy furniture moved and plastic disturbed. Up to considerable damage in poorly built structures, up to slight to moderate damage in normal structures.
6.1-6.9	Considerable damage to ordinary buildings. Heavy furniture overturned
7.0-7.9	Considerable damage to specially designed structures, potentially including partial collapse. Buildings shifted off foundations. Rails bent.
8 or greater	Widespread to total damage. Few, if any, structures remain standing

The magnitude is a number that characterizes the relative size of an earthquake. Magnitude is based on measurement of the maximum motion recorded by a seismograph. Many scales, such as the Richter scale, do not provide accurate estimates for large magnitude earthquakes. Today the moment magnitude scale, (abbreviated as MMS; denoted as M_W or M) is preferred because it works over a wider range of earthquake sizes and is applicable globally. The moment magnitude scale is based on the total moment release of the earthquake. Moment is a product of the distance a fault moved and the force required to move it. It is derived from modeling recordings of the earthquake at multiple stations. Moment magnitude estimates are about the

same as Richter magnitudes for small to large earthquakes. But only the moment magnitude scale is capable of measuring M8 (read 'magnitude 8') and greater events accurately.

The Modified Mercalli Intensity Scale for Earthquakes shown in Table 3.7 measures ground shaking intensity in terms of perception and damage and takes into account localized earthquake effects. The amount of shaking experienced at different locations varies based on not only the overall magnitude, how far you are from the fault that ruptured in the earthquake, and whether you are on rock or thick valley deposits that shake longer and harder than rock.

Table 3.7: Modified Mercalli Intensity Scale for Earthquakes

Scale	Intensity	Earthquake Effects
I	Instrumental	Detected only on seismographs
II	Feeble	Some people feel it
III	Slight	Felt by people resting; like a truck rumbling by
IV	Moderate	Felt by people walking
V	Slightly Strong	Sleepers awake; church bells ring
VI	Strong	Trees sway; suspended objects swing; objects fall off shelves
VII	Very Strong	Mild alarm; walls crack; plaster falls
VIII	Destructive	Moving cars uncontrollable; masonry fractures; poorly constructed buildings damaged
IX	Ruinous	Some houses collapse; ground cracks; pipes break open
X	Disastrous	Ground cracks profusely; many buildings destroyed; liquefaction and landslides widespread
XI	Very Disastrous	Most buildings and bridges collapse; roads, railways, pipes and cables destroyed; general triggering of other hazards
XII	Catastrophic	Total destruction; trees fall; ground rises and falls in waves

Liquefaction

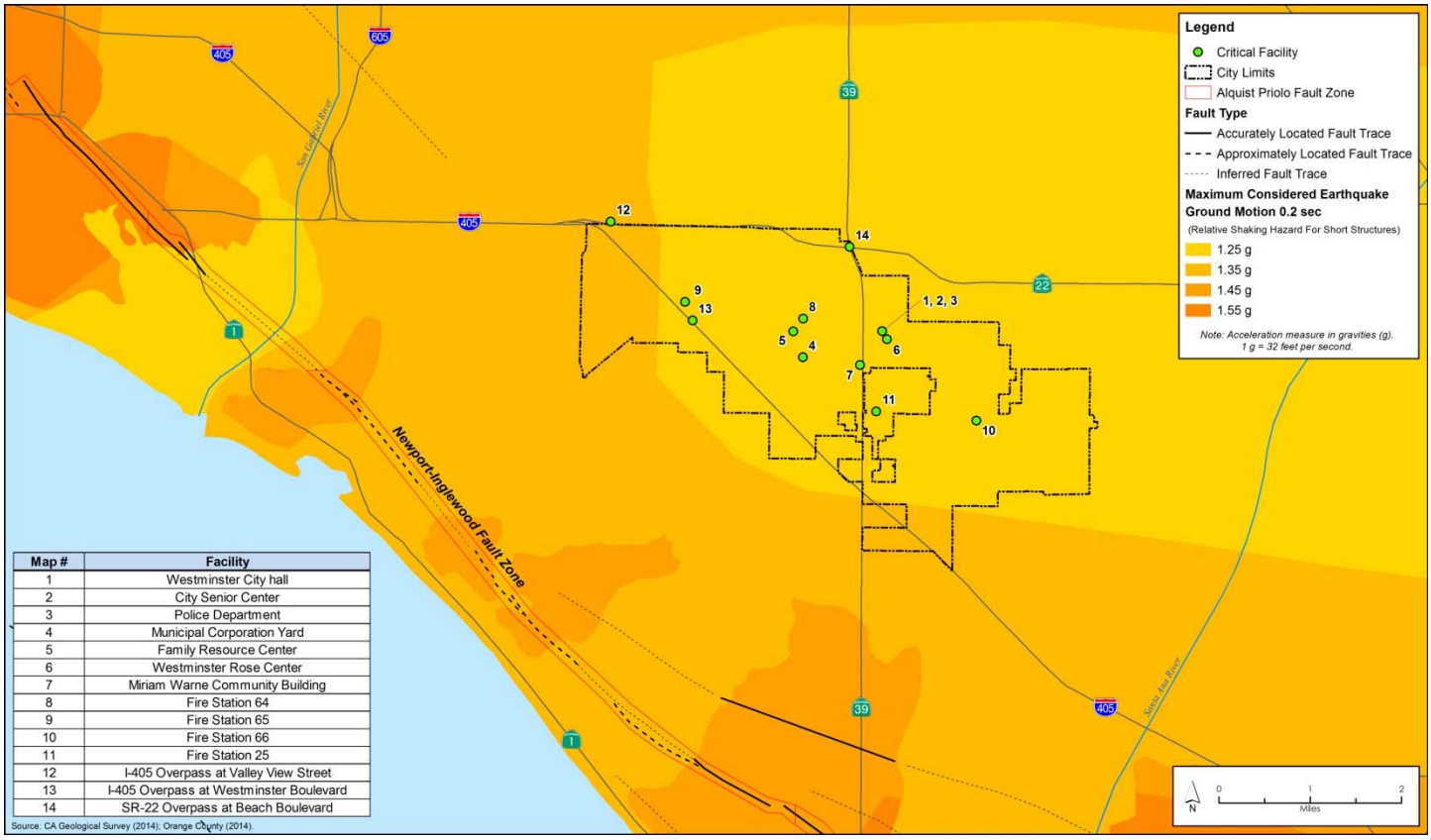
Liquefaction is the transformation of loose, water-saturated granular materials (such as sand and silt) from a solid to a liquid state. This results in the loss of soil strength and the soil's ability to support weight. Buildings and their occupants are at risk when the ground can no longer support these buildings and structures.

Hazard Profile

Location and Extent of Seismic Shaking

There are no active fault lines running through the City. However, seismic shaking from nearby faults could result in significant damage. Figure 3.2 identifies nearby active faults and the relative shaking hazard for structures in the city. According to the California Geological Survey, the entire city is susceptible to moderate ground shaking associated with an earthquake.

Figure 3.2: Active Fault Zones



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14	SR-22 Overpass at Beach Boulevard

Location and Extent of Liquefaction

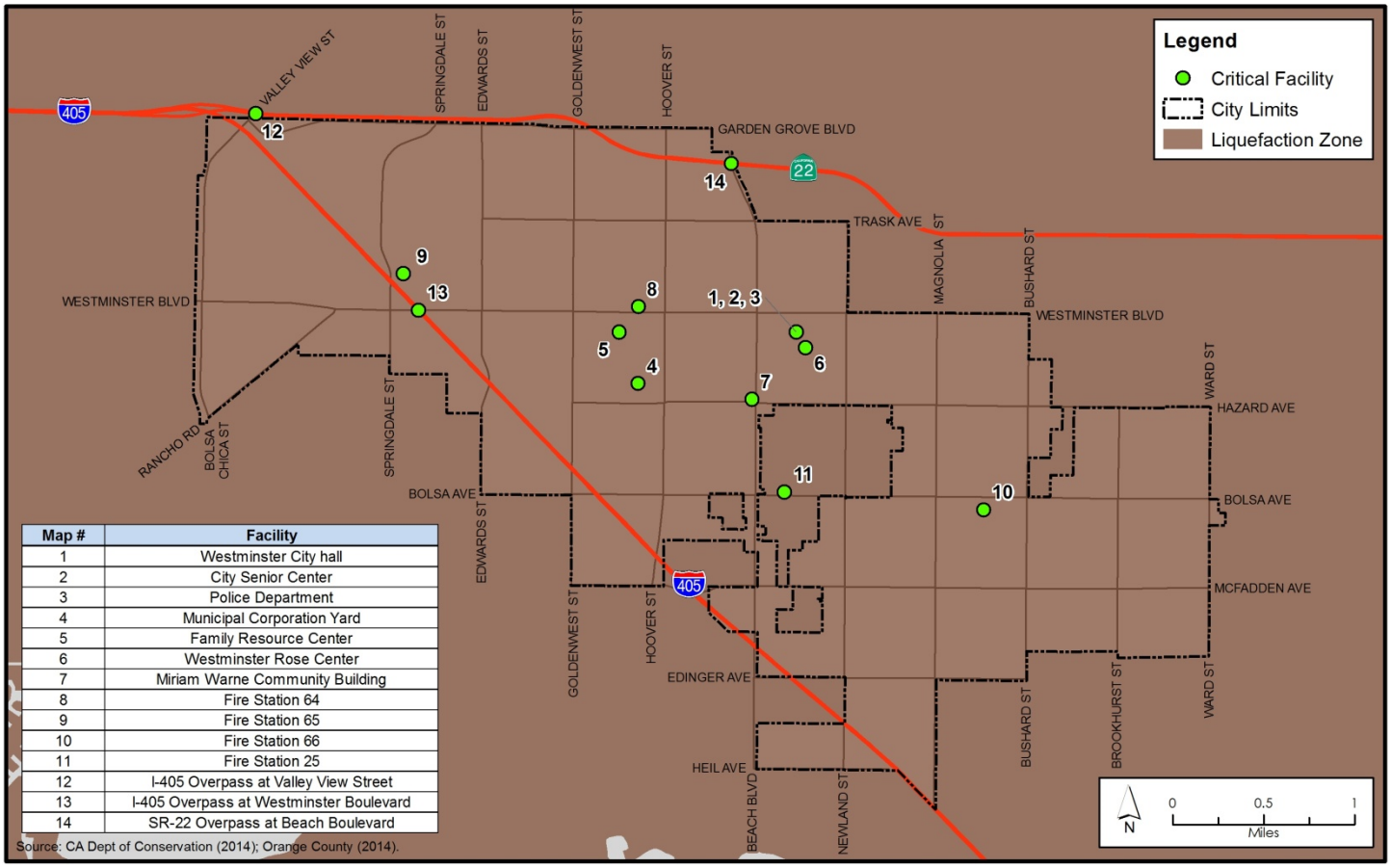
The City of Westminster is located in an area susceptible to liquefaction. The greatest potential damage and loss of life is likely to result from structural failure and collapse due to liquefaction. Liquefaction is a phenomenon in which the strength and rigidity of soil is diminished by earthquake shaking or other extreme pressure. This phenomenon has been responsible for tremendous amounts of damage in earthquakes around the world. The entire city is located in an area of high liquefaction potential. This condition is based on the potential for the following three required conditions for liquefaction to occur:

Loose Unconsolidated Soils – the City of Westminster is underlain by loose sandy and silty soils that exhibit liquefaction potential.

Shallow Groundwater – liquefaction occurs when shallow groundwater is present and the hazard is greatest when groundwater is within 50 feet or less from the ground surface. Current groundwater elevations within the City are approximately seven feet beneath the surface.

Strong Seismic Shaking – the City of Westminster is located in close proximity to active earthquake faults that can produce strong seismic shaking. Figure 3.3 presents the areas at risk to liquefaction in the City of Westminster.

Figure 3.3: Liquefaction Zone in Westminster



Map #	Facility
1	Westminster City hall
2	City Senior Center
3	Police Department
4	Municipal Corporation Yard
5	Family Resource Center
6	Westminster Rose Center
7	Miriam Warne Community Building
8	Fire Station 64
9	Fire Station 65
10	Fire Station 66
11	Fire Station 25
12	I-405 Overpass at Valley View Street
13	I-405 Overpass at Westminster Boulevard
14	SR-22 Overpass at Beach Boulevard

Past Occurrences – Seismic Shaking

Past seismic events indicate that the city has been free of major damaging earthquakes for at least 80 years. However, a number of historic earthquakes affecting Orange County, and Southern California in general, have impacted Westminster in varying degrees from nonstructural damage (toppling of building contents) to minor structural damage (cracks in swimming pools). Table 3.8 shows the historical earthquakes that have occurred in Southern California from 1855 through the present.

Table 3.8: Historic Earthquake Events

Date	Fault/Location	Impact/Property Damage
July 11, 1855	Newport-Inglewood	Magnitude 6.0. This earthquake was felt from San Bernardino to Santa Barbara.
January 9, 1857	San Andreas	Magnitude 7.9 (largest earthquake in California history). Heavy property loss at Ft. Tejon, one death, was felt from Marysville south to San Diego and east to Las Vegas, Nevada. Strong shaking lasted from 1 to 3 minutes.
June 21, 1920	Newport-Inglewood	Magnitude 4.9. Minor property damage to a limited area of Inglewood.

Date	Fault/Location	Impact/Property Damage
June 29, 1925	Santa Barbara	Magnitude 6.3. Property damage estimated at $8 million. 13 deaths, was felt as far north as the central coast region between Santa Maria and Nipomo, and as far east as Corona and San Bernardino.
March 11, 1933	Newport-Inglewood (Long Beach)	Magnitude 6.4, Intensity VIII. Property damage estimated at $40 million. 115 deaths, was felt almost everywhere in the 10 southern counties of California and at some points farther to the northwest and north in the Coast Range, the San Joaquin Valley, the Sierra Nevada, and the Owens Valley, as well as Baja, California.
October 21, 1941	Torrance-Gardena	Magnitude 4.8, Intensity VII. No deaths reported; property damage estimated at $100,000.
February 9, 1971	San Fernando (Sylmar)	Magnitude 6.6, Intensity XI. Property damage estimated at $505 million. 65 deaths, more than 2,000 injuries, felt throughout Southern California and into western Arizona and southern Nevada.
July 8, 1986	North Palm Springs	Magnitude 6.1, Intensity VII. Property damage estimated at $6 million. 40 injuries in the North Palm Springs area. The earthquake disrupted electrical and telephone service and caused failure of two pumping stations in the Metropolitan Water District.
October 1, 1987	Whittier Narrows	Magnitude 5.9, Intensity VI-VIII. Property damage estimated at $358 million. 8 deaths and several hundred injuries. A large aftershock registering magnitude 5.6 occurred three days later, causing one additional death and additional property damage.
January 17, 1994	Northridge	Magnitude 6.7, Intensity IX. Responsible for at least 61 deaths, 6,500 injuries, destroying/seriously damaging more than 1,000 buildings, and moderately damaging 11,000 structures throughout the Los Angeles Basin, and leaving 20,000 people homeless. Estimated damages as high as $20 billion; one of the costliest natural disasters in American history.
July 29, 2008	Chino Hills	Magnitude 5.5, Intensity VI. Felt at cities in Orange and Los Angeles Counties. No deaths, but considerable damage to numerous structures throughout the area.

Source: USGS Earthquake Hazards Program data. http://earthquake.usgs.gov/earthquakes/states/historical_state.php#california accessed 4-22-13.

Past Occurrences - Liquefaction

Prior instances of liquefaction have not occurred within the city; however, Westminster is situated primarily on soil with high liquefaction potential.

Probability of Future Occurrence

There are several major faults and fault systems within Southern California and in close proximity to the city, placing them in an area of high seismic risk and high probability of occurrence. Of these faults, the Newport-Inglewood Fault Zone presents the highest risk of damage to the City of Westminster. Table 3.9 identifies the active faults that could impact the City as a result of an earthquake. Earthquakes can cause severe damage over a long distance and, therefore, Southern California and Westminster remain at risk from seismic activity along these active faults.

To clarify the extent of future earthquake risk, a partnership between the United States Geological Survey, California Geologic Survey, and Southern California Earthquake Center was formed in September 2004 to provide a uniform forecast. Known as the Working Group on California Earthquake Probabilities, this group evaluated and systemized currently available historic and paleoseismic information to produce a probabilistic seismic hazards analysis to indicate the type of future earthquakes. One product of this analysis is a method of estimating the probability of ground shaking. The 30-year probability of an $M \geq 6.7$ earthquake on the southern segment of the San Andreas Fault in Southern California is 97 percent, and a probability of 50% that a M7.8 earthquake could occur.

The impact and potential losses of such an event reveal significant risk and would be devastating to not only the City of Westminster and Orange County, but the entire Southern California region. With the highly concentrated population of over 10 million and the heavy use of the transportation infrastructure, a major earthquake could virtually shut down large portions of Southern California.

Table 3.9: Active Faults in Proximity to Westminster

Fault Name	Description	Distance to Westminster	Magnitude Range
San Andreas Fault Zone	The San Andreas Fault is the dominant active fault in California; it is the main element of the boundary between the Pacific and North American tectonic plates. The longest and most publicized fault in California, it extends approximately 650 miles from Cape Mendocino in northern California to east of San Bernardino in southern California. This fault was the source of the 1906 San Francisco earthquake, which resulted in some 700 deaths and millions of dollars in damage. It is the southern section of this fault that is currently of greatest concern to the scientific community. Geologists can demonstrate that at least eight major earthquakes (Richter magnitude 7.0 and larger) have occurred along the Southern San Andreas Fault in the past 1200 years with an average spacing in time of 140 years, plus or minus 30 years. The last such event occurred in 1857 (the Fort Tejon earthquake). Based on that evidence and other geophysical observations, the Working Group on California Earthquake Probabilities (SCEC, 1995) has estimated the probability of a similar rupture (magnitude7.8) in the next 30 years (1994 through 2024) to be about 50%.	Approximately 47 miles (Northeast)	6.8-8.0
Newport-Inglewood Fault Zone	The Newport-Inglewood Fault is considered the second most active fault in California. It extends from the Santa Monica Mountains southeastward through the western part of Orange County to the offshore area near Newport Beach and was the source of the destructive 1933 Long Beach earthquake (magnitude 6.4).	Approximately 4 miles (West)	6.0-7.4
Elsinore Fault Zone	The Elsinore Fault is located in the northeast part of Orange County. This fault follows a general line easterly of the Santa Ana Mountains into Mexico. The main trace of the Elsinore Fault zone is about 112 miles long. The last major earthquake on this fault occurred in 1910 (magnitude 6.0), and the interval between major ruptures is estimated to be approximately 250 years. At the northern end of the Elsinore Fault zone, the fault splits into two segments: the 25 mile long Whittier Fault, and the 25 mile long Chino Fault.	Approximately 16 miles (Northeast)	6.0-7.5
San Jacinto Fault Zone	The San Jacinto Fault is located in Riverside, Imperial, and San Bernardino Counties. The interval between ruptures on this 130 mile long fault zone has been estimated by SCEC to be between 100 and 300 years, per segment. The most recent event (1968 magnitude 6.5) occurred on the southern half of the Coyote Creek segment.	Approximately 45 miles (Northeast)	6.5-7.5
San Joaquin Hills Thrust Fault	The San Joaquin Hills Fault is a recently discovered southwest-dipping blind thrust fault originating near the southern end of the Newport-Inglewood Fault close to Huntington Beach, at the western margins of the San Joaquin Hills.	Approximately 12 miles (Southeast)	Up to 7.3
Puente Hills Thrust Fault	The Puente Hills Fault is another recently discovered blind thrust fault that runs from northern Orange County to downtown Los Angeles. This fault is now known to be the source of the 1987 Whittier Narrows earthquake. Recent studies indicate that this fault has experienced four major earthquakes ranging in magnitude from 7.2 to 7.5 in the past 11,000 years, but that the recurrence interval for these large events is on the order of several thousand years.	Approximately 20 miles (Northwest)	7.2-7.5
Palos Verdes Fault Zone	The Palos Verdes Hills Fault is located off the coast of Huntington Beach. It starts north of Long Beach and extends south past Newport Beach where it is projected to join the Coronado Bank Fault Zone. It has two main branches and continues southward as the Palos Verdes-Coronado Bank Fault Zone. An issue of concern is the fault has the potential to cause shaking, liquefaction, and a local tsunami that would strike without sufficient warning time to evacuate the Orange County and Long Beach coastal areas.	Approximately 12 miles (Southwest)	6.0-7.0

The probability that liquefaction will occur in the future in Westminster is dependent on many factors including the intensity of ground shaking, location of the earthquake, and subsurface conditions (including groundwater elevation). For those areas of the city identified with a high and very high liquefaction potential, it should be anticipated that potential damage could occur under future earthquakes.

Climate Change Considerations

The link between climate change impacts and seismic hazards is indirect. One possible consideration is that anticipated changes to precipitation regimes and hydrological patterns could result in a change to groundwater levels. Since liquefaction is dependent on the presence of shallow subsurface water, an increase in groundwater levels could occur due to new precipitation patterns. The potential change in shallow subsurface water conditions could expand the potential liquefiable areas within the city, increasing the risk of future damage to additional structures in the city. In contrast, a reduction in precipitation as a result of climate change could reduce groundwater levels in the future, which could reduce liquefaction potential in the city.

Vulnerability/Risk Assessment

Based on the City's proximity to an active earthquake fault zone (Figure 3.2), and the extent of liquefaction potential throughout the entire city (Figure 3.3), Table 3.10 identifies the critical facilities located in areas of high seismic shaking and liquefaction potential for three earthquake scenarios. The first two scenarios estimate a 6.9 magnitude earthquake along the Newport Inglewood Fault with liquefaction and a 6.6 magnitude earthquake along the San Joaquin Hills Fault with liquefaction. The third estimates losses form a 7.8 magnitude earthquake along the San Andreas Fault with liquefaction, as modeled in the California Shakeout scenario. Although seismic shaking from the San Andreas Fault would have local impacts and severe regional impacts, the seismic shaking damages from the Newport-Inglewood Fault and the San Joaquin Hills Fault would likely be more substantial due to their proximity to the City. Appendix C provides a detailed description of the methods used to estimate potential losses for each scenario.

Regarding liquefaction potential, analysis of the liquefaction overlay shows that the populated area affected by liquefaction is a total of 6,400 acres. A total of 89,701 residents (100 percent of the City's total population) could be affected in the event of liquefaction. In addition, 22,532 employees, or 100 percent of the people that work in Westminster, could be affected. Table 3.20 at the end of the chapter provides a summary of residents affected by hazard.

Utility Concerns

Seismic shaking and liquefaction from earthquakes can cause major damage to nearly all utility systems, both aboveground and underground. Utility poles may fall, cutting off electrical and telephone service. Gas lines may rupture, causing fires. Water lines may rupture and prevent access to potable water. Any one or a combination of these occurrences would prevent the response and recovery process from taking place and would place lives and property at risk. Those utilities located within or in close proximity to faults and liquefaction areas are potentially susceptible to these hazards and failure of these facilities could further exacerbate emergency response and recovery.

Table 3.10: Westminster Critical Facilities Susceptible to Seismic Shaking and Liquefaction

Map #	Facility	Replacement Value	Contents Value	Potential Loss		
				M6.9 Newport-Inglewood Fault with Liquefaction	M6.6 San Joaquin Hills Fault with Liquefaction	M7.8 ShakeOut Scenario with Liquefaction
1	Westminster City Hall (inc. Water Dept.)	7,200,000	2,100,000	975,700	915,500	120,200
2	City Senior Center	5,100,000	600,000	1,258,900	1,173,000	346,800
3	Police Department	56,200,000	4,200,000	5,777,700	5,487,500	452,100
4	Municipal Corporation Yard/Police Department Training Facility †	23,000,000	4,000,000	1,476,400	1,282,600	136,200
5	Family Resource Center †	2,200,000	200,000	174,400	98,500	20,000
6	Westminster Rose Center	13,400,000	1,100,000	1,470,600	1,380,500	135,600
7	Miriam Warne Community Building †	4,000,000	100,000	173,900	122,700	30,800
8	Fire Station 64	3,900,000	12,000	510,600	291,000	44,900
9	Fire Station 65	1,000,000	6,000	71,400	48,700	5,300
10	Fire Station 66	800,000	6,000	83,500	99,200	29,400
11	Fire Station 25	500,000	0	77,500	58,300	5,400
12	I-405 Overpass at Valley View Street	N/A*	N/A*	N/A	N/A*	N/A*
13	I-405 Overpass at Westminster Boulevard	N/A*	N/A*	N/A	N/A*	N/A*
14	SR-22 Overpass at Beach Boulevard	N/A*	N/A*	N/A	N/A*	N/A*
	Total Potential Losses	117,300,000	12,324,000	12,050,600	10,957,500	1,326,700

Replacement value information based on City insured values for each facility.

** Replacement value, contents value, and potential losses were not estimated for overpasses*

† The values of these facilities were updated after the preparation of the HAZUS potential loss analysis. The potential loss values have been adjusted to reflect these updated values. The analyses for these facilities may not be consistent with the HAZUS Risk Assessment presented in Appendix C

3.4.3 FLOOD HAZARDS

Flood Hazard Explanation

During a flood, excess water from rainfall or storm surge accumulates and overflows onto stream banks, beaches, and adjacent floodplains. Floodplains are lowlands adjacent to rivers, lakes, and oceans that are subject to recurring floods. Several factors determine the severity of floods, including rainfall intensity and duration; creek and storm drain system capacity, and the infiltration rate of the ground.

A flood occurs when a waterway receives a discharge greater than its conveyance capacity. Floods may result from intense rainfall, localized drainage problems, or failure of flood control or water supply structures such as culverts, levees, dams, or reservoirs. Floods usually occur in relation to precipitation. Flood severity is determined by the quantity and rate at which water enters the waterway, increasing volume and velocity of

water flow. The rate of surface runoff, the major component of flood severity, is influenced by the topography of the region as well as the extent to which ground soil allows for infiltration in addition to the percent of impervious surfaces.

Floodwaters can carry large objects downstream with a force strong enough to destroy stationary structures such as homes and bridges and break utility lines. Floodwaters can also saturate materials and earth resulting in the instability, collapse, and destruction of structures as well as the loss of human life.

Orange County is susceptible to heavy rains and flood inundation. Some of the heaviest rains ever recorded on the west coast of North America occurred in Southern California. In the latter half of the twentieth century, enormous public work projects were completed, which served to mitigate flood damage across the region.

The City of Westminster is located within the alluvial plains of the San Gabriel and Santa Ana Rivers. The San Gabriel River is located approximately 3 miles to the west of the western boundary of the city and the Santa Ana River is located approximately 2 miles to the east of the eastern boundary. The city can be exposed to property damage and public safety hazards from overbank flooding of the Santa Ana River. Flooding is also a concern along the City's storm drainage channels and in identified areas of the city that lack inlet or drain capacity.

The coastal plain has a long history of flood problems associated with the drainages of the Santa Ana and San Gabriel Rivers. According to FEMA, approximately 5 percent of the city is within the 100-year flood zone and much of this area is adjacent to existing channels. Recently completed work in the city includes improvements to the Westminster channel between Magnolia and Brookhurst, and improvements to the East Garden Grove/Wintersburg Channel. These improvements aim to reduce the amount of out-of-bank flooding which occurs along this channel.

Flood Hazard Profile

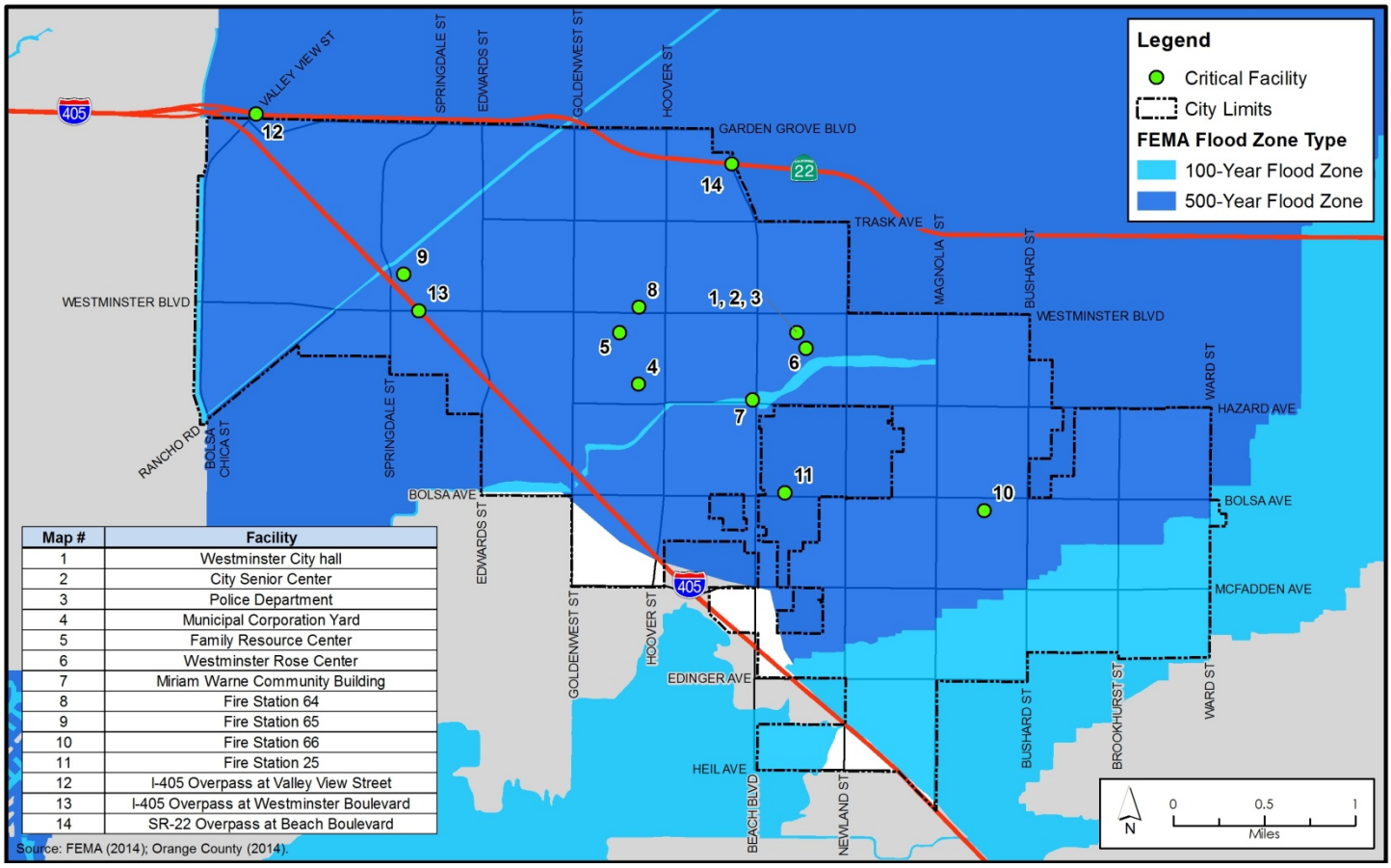
Location

The Santa Ana River flows through Orange County to the Pacific Ocean and is the county's greatest flood threat. Portions of the City of Westminster are prone to urban flooding, also referred to as ponding. While urban flooding is not a major problem in the city, it is one that requires ongoing maintenance of existing storm drains and flood control channels. Debris accumulation in storm drains and flood control channels is one of the largest maintenance problems for the city. Low-lying areas of the city are particularly susceptible to localized urban flooding. In recent years, the County made improvements to the flood control channel on Hazard Avenue, just west of Beach Boulevard, which eliminated many flooding issues on surface streets. The City also installed new storm drain systems in the area of Pacific and 10th Street, and Richardson Way and 19th Street which eliminated a majority of the surface flooding issues. In times of heavy rain there may still be some localized flooding, but not as much as previously occurred due to these system upgrades.

Extent

The urban flooding areas described above are considered to be a hazard only to their specific location and are not expected to threaten or endanger the lives of persons in the surrounding areas; therefore, the hazard is considered to be moderate. Figure 3.4 identifies flood zones in the City, as identified by FEMA. According to the FEMA maps for Orange County, the entire city, except for a small portion in the southeast, is within the 500-year flood zone. Parts of the southeastern potion of the city, as well as areas along waterways, are within the 100-year flood zone.

Figure 3.4: Flood Hazard Zones



Map #	Facility
1	Westminster City hall
2	City Senior Center
3	Police Department
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5	Family Resource Center
6	Westminster Rose Center
7	Miriam Warne Community Building
8	Fire Station 64
9	Fire Station 65
10	Fire Station 66
11	Fire Station 25
12	I-405 Overpass at Valley View Street
13	I-405 Overpass at Westminster Boulevard
14	SR-22 Overpass at Beach Boulevard

Past Occurrences

California has a chronic and destructive flood history. Out of 72 federally declared disasters in the state between 1950 and 2000, half were flood-related. Westminster and other cities in Orange County have suffered from significant flooding events over the years. Many of these events have been catalysts to changing the way communities address flood conditions and mitigation of impacts. A significant flood in 1938 within the County is considered to be the catalyst for the construction of the Prado Dam, which is now part of the Army Corps of Engineers flood protection program along the mainstem of the Santa Ana River.

More specific to the City of Westminster, in September 1998, a municipal water storage unit in Westminster failed, collapsing 12 feet of a 100,000-gallon tank. The flow of water from the tank destroyed most of the facility as well as several private residences. Additionally, approximately 30 more homes were inundated with water and silt. Through the Public Works Mutual Aid Agreement, the County of Orange Public Works Department (along with several neighboring jurisdictions) assisted in the clean-up and temporary repair of the areas impacted. Although this event did not occur as a result of a natural phenomenon,

Table 3.11 identifies past flood events affecting Orange County from 1950 through 2012.

Table 3.11: Orange County Flood Events

Year	Disaster Declaration #	Event	Deaths and/or Injuries [1]
1950	OCD 50-01	Flooding	9 deaths
1955	DR-47	Flooding	74 deaths
1958	-	Severe storms	13 deaths, multiple injuries
1969	DR-253	Severe storms	47 deaths, 161 injuries
1978	DR-547	Coastal storms, mudslides, and flooding	14 deaths, 21 injuries
1980	DR-615	Severe storms, mudslides, and flooding	N/A
1982-83	DR-677	Coastal storms, floods, slides, and tornadoes	N/A
1988	DR-812	Severe storms, high tides, and flooding	N/A
1992	DR-935	Snow storm, heavy rain, high winds, flooding, and mudslide	5 deaths
1992	DR-979	Severe storm, winter storm, mud & landslides, and flooding	20 deaths, 10 injuries
1993	DR-1005	Fires, mud & landslides, soil erosion, and flooding	4 deaths, 162 injuries 2
1995	DR-1044	Severe winter storms, flooding, landslides, and mud flows	11 deaths
1995	DR-1046	Severe winter storms, flooding, landslides, and mud flows	17 deaths
1997	97-04	Flooding	N/A
1998	DR-1203	Severe storms	17 deaths
2008	DR-1577, GP2005-01	Severe storms	N/A
2005	DR-1585	Severe storms, flooding, landslides, and mud and debris flows	N/A
2010	DR-1952	Severe storms	N/A

1. Number of deaths and/or injuries reported statewide

2. Deaths and injuries total include those caused by other elements of this disaster

Source: California 2013 State Hazard Mitigation Plan. http://hazardmitigation.calema.ca.gov/plan/state_multi-hazard_mitigation_plan_shmp.

Probability of Future Occurrence

FEMA defines flood zones based on the probability of occurrence, expressed in a percentage of the change of a flood of a specific extent occurring in any given year. For areas located within the 100-year flood zone, there is a 1 percent chance in a given year that this area will be inundated by flood waters. For areas located within the 500-year flood zone, this probability decreases to 0.2 percent.

Climate Change Considerations

Although Southern California is likely to experience a decrease in overall precipitation levels due to climate change, the region is also expected to see an increase in the number of extreme precipitation events. A meteorological phenomenon known as the "atmospheric river," a narrow stream of extremely moist air, is frequently responsible for the more intense storms that strike California. Atmospheric rivers generally deliver high levels of precipitation, up to 50 percent of the state's total precipitation in any given year.

Some recent studies indicate that atmospheric rivers may strengthen as a result of climate change. This is expected to lead to an increase in the number of storms caused by atmospheric rivers. Additionally, there is

some indication that the most powerful atmospheric river storms will increase in intensity. Although there are no specific flooding projections for the Westminster, flood events are expected to become more frequent, and it is possible that the areas subject to flooding could expand.

Vulnerability/Risk Assessment

As discussed above and as shown in Figure 3.4, nearly the entire city is located within the 500-year flood zone, with portions to the south located in the 100-year flood zone. All 14 critical facilities are located in the FEMA 500-year flood plains, with Facility 7 also located within a 100-year flood plain. Appendix C provides a detailed description of the flood loss estimations based on FEMA's HazUS software. These estimated losses are intended to inform the City of anticipated community losses in addition to the loss identified for critical facilities in Table 3.12.

Table 3.12: Westminster Critical Facilities Located in a 100-Year Flood Zone

Map #	Facility	Replacement Value	Contents Value	Potential Loss
7	Miriam Warne Community Building	4,000,000	100,000	4,100,000
	Total Potential Losses	4,000,000	100,000	4,100,000

Replacement value information based on City insured values for each facility.

Analysis of the flood zones "AE" and "X" overlays shows that the populated area within 500 feet of a 100-year flood zone is a total of 1,570 acres. A total of 20,405 residents (23 percent of the city's total population) would be affected in the event of a flood not related to dam failure inundation. In addition, 9,130 employees, or 41percent of the people that work in Westminster, could be affected. Table 3.20 at the end of the chapter provides a summary of residents affected by hazard.

As of November 2015, Westminster had 1,030 structures enrolled in the National Flood Insurance Program (NFIP). Most (922, or 89.5 percent) were single family homes, with a smaller number of enrolled multifamily and nonresidential buildings. NFIP has paid losses of $445,281 to Westminster property owners, of which 96.4 percent has gone to single family homes and the remaining payments have gone to multifamily property owners.

Utility Concerns

Significant damage can occur to utilities during flooding events. When water rushes through a City in this way, it takes everything in its path, which could include any aboveground infrastructure such as electricity line poles and traffic signal control boxes. The water sometimes mixes with sediment, oil, and/or sewage, which can impact roads, block storm drains and further exacerbate flood damage. Infrastructure located underground may be damaged due to inundation or could be exposed, requiring repair or reconstruction. Ultimately utilities located within flood prone areas should be designed and constructed to accommodate these concerns when feasible. For communities where above ground infrastructure is located, flood proofing techniques should be identified to ensure continued operations during flood events.

3.4.4 HAZARDOUS MATERIALS

"Hazardous materials" covers a large number of substances that are a danger to the public. These include toxic metals, chemicals, and gases; flammable and/or explosive liquids and solids; corrosive materials; infectious substances; and radioactive materials. The City of Westminster Municipal Code Chapter 8.31 requires that any person who uses or handles a hazardous material must semiannually submit a completed disclosure form to the fire department, and that any person who for the first time becomes a user or handler of any hazardous material must submit a completed disclosure form to the fire department within 30 days of becoming a user or handler. The fire department may specify in writing such other times that the submittal of the disclosure form may be necessary. Any person who fails to file a disclosure form within the time limits set forth shall pay such penalty for such late filing as established pursuant to Section 8.31.090. Upon receipt of a disclosure form, the fire department shall maintain files on all disclosure forms received. Subject to the provisions of Section 8.31.110, these files shall be open to the public during normal business hours.

In addition to the immediate risk to life safety, public health, and air quality, the potential for water source contamination, and the potential environmental impacts of accidental hazardous materials releases and toxic substances, there is also concern over the long-term public health and environmental impacts that may result from the sustained use of or exposure to certain substances. An incident could result in the evacuation of a few people, a section of a facility, or an entire neighborhood.

Hazard Profile

Location and Extent

Statewide, hazardous material incidents are generally minor but some did cause significant impacts such as injuries, evacuation, and the need for cleanup. Figure 3.5 shows Hazardous Materials Locations in Westminster, which are properties in the city containing hazardous materials. These facilities include medical research and development facilities; pharmacies; automotive-related businesses; and industrial businesses. One area in the city contaminated by toxic waste was added to the federal Superfund list of the nation's most dangerous dump sites in October 1991. The contamination was the result of dumping of oil refinery sludge that occurred in the 1930s. This site was removed from the Superfund list in 2004, following cleanup efforts. The site is located in a particularly sensitive residential 73-home neighborhood at Sowel Avenue, east of the I-405 freeway near Westminster Mall.

In addition to fixed locations within the City, numerous roadways as well as underground pipelines are used to transport hazardous materials within the City. Accidents involving vehicles conducting this transport or damage to pipelines could also cause a release of materials and impact residents and businesses. One concern in particular regarding hazardous materials spills is the potential for chemicals and substances to migrate into the groundwater table. The city relies significantly on groundwater pumped from local wells for its supply. Migration of hazardous materials into the aquifer could impact the city's ability to supply water to its customers.

Past Occurrences

Table 3.13 identifies 94 spills in Westminster as documented by the California Office of Emergency Services Regional Information Management System (RIMS) between 1993 and the end of 2014.

Figure 3.5: Hazardous Materials Locations

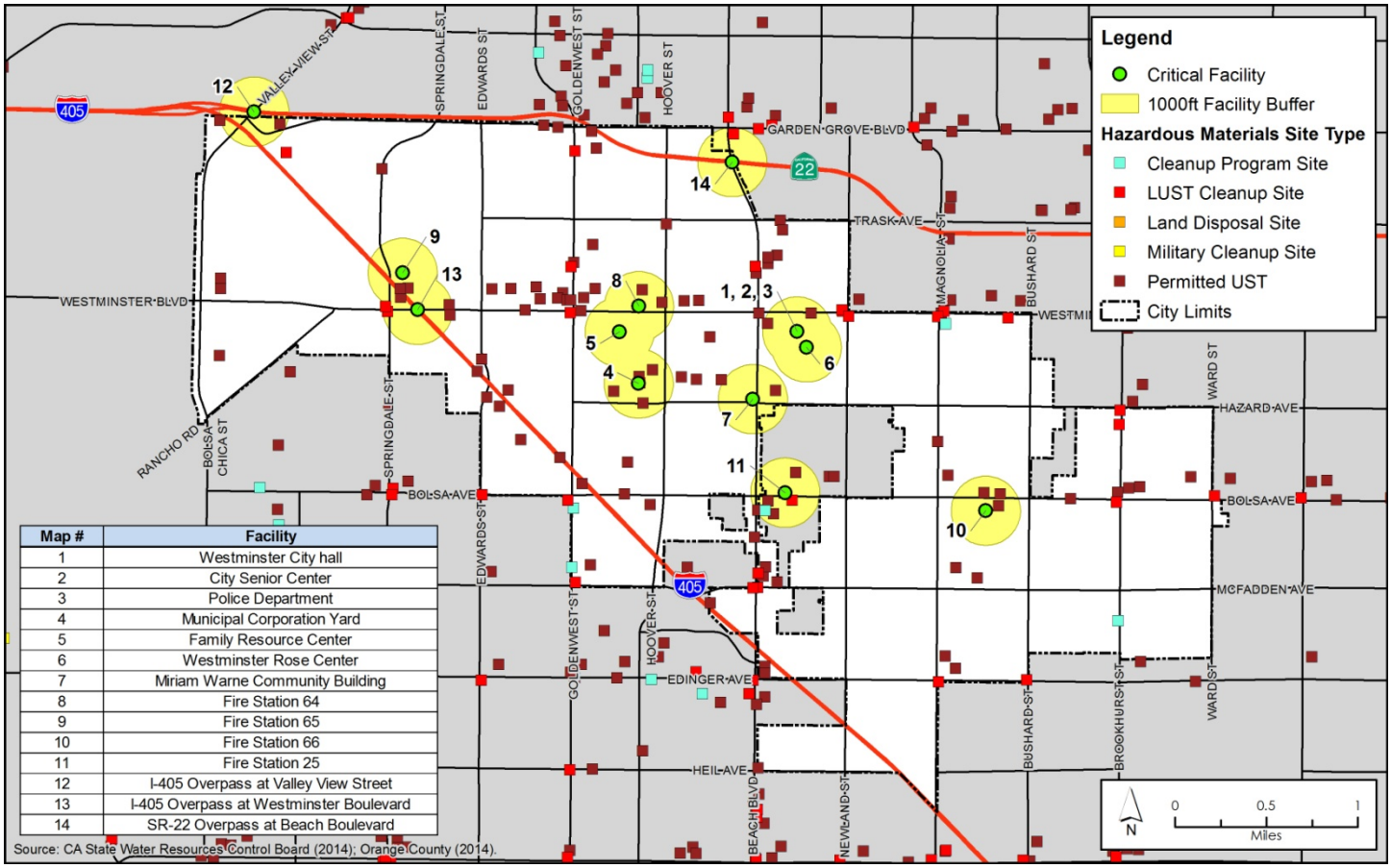


Table 3.13: RIMS Spill Database for Westminster

Date Notified	Substance	Location
2/2/1993	Gasoline	5800 Westminster Boulevard
1/16/1994	Crude	7801 21st Street
9/10/1996	Gasoline	6322 Westminster Avenue
7/31/1997	Gasoline	6311 Westminster Avenue
12/29/1997	Hydrocarbons	13982 Bolsa Chica Road
6/11/1998	Round Up/Surtlan/goal/and a dye	15072 Old Bolsa Chica Road
12/31/1998	Muriatic Acid	S/B I-405 South of Springdale Street
1/12/1999	Not released	Hazard Avenue at Hoover Street
7/22/1999	Diesel	N/B I-405 just south of Valley View Street
2/16/2000	Water Based Paint	Intersection of Eallecito Avenue and Milan Street
2/21/2000	Mineral Oil	6972 Garden Grove Boulevard
3/3/2000	Muriatic Acid	1025 Westminster Mall
5/5/2001	Unleaded Automotive Gasoline	SW corner of Westminster Boulevard and Newland
6/9/2001	Sewage	8602 Westminster Boulevard

Date Notified	Substance	Location
6/14/2001	Hydrogen Chloride Gas	14550 Brookhurst Street
7/24/2001	Sewage and Grease	14530 Brookhurst Street
8/12/2001	Mineral Oil	13591 Sioux
8/12/2001	Mineral Oil	13631 Sioux
8/18/2001	Hydrogen Chloride Gas	15161 Weststate Street
8/29/2001	Hydrogen Chloride	14916 Dillow Street
10/13/2001	Diesel	E/B SR-22 just west of Beach Boulevard
1/22/2002	Mineral Oil	16310 Zenith
7/9/2002	Gasoline	S/B I-405 at Springdale
8/23/2002	Unknown Odor	Bolsa Chica Boulevard at Rancho
1/4/2003	Sewage	9000 block of Tree Circle
1/27/2003	Fuel	Exxon Station #18060 at Beach Boulevard
2/8/2003	Gasoline	6311 Westminster Avenue
7/30/2003	Goal coat slurry seal	NW corner of Westminster Boulevard and Goldenwest Street
8/15/2003	Sewage	9681 Bolsa Avenue
9/7/2003	Water and food grease	15430 Brookhurst Street
9/28/2003	Gasoline	13441 Beach Boulevard
10/3/2003	Gasoline	13441 Beach Boulevard
10/7/2003	Gasoline	13441 Beach Boulevard
10/22/2003	Sewage	6101 Choctaw Street
2/28/2004	Mineral Oil	15211 Coronado
3/15/2004	Non PCB Mineral Oil	Corner of Edwards and Homer Street
3/28/2004	Mineral Oil	5160 Piccadilly Circle
6/16/2004	Unknown	15151 Goldenwest Close
6/28/2004	Water with Sediment	14306 Bach Boulevard
7/3/2004	Sewage	13856 Milton Street
8/26/2004	Restaurant Grease	9066 Bolsa Avenue
11/10/2004	Mineral Oil	7300 Fenwick
5/8/2005	Unknown PBC Mineral Oil	6221 Glacier Drive
5/17/2005	Sewage	Bolsa at Dellow
5/25/2005	Gasoline	13441 Beach Boulevard
5/28/2005	Sewage	6194 Chinook
5/31/2005	Gasoline	13441 Beach Boulevard
6/3/2005	Gasoline	13441 Beach Boulevard
7/13/2005	Mineral Oil	12930 Court Street
7/22/2005	Odor similar to Natural Gas	Goldenwest at McFadden
10/18/2005	Sewage	13192 Edward Street
11/5/2005	Sewage	1636 Goldenwest

Date Notified	Substance	Location
4/16/2006	Sewage	Bolsa and Pacific
6/27/2006	PPM 50-100 PCB Mineral Oil	7351 Fenwick Lane
8/2/2006	Hydraulic Fluid	Goldenwest Boulevard and Garden Grove Boulevard
1/22/2007	Unknown PCB Mineral Oil	Brookhurst and Bishop
2/23/2007	Anti-freeze	Westminster Gateway Shopping Center at Beach and Trask
4/23/2007	Sewage	9372 Oasis
8/6/2007	Mineral Oil	I-405 at Goldenwest
10/29/2007	Sewage	1300 block of Trask and Edward
2/27/2008	Sewage	Jackson and Westminster
2/29/2008	Raw Sewage	13331 Beach Boulevard
3/8/2008	Sewage	12005 Beach Boulevard
3/10/2008	Mineral Oil	10192 Arundel Avenue
6/16/2008	Mineral Oil	7455 Fenwick Avenue
10/10/2008	Sewage	13072 Edwards Avenue
12/15/2008	Mineral Oil	7541 Baylor Drive
1/3/2009	Sewage	Moran at Bolsa
1/21/2009	Sewage	14221 Edward Street
7/14/2009	Natural Gas	Goldenwest Street and Hood Street
7/15/2009	Raw Sewage	7032 Natal Street
11/24/2009	Diesel	13441 Beach Boulevard
1/11/2010	Sewage	14081 Magnolia
1/24/2010	Sewage	9342 Oasis Avenue
8/1/2010	Gasoline	13441 Beach Boulevard
11/30/2010	Raw Sewage	8652 Oasis
12/12/2010	Sewage	Bushard at Madison
1/25/2011	Mineral Oil	14911 Moran
3/8/2011	Sewage	9727 Bolsa Avenue
5/29/2011	Sewage	Intersection of Hesley Street and Milton Street
6/9/2011	Unknown Oil	7351 Fenwick Lane
8/9/2011	Sewage	8340 Wells
9/4/2011	Sewage	8675 Brook Drive
11/22/2011	Photo Processing Chemicals	7351 Hazard Avenue
6/12/2012	Unknown PCB Mineral Oil	7033 Lisa Lane
8/2/2012	Sewage	6381 Kiowa Road
12/2/2012	Sewage	13841 Richardson Way
3/27/2013	Hydraulic Oil	15252 Goldenwest
5/10/2013	Photo Processing Chemicals	1000 Hazard Avenue
10/15/2013	Mercury	7300 Fenwick Lane

Date Notified	Substance	Location
11/4/2013	Mineral Oil	Newland Avenue and Whitley Avenue
4/1/2014	Motor Oil	8911 Pinehurst Circle
5/15/2014	Mineral Oil	7051 Natal Drive
10/18/2014	Transmission Fluid/Motor Oil	N/B I-405 North of Springdale

Source: http://www.calema.ca.gov/HazardousMaterials/Pages/Historical-HazMat-Spill-Notifications.aspx

Probability of Future Occurrence

Although past occurrences can be an indicator of future impacts, in the case of hazardous materials spills, the City is constantly improving the mechanisms by which it approves and regulates businesses that use hazardous materials. In addition, technological advances and increases in industry standards are also improving safety and further preventing/ minimizing potential releases of hazardous materials. As a result, it is anticipated that future incidents will decrease over time as newer technologies, standards, and regulations are put in place.

Climate Change Considerations

Anticipating that precipitation regimes may change in the future as a result of climate change, there may be greater opportunity for the release of hazardous materials to enter local waterways and the groundwater aquifer. It is anticipated that if this concern increases, the City and other regulating agencies would revisit procedures and practices in place to ensure the greatest amount of protection occurs.

Vulnerability/Risk Assessment

Table 3.14 identifies critical facility locations that could be exposed to hazardous materials releases during a disaster event. These locations only take into consideration the proximity to existing hazardous materials facilities and do not include potential exposure associated with the movement/transport of hazardous materials. The total potential loss shown in the table is based on the assumption that all facilities within 1,000 feet of a hazardous materials facility would be impacted during a hazardous materials release/event and shows the maximum potential losses. While this is possible, actual losses will vary based on the location and magnitude of the event.

Analysis of the hazardous materials overlay shows that the populated area within 1,000 yards of a hazardous materials facility is a total of 2,523 acres. A total of 46,784 residents (52percent of the City's total population) could be affected in the event of hazardous materials release. In addition, 19,212 employees, or 85 percent of the people that work in Westminster, could be affected. Table 3.20 at the end of the chapter provides a summary of residents affected by hazard.

Table 3.14: Westminster Critical Facilities Located Adjacent to Hazardous Materials Sites

Map #	Facility	Replacement Value	Contents Value	Potential Loss
1	Westminster City Hall	7,200,000	2,100,000	9,300,000
2	City Senior Center	5,100,000	600,000	5,700,000
3	Police Department	56,200,000	4,200,000	60,400,000
4	Municipal Corporation Yard/Police Department Training Facility	23,000,000	4,000,000	27,000,000
6	Westminster Rose Center	13,400,000	1,100,000	14,500,000
7	Miriam Warne Community Building	4,000,000	100,000	4,100,000
8	Fire Station 64	3,900,000	12,000	3,912,000
9	Fire Station 65	1,000,000	6,000	1,006,000
10	Fire Station 66	800,000	6,000	806,000
11	Fire Station 25	500,000	0	500,000
12	I-405 Overpass at Valley View Street	N/A	N/A	N/A
13	I-405 Overpass at Westminster Boulevard	N/A	N/A	N/A
14	SR-22 Overpass at Beach Boulevard	N/A	N/A	N/A
	Total Potential Losses	115,100,000	12,124,000	127,224,000

Replacement value information based on City insured values for each facility.

3.4.5 EXTREME HEAT

While there is no universally accepted definition of extreme heat, the Centers for Disease Control and Prevention define extreme heat as "summertime temperatures that are substantially hotter and/ or more humid than average for that location at that time of year[4]". According to the State of California, Cal-Adapt website, the threshold for an extreme heat day in Westminster is approximately 91 °F. Five such extreme heat days in a row is considered a heat wave. Historically, Westminster experiences an average of four extreme heat days each year, and at most one heat wave.

Hazard Profile

Extreme heat poses substantial health risks to a number of people. Extreme heat events can override the body's ability to maintain a safe internal temperature (an ability known as thermoregulation), potentially causing the body's temperature to rise to dangerous levels. The symptoms of heat-related illnesses such as heat stroke may include headache, dizziness, rash, and fainting and seizures. If not treated, extreme heat can result in coma or death.

The risks of extreme heat are greatest among elderly individuals, particularly those 85 years of age or older. Heat-related mortality rises sharply with age, and elderly people can suffer potentially fatal respiratory and cardiovascular conditions during high temperatures. Elderly individuals may also be less able to take care of

[4] Preparing California for Extreme Heat: Guidance and Recommendations, Heat Adaptation Workgroup, a subcommittee of the Public Health Workgroup, California Climate Action Team (CAT), October 2013.

themselves during extreme heat events, and may be more likely to take a medication that impacts their thermoregulatory capacity.

Extreme heat risks are high as well among lower-income individuals, who are more likely to live in housing with no or inadequate cooling capacity (e.g., an air conditioner), and may not have access to effective transportation that can allow them to reach cooling centers or seek other assistance as needed. Outdoor workers, such as construction workers, are more exposed to extreme heat conditions than many other people and are therefore also at increased risk of extreme heat.

Other impacts of extreme heat can indirectly affect a person's health. Power lines become less efficient during extreme heat events; coupled with increased stress on the electric grid due to increased energy demand for cooling, this can cause blackouts. During particularly intense heat events, roads and railways may be damaged by the high temperatures, resulting in transportation delays.

Past Occurrences

The number of extreme heat events in the City of Westminster varies from year to year. On average, the community experiences four extreme heat days and between zero and one heat waves per year. These events typically occur between the months of July through October and in rare occasions can occur in April, May, or June. According to the National Climatic Data Center, between 1990 and 2011[5], several notable extreme heat events have occurred in 1992, 1997, 1998, 1999, 2004, 2006, 2008, and 2009.

Probability of Future Occurrence

Extreme heat events are very likely to continue to occur in and around Westminster. These events are expected to be more frequent and severe as a result of climate change, as discussed below.

Climate Change Considerations

Extreme heat is one of the primary risks posed by climate change in California. As a result of increased temperatures and other changes to climate conditions, the number of extreme heat days in Westminster is expected to increase from the current average of four each year to 15–35 annually by 2050. By the end of the twenty-first century, Westminster may see as many as 50 to 100 extreme heat days each year. The severity of these events may be exacerbated by a decline in precipitation and an increased risk of drought.

Vulnerability/Risk Assessment

Like other communities in the region, Westminster is at an elevated risk of extreme heat. Urbanized areas experience higher temperatures than rural communities (known as the urban heat island effect), which could further elevate temperatures in and around Westminster. Westminster has a somewhat greater rate of poverty than Orange County as a whole, and so may have a greater proportion of lower-income residents with elevated vulnerability than surrounding communities. Westminster also has a greater proportion of elderly residents (22 percent of community residents are at least 65) compared to Orange County (17.5 percent), who are likely to face a higher risk from extreme heat than the wider population.

[5] http://www7.ncdc.noaa.gov/CDO/cdoextremesdateselect.cmd

Utility Concerns

Extreme heat events can cause an increase in the number of blackouts and other failings of the electrical power grid, driven by greater electrical demand for cooling and heat stress on the grid's mechanical system. Power outages may in turn have impacts on other utility systems and key services.

3.4.6 SEVERE WEATHER

This section addresses the threats to life and property as a result of severe weather (direct impacts from severe wind and rain). Flooding is addressed as a separate hazard in this chapter.

In addition to flooding impacts addressed in Section 3.4.3, severe weather has the potential to cause damage through direct impacts to assets in the city. Although rain can cause direct impacts, the majority of damage during severe weather is caused by wind either directly damaging property, or by wind blowing over trees, power lines, or other items in the landscape, which in turn, pose a threat to property and life. For this reason, this section focuses primarily on wind and wind related hazards such as tornadoes.

Santa Ana winds are warm, dry, gusty offshore winds that blow from the east or northeast and occur below the passes and canyons of the coastal ranges of Southern California, sweeping across the Los Angeles Basin. Based on local history, most incidents of high wind in the city are the result of the Santa Ana wind conditions. While high impact wind incidents such as tornadoes are not common to the area, there is still the potential for them to occur. On average the state of California experiences 11 tornadoes a year[6]. The most prevalent and significant wind related hazards within the City involve the Santa Ana wind events that occur on a yearly basis and have been known to negatively impact the local community.

Hazard Profile

The entire city is affected by Santa Ana winds. According to the National Weather Service, winds must blow at speeds greater than 25 knots to be called Santa Ana winds. These winds accelerate to speeds of 35 knots as they move through canyons and passes, with gusts to 50 or even 60 knots.

Location and Extent

Windstorms that affect Orange County, notably Santa Ana winds, are not location specific but rather impact much of the area. Several meteorological conditions contribute to the phenomenon. These regional winds typically occur annually, from October to March, and can last several days. Hazards created by wind-fallen trees or utility poles can threaten property and have the potential for personal injury and even death. Many older neighborhoods have larger trees. Although these trees are usually well-rooted enough to withstand higher speed winds, broken and falling tree limbs can create significant hazards.

It is unlikely that Orange County will be subject to widespread damage from wind storm activity but there is potential for isolated events, such as damage to property or communications. Although Santa Ana winds are frequent, the occurrence of wind with enough velocity to cause significant damage is much lower. Therefore, wind damage in the city may not always be associated with wind, but with tree falls that occur during windy conditions. If soil is saturated due to rain, the trees are more susceptible to falling in the wind.

[6] Average Annual Number of Tornadoes (1991-2010), National Climatic Data Center of the National Oceanic and Atmospheric Administration.

Table 3.15 Beaufort Scale, describes the effects that can be observed when wind speeds reach these levels.

Table 3.15: Beaufort Scale

Force	Wind (Knots)	WMO Classification	Physical Description
0	Less than 1	Calm	Calm, smoke rises vertically
1	1-2	Light Air	Smoke drift indicates wind direction, still wind vanes
2	3-6	Light Breeze	Wind felt on face, leaves rustle, vanes begin to move
3	7-10	Gentle Breeze	Leaves and small twigs constantly moving, light flags extended
4	11-16	Moderate Breeze	Dust, leaves, and loose paper lifted, small tree branches move
5	17-21	Fresh Breeze	Small trees in leaf begin to sway
6	22-27	Strong Breeze	Larger tree branches moving, whistling in wires
7	28-33	Near Gale	Whole trees moving, resistance felt walking against wind
8	34-40	Gale	Whole trees in motion, resistance felt walking against wind
9	41-47	Strong Gale	Slight structural damage occurs, slate blows off roofs
10	48-55	Storm	Seldom experienced on land, trees broken or uprooted, "considerable structural damage"
11	56-63	Violent Storm	Not experienced on land
12	64+	Hurricane	Not experienced on land

Past Occurrences

Table 3.16 identifies past windstorms and Santa Ana events in Southern California from 1957 through the present. Of these events, the windstorms in 1987, 1988, 1997, 1998, and 2000 directly impacted Orange County. In addition, according to the Tornado History Project[7], since 1958, one tornado has impacted the City of Westminster. This event occurred on December 7, 1992 and was recorded as F1 (Fujita Scale) event, which is described as an event that has wind speeds ranging from 73-112 miles per hour. In addition to this event, between 1958 and 2010, 31 other tornado events have occurred within Orange County ranging in intensity from F0-F2, causing 13 injuries and zero fatalities.

[7] http://www.tornadohistoryproject.com

Table 3.16: Major Windstorms/Santa Ana Events in Orange County

Dates	Location/Event	Damage
November 21-22, 1957	Extremely destructive Santa Ana winds.	Winds produced a 28,000-acre brush fire on a 40-mile front west of Crystal Lake. People were ordered off streets in some areas due to flying debris. 12 of 33 passengers on an airplane over Ontario were hurt by a downdraft in extreme turbulence. Paint was completely stripped off of windward sides of 4 cars stalled in a Fontana sandstorm.
November 5-6, 1961	Strong Santa Ana winds fanned fires in Bel Air and Brentwood.	Fire in Topanga Canyon. 103 injured firemen, $100 million economic losses including 484 buildings (mostly residential) and 6,090 acres destroyed.
January 18-28, 1969	Strong storm winds.	4 dead from falling trees. Power outages.
February 10-11, 1973	Strong storm winds.	Strong storm winds caused damage to trees and some flying debris.
March 25, 1975	Wind gust of 101 mph at the community of Sandberg (located in N. Los Angeles County), a California record.	None reported.
September 10, 1976	Hurricane Kathleen brought the southwest the highest sustained winds ever associated with an Eastern Pacific tropical cyclone with sustained winds of 57 mph at Yuma.	
October 9, 1982	Santa Ana winds gusted to 60 mph.	A major wildfire moved across the Santa Monica Mountains.
December 4-5, 1987	Strong Pacific storm brought gale force winds along the coast exceeding 40 mph in many areas.	Trees down, power outages.
December 15, 1987	Strong storm winds of 100 mph at Wheeler Ridge in the Tehachapi Mountains. 80 mph in San Bernardino County. Up to 70 mph gusts at Point Arguello and gusts up to 60 mph gusts were clocked in Orange County and the San Gabriel Mountains.	One truck overturned.
February 16-19, 1988	Very strong Santa Ana winds: Gusts of 90 mph at Newport Beach, 70+ mph in the San Gabriel Mountain foothills.	Numerous trees, power lines downed and power outages all near the foothills of the San Gabriel and San Bernardino Mountains. Three were killed when a big rig truck overturned and burned; one was killed having stepped on a downed power line. Power outages hit 200,000 customers in LA and Orange counties. Minor structural damage occurred to signs, etc. Grass fires resulted. Roof damage was widespread in communities around Glendale and Pasadena. Planes flipped in Burbank and at John Wayne airports.
November 2-4, 1993	Santa Ana winds gusted to over 60 mph.	The Old Topanga fire burned from Calabasas to the ocean, consuming hundreds of homes and other structures.
August 20, 1997-98	The remnants of Tropical Storm Ignacio tracked northward moving inland in central California with gale force winds over portions of the Southern California coastal waters. This occurred during the strong El Niño of 1997-98.	
January 6-7, 1997	Severe windstorm.	One of the most severe windstorms in Southern California history. Caused the closure of the Foothill Freeway, damage to vehicles, sidewalks, irrigation systems, and public buildings. Over 50 trees were lost, local streets were closed to traffic shortly after the windstorm due to leaning power poles and downed electrical lines. It was estimated at the time that the windstorm caused $310,000 in damage.
October 14, 1997	Santa Ana winds: gusts 87 mph in central Orange County.	Large fire in Orange County.

Dates	Location/Event	Damage
February 3-4, 1998	Strong storm winds: gust 60 mph at Newport Harbor, 51 San Clemente.	
March 28-29, 1998	Strong storm winds in Orange County: sustained 30-40 mph. Gust 70 mph at Newport Beach, gust 60 Huntington Beach. Gusts to 60 mph in the mountains.	Trees down, power out, and damage across Orange and San Diego Counties. 1 dead in Jamul.
April 1, 2000	Santa Ana winds: gust 93 mph at Mission Viejo, 67 Anaheim Hills.	
October 21-23, 2007	Very strong Santa Ana winds. Gusts recorded at Fremont Canyon (85 mph); San Bernardino (79 mph); Descanso and Mira Loma (75 mph); and Fallbrook and Rancho Cucamonga (74 mph). Some locations experienced tropical storm force winds (or greater) for 36+ consecutive hours.	Winds caused at least $60 million in damage and destruction to buildings, fences, vehicles, etc. The devastating wildfires of 2007 were fanned by these winds. These fires caused the largest mass evacuation in California history.

Source: National Weather Service. 2010. "A History of Significant Weather Events in Southern California Organized by Weather Type."; LA Times November 30, 2011, December 1, 2011 and December 22, 2011 editions.

Probability of Future Occurrence

Due to its location, it is anticipated that Westminster will experience windstorms in the future. The prevalence of annual Santa Ana winds in the region creates a high probability of future occurrences of windstorms throughout Southern California. It is difficult to predict the amount of damage that could occur from a windstorm with great precision. Based on current modeling and information, it is anticipated that most windstorms will follow the general patterns that have historically affected both the city and the region.

Climate Change Considerations

Some projections suggest that climate change could alter wind patterns, although there is much uncertainty as to how the wind patterns could shift. At this point, the climate change considerations with regard to wind should be considered unknown.

Vulnerability/Risk Assessment

The entire city and all critical facilities are susceptible to storm damage. A majority of windstorm damage that occurs is associated with fallen trees/tree limbs. Facilities located in close proximity to large trees may be more susceptible to windstorm damage as a result.

Utility Concerns

Historically, falling trees and power lines have been the major cause of power outages in the region. Windstorms such as strong microburst and Santa Ana wind conditions can cause flying debris and downed utility lines. For example, tree limbs breaking in winds of only 45 mph can be thrown over 75 feet. As such, overhead power lines can be damaged even in relatively minor windstorm events. Falling trees can bring electric power lines down to the pavement, creating the possibility of lethal electric shock.

3.4.7 DISEASE AND PEST MANAGEMENT

Disease and pest management hazards occur when an undesirable type of organism (including insects and pathogens such as bacteria) inhabits an area in a manner that causes serious harm to plants, animals, or humans.

In some communities, diseases can do significant harm to agricultural operations, or cause widespread devastation to forests which may have safety and economic impacts. As these activities do not exist in Westminster, the primary disease and pest management hazard is to human health.

Hazard Profile

Locations and Extent

The most widespread potentially serious disease known to occur in Westminster is influenza, which commonly occurs during winter. The virus that causes influenza is spread through the air, usually by coughing or sneezing, and may also be spread by touching surfaces which may have been contaminated with the pathogen. The symptoms of influenza may include fever, headache, runny or stuffy noses, fatigue, and gastrointestinal distress. In some instances influenza can be severe; each year an estimated 3 to 5 million people are affected by a significant case of the disease and approximately 250,000 to 500,000 people are killed. Fatalities are most common among the young, the elderly, and those with weakened immune systems.

Although vaccines for influenza are often widely available, a primary health concern is that of a pandemic, which would affect a large number of people and for which there may not be an effective vaccine or treatment options. An influenza pandemic most recently occurred in 2009, when the H1N1 version of the disease (commonly known as the "swine flu") killed an estimated 284,500 people worldwide, on top of fatalities caused by all other versions of influenza. Most recently, the Centers for Disease Control and Prevention and World Health Organization have been monitoring the H5N1 strain of Avian Influenza across the globe. This strain infects birds, poultry, and humans; however no reported infections have occurred within the United States. Areas of the globe where confirmed infections/outbreaks have occurred include parts of Asia and the Middle East[8].

The second primary disease risk, as identified by the Orange County Health Care Agency, is West Nile virus. The virus is spread by mosquitoes, which can infect a victim with the virus through a bite. Birds commonly act as a host for the virus, which is passed on when a mosquito bites an infected bird. Approximately 80 percent of people infected by West Nile virus show no outward symptoms, while 20 percent experience symptoms associated with a cold or mild flu, such as fever, nausea, and a headache. In a small number of people (less than 1 percent of those infected), West Nile virus attacks the central nervous system, causing severe illness and potentially a coma or death. As of August 20, 2015, there have been 3 reported cases in Orange County[9].

In the past, the Orange County Health Care Agency has also identified severe acute respiratory syndrome (SARS) as a primary health risk. The disease first appeared in China in November 2002 and spread to a number of other countries, including the United States, before the outbreak was declared contained in July 2003. The worldwide number of probable SARS infections reached 8,273 people; including 27 in the United States (only eight cases were confirmed). No known deaths occurred in the United States, although globally the disease killed 775 people. There have been no new reported cases of SARS since 2004.

Most recently, in December 2014, an outbreak of measles occurred within California originating in Orange County. During this outbreak, 131 measles cases were reported to the California Department of Public Health

[8] http://www.flu.gov/about_the_flu/h5n1/index.html

[9] http://ochealthinfo.com/phs/about/dcepi/epi/disease/wn

(CDPH) that are likely linked to this outbreak. Forty-two cases were directly linked to an initial exposure in December at the Disneyland Theme Parks in Anaheim, California. As of April 17, 2015, the CDPH announced that the measles outbreak that began in December 2014 is over. According to the Orange County Health Care Agency, 35 cases were confirmed within the County; however specific information on place of residence was not available at the time of this writing.

Past Occurrences

As influenza strains and their virulence change each year, the number of people severely affected by influenza can vary widely. In the 2009–2010 H1N1 pandemic, Orange County saw 47 flu-related fatalities and 166 victims who lived but required intensive care. Since then, influenza-related deaths in Orange County have ranged from 2 to 20 each year, with an additional 18 to 44 people requiring intensive care.

West Nile virus infections also range significantly from year to year. The virus first appeared in California in 2003, and had spread to all counties in the state by 2004. Since the disease arrived, the number of reported West Nile virus infections in humans in Orange County has ranged annually from 0 to 71. In 2013, Orange County saw 10 reported human infections of West Nile virus. Currently three cases of West Nile Virus have been reported this year in Orange County.

Probability of Future Occurrence

It is likely that influenza and West Nile virus infections will continue to occur in Westminster. Influenza viruses change rapidly and have proven virtually impossible to eradicate, although vaccination and basic hygiene rules can substantially reduce the odds of being infected. West Nile virus has proven similarly challenging to wipe out, although the disease remains relatively rare and can be constrained by reducing the risk of mosquito bite through insect repellents, the use of screens and protective clothing, and draining pools of stagnant water where mosquitoes breed.

Climate Change Considerations

There is no clearly identified link between climate change and influenza, although changes in animal migration patterns may create new opportunities for influenza mutation. The West Nile virus, however, is expected to be impacted by changing climate conditions. As climate change causes temperatures to rise, the time of year when mosquitoes are most active is expected to increase, resulting in greater opportunities for the spread of the disease.

Vulnerability/Risk Assessment

As described above, Orange County as a whole, and thus the City of Westminster, is vulnerable to influenza and West Nile virus. Westminster does not have any unique conditions that make the community more or less vulnerable to the impacts of these diseases.

3.4.8 DAM FAILURE

Dam failures can result from a number of natural causes such as earthquakes, erosion of the face or foundation of the dam, improper siting of the dam, and rapidly rising floodwaters, or from man-made causes including structural/design flaws. Dam failure can result in severe flood events to lower-lying areas. A dam failure can cause loss of life, damage to property, and other ensuing hazards, as well as the displacement of persons residing in the inundation path. Damage to electric-generating facilities and transmission lines could also impact

life support systems in communities outside the immediate hazard areas. A catastrophic dam failure, depending on the size of the dam and the population downstream, could exceed the response capability of local communities, especially overtaxing the public safety personnel and resources. Damage control and disaster relief support would be required from other local government agencies, private organizations, the state of California, and possibly, the federal government.

The Santa Ana River is controlled by a network of dams and flood control measures. This network of carefully planned dams has protected the City of Westminster from any serious flooding events. The natural water cycle and flow are significantly altered to protect the adjacent communities from flood damage and to better use local water resources for urban and agricultural water supplies. The network of dams and flood control measures have been very effective in controlling flood waters in Orange County and the surrounding region; however, a major earthquake could cause sudden failure of one of these facilities, resulting in major damage. As a result, the city can be exposed to property damage and public safety hazards from overbank flooding of the Santa Ana River or failure of the Prado Dam.

Hazard Profile

Location and Extent

There are 32 dams in Orange County. The ownership ranges from the federal government to homeowners associations. These dams may hold billions of gallons of water in reservoirs, depending on the current water levels. The major reservoirs are designed to protect Southern California from flood waters and to store domestic water. Their holding capacities range from 18 acre-feet to 196,235 acre-feet (Prado Dam). Seismic activity can compromise these dam structures, resulting in catastrophic flooding. Figure 3.6 reports that the entire city is located within the Prado Reservoir inundation zone, meaning that if Prado Dam fails, the entire city would be at risk to inundation. However, the amount and duration of inundation would be based on the amount of water held in the reservoir at the time of the incident. In addition, although the mapping in Figure 3.6 identifies the areas of the city that would become inundated, it does not take into consideration the downstream improvements that have been made along the Santa Ana River main stem and several tributaries since this mapping was initially completed. So, this mapping is meant to identify the worst-case inundation scenario for planning purposes.

Past Occurrences

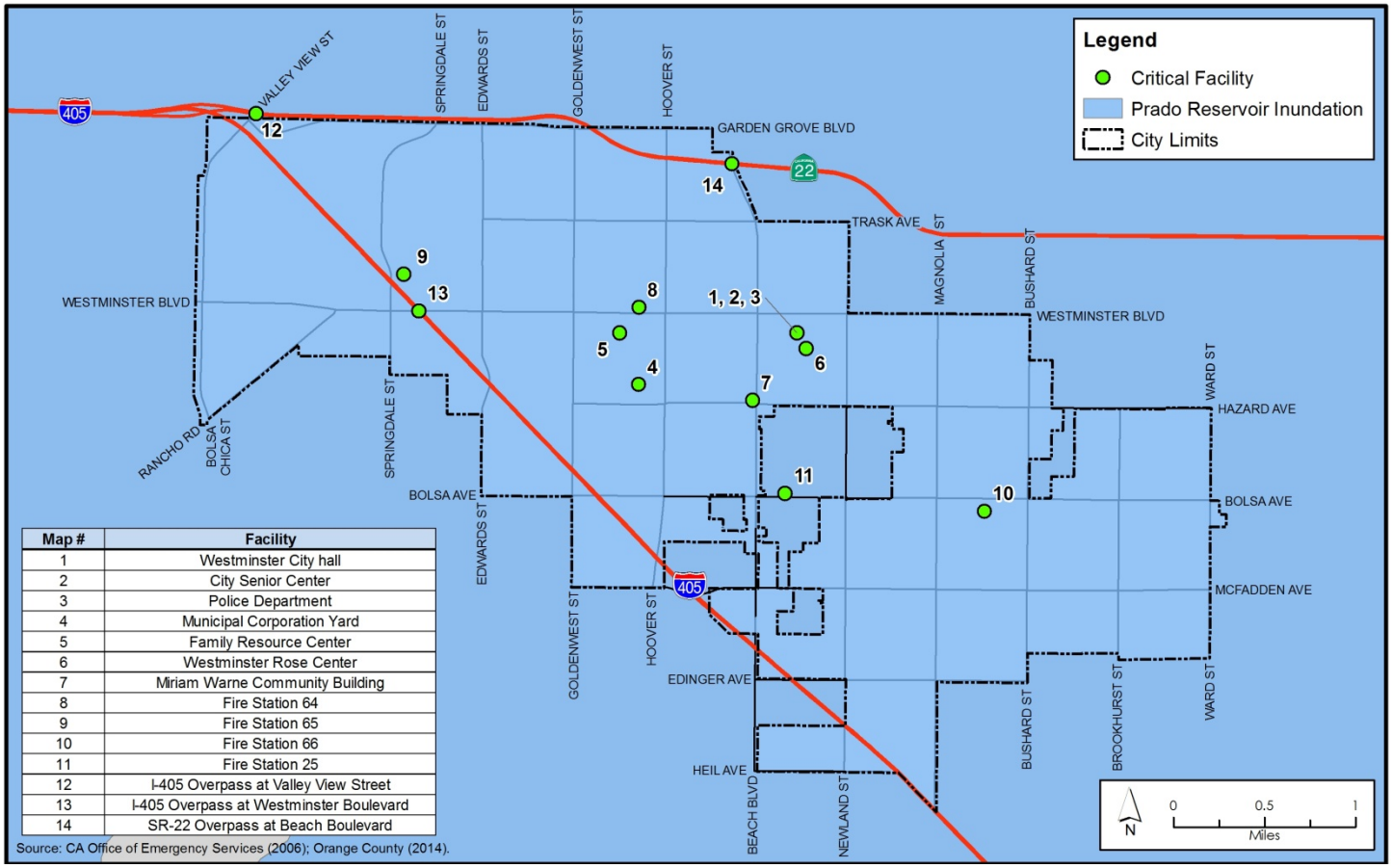
Table 3.17 identifies dam failure events affecting Orange County from 1928 through 1998 (the most recent occurrence).

Table 3.17: Historical Dam Failure Events, Southern California

Date	Disaster Declaration #	Dam	Impacts
March 12, 1928	N/A	St. Francis Dam (located 40 miles NW of City of L.A.)	Up to 600 deaths
December 14, 1963	DR-161	Baldwin Hills Reservoir (located in City of Los Angeles)	5 deaths; 277 homes destroyed

Source: http://cee.engr.ucdavis.edu/faculty/lund/dams/Dam_History_Page/Failures.htm Accessed12-8-14.

Figure 3.6: Prado Dam Failure Inundation Zone



Map #	Facility
1	Westminster City hall
2	City Senior Center
3	Police Department
4	Municipal Corporation Yard
5	Family Resource Center
6	Westminster Rose Center
7	Miriam Warne Community Building
8	Fire Station 64
9	Fire Station 65
10	Fire Station 66
11	Fire Station 25
12	I-405 Overpass at Valley View Street
13	I-405 Overpass at Westminster Boulevard
14	SR-22 Overpass at Beach Boulevard

While dam failures are infrequent in Southern California, one of the most notable dam failures occurred on December 14, 1963. The 155-foot-high Baldwin Hills Dam gave way and sent 360 million gallons of water in a 50-foot-high wall cascading onto the community below, killing five persons, destroying 277 homes, and damaging 50 million dollars (1963 dollars) in property. Luckily, early warning and prompt action by dam personnel and the police prevented more lives from being lost. During construction of the Baldwin Hills Dam in 1950, geologists found that two faults ran through the reservoir and the earthen dam. One of the faults was thought to be active, so special drains were constructed underneath the reservoir to allow water, which might percolate through the fault to exit safely. The dam was built near a large oil field, and the extraction of oil caused the ground to subside, causing slippage between the two faults. The slippage was minimal (only a couple of centimeters), but it was enough to rupture the lining of the reservoir. The special drains quickly clogged up with sand and water, and the 65 million gallons of water quickly cut an opening under and through the dam itself.

The failure of the Baldwin Hills Dam caused the California legislature to amend the State Water Code. The statutes governing dam safety in California place the supervision of the safety of non-federal dams and reservoirs under the jurisdiction of the Department of Water Resources' Division of Safety of Dams. The Division of Safety of Dams reviews plans and specifications for the construction of new dams or for the enlargement, alteration, repair, or removal of existing dams. Professional engineers and geologists from the

division supervise the maintenance and operations of all dams as well as evaluate each project to enlarge, alter, repair, or remove any existing dams.

Probability of Future Occurrence

Loss of life and damage to roads, structures, and utilities, may result from a dam failure. Economic losses can also result due to roads being washed out, mobilization of residents being impaired, and lowered property values. Certainly, any of these factors could be an outcome in the city if the Prado Dam were to fail.

Climate Change Considerations

Climate change is expected to produce longer and more severe droughts due to higher average temperatures, as well as greater and more frequent floods. Orange County's current water systems are designed to balance flood protection during the winter and spring months with water storage during the dry months. Increased rainfall and an earlier melting of the snowpack could result in overburdened facilities that cannot adequately protect communities from floods.

Vulnerability/Risk Assessment

Table 3.18 identifies all critical facilities in the city could be inundated as a result of Prado Dam's failure. The total potential loss shown in the table is based on the assumption that structures are completely destroyed, which is highly unlikely given the proximity to the dam.

Analysis of the dam inundation overlay shows that the populated area vulnerable to inundation as a result of dam failure is a total of 6,400 acres. A total of 89,701 residents (100 percent of the City's total population) could be affected in the event of dam inundation. In addition, 22,532 employees, or 100 percent of the people that work in Westminster, could be affected. Table 3.20 at the end of the chapter provides a summary of residents affected by hazard.

Utility Concerns

Damages to utilities occurring as a result of dam failure are similar to those experienced during flooding events. When water rushes through a City in this way, it takes everything in its path, which could include any aboveground infrastructure such as electricity line poles and traffic signal control boxes. The water sometimes mixes with sediment, oil, and/or sewage, which can impact roads, block storm drains and further exacerbate flood damage. Infrastructure located underground may be damaged due to inundation or could be exposed, requiring repair or reconstruction. Ultimately utilities located within flood prone areas should be designed and constructed to accommodate these concerns when feasible. For communities where above ground infrastructure is located, flood proofing techniques should be identified to ensure continued operations during flood events.

Table 3.18: Westminster Critical Facilities At Risk of Inundation from Dam Failure

Map #	Facility	Replacement Value	Contents Value	Potential Loss
1	Westminster City Hall	7,200,000	2,100,000	9,300,000
2	City Senior Center	5,100,000	600,000	5,700,000
3	Police Department	56,200,000	4,200,000	60,400,000
4	Municipal Corporation Yard/Police Department Training Facility	23,000,000	4,000,000	27,000,000
5	Family Resource Center	2,200,000	200,000	2,400,000
6	Westminster Rose Center	13,400,000	1,100,000	14,500,000
7	Miriam Warne Community Building	4,000,000	100,000	4,100,000
8	Fire Station 64	3,900,000	12,000	3,912,000
9	Fire Station 65	1,000,000	6,000	1,006,000
10	Fire Station 66	800,000	6,000	806,000
11	Fire Station 25	500,000	0	500,000
12	I-405 Overpass at Valley View Street	N/A*	N/A*	N/A
13	I-405 Overpass at Westminster Boulevard	N/A*	N/A*	N/A
14	SR-22 Overpass at Beach Boulevard	N/A*	N/A*	N/A
	Total Potential Losses	117,300,000	12,324,000	129,624,000

Replacement value information based on City insured values for each facility.

3.5 SUMMARY OF VULNERABILITY

Table 3.19 shows a summary of critical facilities that intersect with hazard areas in the City of Westminster. Those facilities that intersect with a hazard area are indicated with a "Y" and a red-shaded cell. Facilities that do not fall within the hazard area are designated by an "N" and a green-shaded cell. The risks of drought, extreme heat, severe weather, and disease and pest management hazards are equal throughout the community.

As stated in Section 3.3, hazard and critical facility overlays were not conducted for drought, extreme heat, disease/pest management, and severe weather. Overlays were conducted for seismic hazards (including liquefaction), flood, hazardous materials, and dam failure. More detailed findings from this analysis can be found in the sections below.

Table 3.20 shows the populated area by acreage potentially affected, broken out by hazard, and the number of residents and employees that would potentially be affected by each hazard based on the hazard locations mapped throughout this document.

3.5.1 SIGNIFICANT HAZARDS

The vulnerability assessments in each hazard profile are used to understand the varying levels of risk to the City of Westminster. Based on these assessments, the planning team concluded that the three hazards that pose the greatest risk to the city are seismic hazards, hazardous materials releases, and dam failure.

Table 3.19: Risk Assessment Summary Table

	Facility	Drought	Seismic Hazards		Flood (100 year flood zone)	Hazardous Materials (1,000 ft)	Extreme Heat	Severe Weather (Wind)	Disease and Pest Mgmt	Dam Failure
			Ground Shaking	Liquefaction						
1	Westminster City Hall	Y	Y	Y	N	Y	Y	Y	Y	Y
2	City Senior Center	Y	Y	Y	N	Y	Y	Y	Y	Y
3	Police Department	Y	Y	Y	N	Y	Y	Y	Y	Y
4	Municipal Corporation Yard/Police Department Training Facility	Y	Y	Y	N	Y	Y	Y	Y	Y
5	Family Resource Center	Y	Y	Y	N	N	Y	Y	Y	Y
6	Westminster Rose Center	Y	Y	Y	N	Y	Y	Y	Y	Y
7	Miriam Warne Community Building	Y	Y	Y	Y	Y	Y	Y	Y	Y
8	Fire Station 64	Y	Y	Y	N	Y	Y	Y	Y	Y
9	Fire Station 65	Y	Y	Y	N	Y	Y	Y	Y	Y
10	Fire Station 66	Y	Y	Y	N	Y	Y	Y	Y	Y
11	Fire Station 25	Y	Y	Y	N	Y	Y	Y	Y	Y
12	I-405 Overpass at Valley View Street	Y	Y	Y	N	Y	Y	Y	Y	Y
13	I-405 Overpass at Westminster Boulevard	Y	Y	Y	N	Y	Y	Y	Y	Y
14	SR-22 Overpass at Beach Boulevard	Y	Y	Y	N	Y	Y	Y	Y	Y

Y denotes that the critical facility intersects the hazard layer

N denotes that the critical facility does not intersect the hazard layer

Table 3.20: Populated Area and Number of Residents and Employees Affected

	Drought	Seismic Hazards (Liquefaction)	Flood (500 ft of 100 year flood zone)	Hazardous Materials (1,000 ft)	Extreme Heat	Severe Weather (Wind)	Disease and Pest Mgmt	Dam Failure
Total Populated Area Affected (Acres)	6,400 acres	6,400 acres	1,570 acres	2,523 acres	6,400 acres	6,400 acres	6,400 acres	6,400 acres

	Drought	Seismic Hazards (Liquefaction)	Flood (500 ft of 100 year flood zone)	Hazardous Materials (1,000 ft)	Extreme Heat	Severe Weather (Wind)	Disease and Pest Mgmt	Dam Failure
Total Number of Residents Affected (% of City population)	89,701 (100%)	89,701 (100%)	20,405 (23%)	46,784 (52%)	89,701 (100%)	89,701 (100%)	89,701 (100%)	89,701 (100%)
Total Number of Employees Affected	22,532 (100%)	22,532 (100%)	9,130 (41%)	19,212 (85%)	22,532 (100%)	22,532 (100%)	22,532 (100%)	22,532 (100%)

3.5.2 FACILITIES MOST AT RISK

The critical facilities listed in Table 3.21 are the most at risk to hazard events in the City of Westminster. They fall within multiple hazard zones, making them susceptible to future damage from a variety of potential events.

Table 3.21: Westminster Critical Facilities Most at Risk

Facility	Drought	Seismic Hazards (Liquefaction)	Flood (500 ft of 100 year flood zone)	Hazardous Materials (1,000 ft)	Extreme Heat	Severe Weather (Wind)	Disease and Pest Mgmt	Dam Failure
Westminster Rose Center	Y	Y	Y	Y	Y	Y	Y	Y
Miriam Warne Community Building	Y	Y	Y	Y	Y	Y	Y	Y
Fire Station 65	Y	Y	Y	Y	Y	Y	Y	Y

3.5.3 POTENTIAL LOSSES

Table 3.22 identifies the critical facilities with the greatest total value (combination of building replacement and contents value) in the city. Should these facilities be completely destroyed by a hazard event, their replacement will be the most costly compared to other identified critical facilities.

Table 3.22: Most Costly Westminster Critical Facilities

Facility	Total (Replacement and Contents) Value*
Police Department	60,400,000
Municipal Corporation Yard/Police Department Training Facility	27,000,000
Westminster Rose Center	14,500,000
Westminster City Hall (inc. Water Dept.)	9,300,000
City Senior Center	5,700,000
Fire Station 64	3,912,000
Miriam Warne Community Building	4,100,000
Family Resource Center	2,200,000
Fire Station 65	1,006,000
Fire Station 66	806,000
Fire Station 25	500,000

*Replacement value information based on City insured values for each facility.

CHAPTER 4
MITIGATION ACTIONS

Hazard mitigation strategies are used to reduce hazard impacts on residents, employment and centers, public infrastructure, and critical facilities. This section of the LHMP is derived from an in-depth review of the vulnerabilities and capabilities described in this Plan. Mitigation actions from the County of Orange Hazard Mitigation Plan (October 2010) were also reviewed so that the City's actions do not conflict with those of the County. Overall, the actions represent Westminster's risk-based approach for reducing and/or eliminating the potential losses as identified in the Vulnerability/Risk Assessment section of each Hazard Profile.

4.1 HAZARD MITIGATION OVERVIEW

FEMA'S NATIONAL FLOOD INSURANCE PROGRAM

In 1968, the U.S. Congress created the National Flood Insurance Program (NFIP). Participation in the NFIP by a community is voluntary; however, in order to receive funding from FEMA, a community is required to participate in the program.

The City participates in the NFIP and development in the floodplain is permitted according to Section 8.55 (Flood Damage Prevention) of the Municipal Code. The City grants or denies building permits in accordance with Section 8.55.

The Community Rating System (CRS) is a voluntary part of the NFIP that seeks to coordinate all flood-related activities, reduce flood losses, facilitate accurate insurance rating, and promote public awareness of flood insurance by creating incentives for a community to go beyond minimum discounts. CRS ratings are on a 10-point scale (from 10 to 1, with 1 being the best rating); with residents of the community who live within FEMA's Special Flood Hazard Areas receiving a 5 percent reduction in flood insurance rates for every Class improvement in the community's CRS rating. The City of Westminster does not currently participate in the CRS.

Repetitive Loss Properties

At this time, the City of Westminster is not aware of any Repetitive Loss Properties under the NFIP. The City's Floodplain Administrator has contacted FEMA to verify this information.

HAZARD MITIGATION GOALS

The Plan goals, presented in Section 1.5 (Mitigation Priorities and Goals), serve as basis for direction to promote sound public policy designed to protect citizens, critical facilities, infrastructure, private property, and the environment from hazards. The Plan goals guide the direction of future activities aimed at reducing risk and preventing loss from natural hazards. The goals also serve as checkpoints as agencies and organizations begin implementing mitigation action items.

The hazard mitigation actions identified below list those activities that the City of Westminster will utilize to reduce its risk of potential hazards. These mitigation actions were identified through data collection and research, and collaboration with the LHMP team. Some of these actions may be eligible for funding through federal and state grant programs, and other funding sources as made available to the City. The mitigation

actions are intended to address the comprehensive range of identified hazards. Some actions may address risk reduction from multiple hazards.

HAZARD MITIGATION PRIORITIZATION

Through discussion and self-analysis, the LHMP team discussed the STAPLE/E (Social, Technical, Administrative, Political, Legal, Economic, and Environmental) criteria, as described in Table 4.1, when considering and prioritizing the most appropriate mitigation alternatives for the city. This methodology, as endorsed by FEMA, requires that social, technical, administrative, political, legal, economic, and environmental considerations be taken into account when reviewing potential actions to undertake. This process was used to help ensure that the most equitable and feasible actions would be undertaken based on the City's unique capabilities. The LHMP team did not subject the mitigation measures to a formal STAPLE/E analysis, but discussed how STAPLE/E would be used when applying for grant funding to implement any mitigation measures, and considered how the mitigation measures might be evaluated under the STAPLE/E criteria. It was intended that this analysis would be reserved for submittal of grant applications for mitigation actions proposed within this plan.

HAZARD MITIGATION BENEFIT – COST REVIEW

FEMA requires local governments to analyze the benefits and costs of a range of mitigation actions that can reduce the effects of each hazard within their communities. Benefit-cost analysis is used in hazard mitigation to show if the benefits to life and property protected through mitigation efforts exceed the cost of the mitigation activity. Conducting benefit-cost analysis for a mitigation activity can assist communities in determining whether a project is worth undertaking now, in order to avoid disaster-related damages later. The analysis is based on calculating the frequency and severity of a hazard, avoided future damages, and risk.

A hazard mitigation plan must demonstrate that a process was employed that emphasized a review of benefits and costs when prioritizing the mitigation actions. The benefit-cost review must be comprehensive to the extent that it can evaluate the monetary as well as the nonmonetary benefits and costs associated with each action. The benefit-cost review should at least consider the following questions:

- How many people will benefit from the action?
- How large an area is impacted?
- How critical are the facilities that benefit from the action (e.g., which is more beneficial to protect, the fire station or the administrative building)?
- Environmentally, does it make sense to do this project for the overall community?

For the Westminster Plan, the LHMP team used these questions to determine the appropriateness of mitigation actions. Those actions that did not have adequate benefits were excluded from the list of mitigation actions.

Table 4.1: STAPLE/E Review and Selection Criteria

Social
• Is the proposed action socially acceptable to the jurisdiction and surrounding community? • Are there equity issues involved that would mean that one segment of the jurisdiction and/or community is treated unfairly? • Will the action cause social disruption?
Technical
• Will the proposed action work? • Will it create more problems than it solves? • Does it solve a problem or only a symptom? • Is it the most useful action in light of other jurisdiction goals?
Administrative
• Can the jurisdiction implement the action? • Is there someone to coordinate and lead the effort? • Is there sufficient funding, staff, and technical support available? • Are there ongoing administrative requirements that need to be met?
Political
• Is the action politically acceptable? • Is there public support both to implement and to maintain the project?
Legal
• Is the jurisdiction authorized to implement the proposed action? • Are there legal side effects? Could the activity be construed as a taking? • Will the jurisdiction be liable for action or lack of action? • Will the activity be challenged?
Economic
• What are the costs and benefits of this action? • Do the benefits exceed the costs? • Are initial, maintenance, and administrative costs taken into account? • Has funding been secured for the proposed action? If not, what are the potential funding sources (public, nonprofit, and private)? • How will this action affect the fiscal capability of the jurisdiction? • What burden will this action place on the tax base or local economy? • What are the budget and revenue effects of this activity? • Does the action contribute to other jurisdiction goals? • What benefits will the action provide?
Environmental
• How will the action affect the environment? • Will the action need environmental regulatory approvals? • Will it meet local and state regulatory requirements? • Are endangered or threatened species likely to be affected?

4.2 HAZARD MITIGATION ACTIONS

The process used by the Westminster LHMP team to identify hazard mitigation actions for this Plan included the following:

- Review of the 2015 Risk Assessment presented in Chapter 3 of this Plan;
- Review of the 2015 Capabilities Assessment presented in Chapter 4 of this Plan;
- Review of the 2010 County of Orange Hazard Mitigation Plan mitigation actions; and
- Team discussion of new concerns/issues that need to be addressed to reduce hazards to critical facilities.

Table 4.2 identifies the hazard, proposed mitigation action, City department responsible for implementation, the anticipated funding source(s), opportunities for integration with other City policy or planning frameworks, the target completion date, and priority.

Table 4.2: Westminster Hazard Mitigation Actions

#	Mitigation Action	Responsible Department	Potential Funding Source(s)	Policy Integration Opportunities	Target Completion Date	Priority
1. Multiple Hazards-Related Actions						
1.1	Develop a strategy to effectively alert, warn, and make notifications to all community members in the event of an imminent threat or a need to evacuate. This strategy should include distribution of notices and "canned messages" through multiple methods (television, phone, radio, mobile device, door-to-door notifications, etc.) and in all languages widely spoken in the community and for people with disabilities and access and functional needs.	Emergency Management, Police	General fund	Emergency Operations Plan; department work plans	2016	High
1.2	Distribute information about ways to reduce the threat of hazards to all community members through mailings, printed notifications, television and digital devices, and in-person events and workshops. All information should be in multiple languages, culturally appropriate, and for people with disabilities and access and functional needs	Emergency Management	General fund; grant opportunities for disaster preparedness, public health, community engagement and outreach, etc.	Emergency Operations Plan	2016	High

Table 4.2: Westminster Hazard Mitigation Actions

#	Mitigation Action	Responsible Department	Potential Funding Source(s)	Policy Integration Opportunities	Target Completion Date	Priority
1.3	Incorporate all hazards identified in the Local Hazard Mitigation Plan into all City emergency response planning efforts and programs.	Community Development, Fire, Police, Public Works	General fund; grant opportunities for disaster preparedness, public health, etc.	General Plan; Emergency Operations Plan; department work plans	2016	Low
1.4	Identify and implement needed infrastructure and program-level actions to maintain City services to community members during emergency situations.	City Manager, Public Works, Police, Fire	General fund; grant opportunities for disaster preparedness, resiliency, etc.	Department work plans; Urban Water Management Plan; Capital Improvements Plan	2017	Low
1.5	Work with regional utility companies and service agencies, including electricity and natural gas providers, telecommunication providers, and transit agencies, to determine approximate time frames for service interruptions, develop appropriate stopgap measures, and establish emergency activities to provide public safety through the restoration process	Public Works, Emergency Management	General fund	Emergency Operations Plan; department work plans	2018	Low
1.6	Improve estimates of property damage, scale, injuries, mortality, and recovery time as a result of various emergency situations.	City Clerk, Community Development, Police, Fire, Emergency Management	General fund; grant opportunities for disaster preparedness, resiliency, etc.	General Plan; department work plans	2016	Medium
1.7	In coordination with state and regional agencies and other key stakeholders, conduct disaster training and exercises of increasing complexity.	Emergency Management, Fire, Police, Public Works	General fund	Department work plans	2018	High
1.8	Ensure General Plan updates incorporate hazards information provided in this Local Hazard Mitigation Plan and a policy framework consistent with the actions in this Local Hazard Mitigation Plan. Consider adopting the LHMP into the Safety Element of the General Plan per AB2140.	Community Development Emergency Management, City Manager, City Council	General fund; staff budget	General Plan	2018	Medium

Table 4.2: Westminster Hazard Mitigation Actions

#	Mitigation Action	Responsible Department	Potential Funding Source(s)	Policy Integration Opportunities	Target Completion Date	Priority
1.9	Review and update the City's Municipal Code to implement the strategies identified in this Local Hazard Mitigation Plan and other emergency planning efforts.	City Clerk, City Manager, Community Development, Public Works, Community Services, Emergency Management,	General fund; grant opportunities for planning, disaster preparedness, resiliency, etc.	General Plan; Emergency Operations Plan; department work plans; Municipal Code	2020	Low
1.10	Coordinate and participate with local, regional, and state agencies to monitor potential changes in the severity, duration, and affected areas of all hazards, and evaluate the possibility for additional hazards to become a threat. In particular, monitor the effects that climate change may have on future hazards.	Community Development, Fire, Police, Public Works	Grant opportunities for disaster preparedness, climate change, public health, etc.	General Plan; Emergency Operations Plan; department work plans	2020	Low
1.11	Develop a regional emergency water distribution system with Seal Beach and Huntington Beach by interconnecting the water systems of the three cities, so that each city would be able to draw on another's water supply in the event of an emergency. Consider installing a major drinking water distribution pipeline to provide better circulation and service points for all connected cities.	Public Works	Grant opportunities for disaster preparedness	Capital Improvements Plan	2016	High
1.12	Invest in energy efficiency upgrades, energy conservation programs, renewable energy facilities, and innovative energy technologies such as microgrids to ensure government facilities are operational during extreme events. Critical facilities and facilities identified as cooling centers should be prioritized.	Public Works, Finance	Grant opportunities for energy efficiency retrofits and renewable energy facilities	Capital Improvements Plan	2018	Medium
2. Drought-Related Actions						
2.1	Identify and pursue alternative water sources to supplement imported Colorado River and State Water Project deliveries from the Metropolitan Water District in the event of regional drought conditions, including expansion of groundwater recharge.	Public Works	Grant opportunities for drought mitigation, resiliency, climate change, sustainability, etc.	General Plan; department work plans; Urban Water Management Plan	2020	Low

Table 4.2: Westminster Hazard Mitigation Actions

#	Mitigation Action	Responsible Department	Potential Funding Source(s)	Policy Integration Opportunities	Target Completion Date	Priority
2.2	Explore constructing additional water storage facilities and additional emergency connections to supplement water supplies during drought conditions or short-term shortages.	Public Works	General fund; grants for disaster preparedness, drought mitigation, resiliency, etc.	Urban Water Management Plan; Capital Improvements Plan	2020	Low
2.3	Develop and implement long-term strategies to reduce community water use, including mandatory use of drought-tolerant plants in new or replacement landscapes, and requirements to install water fixtures in new buildings that exceed minimum code requirements.	Community Development, Public Works	General fund; grants for drought mitigation, resiliency, climate change, sustainability, etc.	General Plan; department work plans; Urban Water Management Plan; Municipal Code	2020	Low
2.4	Expand the complementary water use audit program to include commercial properties.	Public Works	General fund; grants for drought mitigation, resiliency, climate change, sustainability, etc.	Department work plans; Urban Water Management Plan	2020	Low
2.5	Educate community residents and businesses about available rebates for water-efficient and water-conserving equipment.	Public Works	General fund; grants for drought mitigation, resiliency, climate change, sustainability, etc.	Department work plans; Urban Water Management Plan	2020	Low
2.6	Consider implementing additional mandatory restrictions on water use during drought conditions.	Community Development, Public Works	General fund	Department work plans; Urban Water Management Plan; Municipal Code	2020	Low
2.7	Install drought-tolerant or artificial turf at City parks as feasible.	Public Works	General fund; grants for drought mitigation, resiliency, climate change, etc.	Department work plans; Urban Water Management Plan; Capital Improvements Plan	2020	Low

Table 4.2: Westminster Hazard Mitigation Actions

#	Mitigation Action	Responsible Department	Potential Funding Source(s)	Policy Integration Opportunities	Target Completion Date	Priority
2.8	When conducting water supply analyses for future Urban Water Management Plans, use more severe/long-lasting drought scenarios.	Public Works	General fund	Urban Water Management Plan	2020	Low
2.9	Coordinate with Countywide Drought Task Force and identify a water distribution plan.	Public Works	General fund; grants for drought mitigation, resiliency, climate change, etc.	Urban Water Management Plan	2020	Low
3. Seismic Hazards-Related Actions						
3.1	Identify seismically vulnerable municipally owned facilities, and identify potential funding sources to conduct seismic retrofits in public buildings.	Public Works, Community Development	General fund; grant opportunities for disaster preparedness, resiliency, seismic hazard mitigation, etc.	Department work plans; Capital Improvements Plan	2018	Medium
3.2	Inventory the unreinforced masonry, soft story, and other seismically vulnerable private buildings in the city. Advise the owners of potential means of pursuing solutions to assist with seismic retrofits.	Public Works, Community Development	General fund; grant opportunities for disaster preparedness, resiliency, seismic hazard mitigation, etc.	Department work plans; Capital Improvements Plan	2018	Medium
3.3	Assess the potential inundation hazard from aboveground water storage tanks in the event of a significant rupture. Fit all tanks with best available and appropriate equipment to reduce the odds of catastrophic failure and inundation as a result of a seismic event.	Public Works	General fund; grant opportunities for disaster preparedness, resiliency, drought mitigation, seismic hazard mitigation, etc.	Department work plans; Urban Water Management Plan; Capital Improvements Plan	2020	Low

Table 4.2: Westminster Hazard Mitigation Actions

#	Mitigation Action	Responsible Department	Potential Funding Source(s)	Policy Integration Opportunities	Target Completion Date	Priority
3.4	Contact utility companies and districts to obtain information regarding seismic evaluations of utility infrastructure, including power lines, water pipelines, sewer lines, freeways and key surface streets, and natural gas pipelines, in coordination with utility companies and appropriate agencies. Advise utility companies and districts of potential means of pursuing solutions to assist with seismic retrofits.	Public Works	General fund; grant opportunities for disaster preparedness, resiliency, seismic hazard mitigation, etc.	Department work plans; Urban Water Management Plan; Capital Improvements Plan	2020	Low
4. Liquefaction-Related Actions						
4.1	Require liquefaction assessment studies and implementation of mitigation measures for qualifying projects. Potential mitigation measures include soil densification or compaction, displacement or compaction grouting, post-tensioned slab foundations, piles, or caissons.	Community Development, Public Works	General Fund	General Plan; Municipal Code	2018	Medium
4.2	Identify critical facilities and key pieces of infrastructure that are at an elevated risk of liquefaction, and conduct retrofits to reduce vulnerability.	Community Development, Public Works	General fund; grant opportunities for disaster preparedness, resiliency, seismic hazard mitigation, etc.	Department work plans; Urban Water Management Plan; Capital Improvements Plan	2018	Medium
5. Flood-Related Actions						
5.1	Evaluate the effectiveness of City-owned stormwater drainage and pipeline systems, and conduct improvements as needed.	Public Works	General fund; grants for disaster preparedness, resiliency, etc.	Department work plans; Capital Improvements Plan	2020	Low

Table 4.2: Westminster Hazard Mitigation Actions

#	Mitigation Action	Responsible Department	Potential Funding Source(s)	Policy Integration Opportunities	Target Completion Date	Priority
5.2	Update the City's General Plan Safety Element with the following policy: To the extent possible, avoid siting any new critical infrastructure within the 100-year flood zone.	Community Development, Public Works	General fund	General Plan; Emergency Operations Plan	2020	Low
5.3	In coordination with utility companies and state and regional agencies, conduct a flood resiliency analysis of critical facilities and key utility and transportation infrastructure. Identify actions to reduce vulnerability and pursue funding to carry out improvements.	Public Works	General fund; grants for disaster preparedness, resiliency, etc.	Department work plans; Urban Water Management Plan; Capital Improvements Plan	2020	Low
5.4	Supplement existing drainage systems with low-impact development features as feasible.	Public Works	General fund; grants for disaster preparedness, resiliency, etc.	General Plan; department work plans; Capital Improvements Plan	2020	Low
5.5	Support the use of low-impact development in new projects, including as a condition of approval for major developments.	Community Development, Public Works	General fund	General Plan; Municipal Code	2020	Low
5.6	Maintain a supply of sandbags and other low-cost flood control measures adequate to protect public facilities at all times. Consider including additional supplies for public distributions.	Public Works	General fund; grants for disaster preparedness, resiliency, etc.	Department work plans	2020	Low
5.7	Investigate the City's ability to participate in the National Flood Insurance Program's Community Rating System to reduce local insurance premiums and further mitigate flood impacts.	Community Development, Public Works	General fund	General Plan; Municipal Code	2020	Low
6. Hazardous Materials-Related Actions						
6.1	Develop and maintain protocols to ensure that City staff and emergency responders are notified as soon as possible following a hazardous materials release, or if an emergency situation (e.g., a flood) may result in a hazardous materials release.	City Manager, Fire, Police	General fund	Emergency Operations Plan; department work plans	2016	High

Table 4.2: Westminster Hazard Mitigation Actions

#	Mitigation Action	Responsible Department	Potential Funding Source(s)	Policy Integration Opportunities	Target Completion Date	Priority
7. Extreme Heat-Related Actions						
7.1	Designate selected City and community facilities as cooling centers, ensuring that all residents have easy access to a cooling center, including those with limited mobility. Set a temperature trigger to open the cooling centers and distribute information about cooling center availability through multiple media forms.	Emergency Management, Police, Community Services	General fund; grant opportunities for disaster preparedness, resiliency, climate change, etc.	Emergency Operations Plan; department work plans	2016	High
7.2	Provide training to outdoor City workers, including landscaping, recreation, and construction staff, about the risks posed by extreme heat and ways to reduce vulnerability. Work with local businesses and community groups to encourage similar training in the private sector.	Human Resources, Public Works	General fund; grant opportunities for disaster preparedness, resiliency, climate change, etc.	Department work plans	2020	Low
7.3	Encourage new development to incorporate shade trees, high-reflectivity roofs and surfaces, and other green and hard infrastructure features to reduce the urban heat island effect. Ensure new shade trees are drought-tolerant and are able to be planted using minimal amounts of water. Consider making such conditions mandatory as appropriate for certain types of development.	Community Development, Public Works	General fund; grant opportunities for urban forestry	General Plan; Municipal Code	2020	Low
8. Severe Weather-Related Hazards						
8.1	Design future critical infrastructure to withstand wind events beyond minimum code standards.	Community Development, Public Works	General fund; grant opportunities for disaster preparedness, resiliency, etc.	General Plan; Capital Improvements Plan	2016	High

Table 4.2: Westminster Hazard Mitigation Actions

#	Mitigation Action	Responsible Department	Potential Funding Source(s)	Policy Integration Opportunities	Target Completion Date	Priority
8.2	Monitor trees and other vegetation near power lines, and promptly inform Southern California Edison of the need for any tree trimming.	Public Works	General fund	Department work plans	2020	Low
9. Disease/Pest Management-Related Hazards						
9.1	Coordinate with the Orange County Public Health Services, Orange County Vector Control District, and local medical care providers to distribute information about ways to reduce the risks associated with diseases of concern, including influenza and West Nile virus.	Emergency Management,, Fire	General fund	Emergency Operations Plan; department work plans	2020	Low
9.2	Identify areas of poor drainage or other areas with consistently stagnant water, and address through new or retrofitted drainage infrastructure.	Community Development, Public Works	General fund; grants for disaster preparedness, resiliency, etc.	Department work plans; Capital Improvements Plan	2020	Low
10. Dam Failure-Related Hazards						
10.1	Develop an outreach campaign for residents regarding the upgrades to Prado Dam and potential flooding impacts in the city associated with dam failure.	Emergency Management, Fire, Police	General fund	Emergency Operations Plan; department work plans	2020	Low

4.3 CAPABILITIES ASSESSMENT

This capabilities assessment is designed to identify existing local agencies, personnel, planning tools, public policy and programs, technology, and funds that have the capability to support hazard mitigation activities and strategies outlined in this Plan. To create this capability assessment, the LHMP team collaborated to identify current local capabilities and mechanisms available to the City for reducing damage from future natural hazard events. These plans and resources were reviewed while developing the Plan and are summarized below.

KEY RESOURCES

The City of Westminster has several key departments with resources to support the implementation of mitigation actions. These departments offer a variety of planning, technical, policy, and staffing resources as summarized in Table 4.3.

Table 4.3: Westminster Capabilities Assessment

Type of Resource	Resource Name	Ability to Support Mitigation	Web Address
Community Development Department			
Policy Resource	Development Code	The Zoning Code is the main tool to implement the City's General Plan. It sets land use regulations and the zoning map for the city. Mitigation actions outlined in this Plan can be adopted in the form of land use/development regulations.	http://www.qcode.us/codes/westminster/
Policy Resource	Building Code/Fire Code	International Building Code, International Fire Code.	http://www.iccsafe.org/Pages/default.aspx
Plan Resource	General Plan	Principal policy document that guides conservation, development, and change in the city. Identifies City programs and policies as they pertain to land use, public services, housing, natural resources, and safety. Hazard data and mitigation actions described in this Plan can be incorporated into the General Plan.	http://www.westminster-ca.gov/civicax/filebank/blobdload.aspx?BlobID=6839
Policy Resource	Housing Program	The City offers numerous referrals to programs to help residents maintain safe housing.	http://www.westminster-ca.gov/depts/cd/housing/
Plan Resource	Floodplain Management	The City supports reduction of flood losses per Chapter 8.55 Flood Damage Prevention of the Westminster Municipal Code.	http://www.qcode.us/codes/westminster/
Personnel Resource	Planning Commission	The Planning Commission meets twice every month to discuss planning and development in Westminster. It reviews and comments on the LHMP.	http://www.westminster-ca.gov/depts/cd/planning/

Table 4.3: Westminster Capabilities Assessment

Type of Resource	Resource Name	Ability to Support Mitigation	Web Address
Building and Safety Department			
Personnel Resource	Building Official	Enforces building codes and development ordinances including the Floodplain Management Regulations.	http://www.westminster-ca.gov/depts/cd/building/
Policy Resource	Inspections & Permit	Building permits ensure that development standards as well as fire and structural safety standards are met.	http://www.westminster-ca.gov/depts/cd/building/permits_n_plan.asp
City Council			
Policy Resource	Policy Approval	Policy legislation and implementation.	http://www.westminster-ca.gov/officials/mayor_council/
City Administration			
Personnel Resource	City Manager	Supports the development and implementation of this Local Hazard Mitigation Plan by allocating the appropriate personnel and resources.	Not available online.
Financial Resource	Finance	Budgeting for City-owned facilities.	Not available online.
Public Works Department			
Technical and Personnel Resources	GIS Program	GIS creates an updated zoning map and General Plan map and also maintains an interactive parcel map that residents can use to determine information about their property location.	http://www.westminster-ca.gov/services/community_view_maps/
Policy Resource	2010 Urban Water Management Plan	25 year plan to deal with water system needs and meet supply and demand projections through build-out development. The Plan utilizes information from the City Water Master Plan and the City's current water conservation and supply shortage ordinance, and reflects the latest information about future water supply and demand.	http://www.westminster-ca.gov/civicax/filebank/blobdload.aspx?blobid=9198
Policy and Plan Resource	Capital Improvement Program	The Capital Improvement Program should be informed by the strategies identified and prioritized in this plan.	http://www.westminster-ca.gov/depts/pw/engineering/capital_improvement.asp
Personnel Resource	Public Works Manager	Participates in the development and implementation of this Local Hazard Mitigation Plan.	http://www.westminster-ca.gov/depts/pw/default.asp

Table 4.3: Westminster Capabilities Assessment

Type of Resource	Resource Name	Ability to Support Mitigation	Web Address
Police Department			
Personnel Resource	Emergency Management	Coordinates preparedness training, public outreach on safety and emergency preparedness, and emergency response.	http://www.westminster-ca.gov/depts/police/admin/pdcommandstaff.asp
Personnel Resource	Police Department	Leads the development and implementation of this Local Hazard Mitigation Plan.	http://www.westminster-ca.gov/depts/police/
Policy and Plan Resource	Traffic Division, Emergency Management	Includes emergency preparedness guides for the elderly, physically challenged, and children.	http://www.westminster-ca.gov/depts/police/operations/emergency_operations/default.asp
Policy Resource	Code Enforcement	Each zoning district has specific zoning codes and guidelines that were developed to enhance and protect each district. The Police Department enforces and carries out these guidelines.	http://www.westminster-ca.gov/depts/cd/
Personnel Resource	Traffic Division Emergency Management	Coordinates with City staff on emergency preparedness, response, and mitigation activities.	www.westminster-ca.gov
Policy Resource	Traffic Division Emergency Management	Educates City employees and residents on hazards awareness, prevention, and preparedness.	www.westminster-ca.gov
Technical Resource	Police Communications	Provides a means of notification to residents and listed phone numbers during an emergency situation, allowing resident and businesses to relocate out of a potentially vulnerable area.	Fire department is not a PSAP
Technical and Staffing Resource	SEMS/NIMS/EOC Training	On an ongoing basis, Westminster Emergency Management conducts training for City personnel on their roles in an emergency based on the Standardized Emergency Management System, the National Incident Management Systems (NIMS), and National Response Framework.	Not available online.
SPECIAL DISTRICTS			
Midway City Sanitary District			
Technical Resource	Solid Waste and Wastewater services	Operates solid waste collection/disposal and wastewater collection and treatment services for the City of Westminster and portions of unincorporated Orange County (Midway City) within the City's Sphere of Influence.	http://www.midwaycitysanitarydistrict.com/

Table 4.3: Westminster Capabilities Assessment

Type of Resource	Resource Name	Ability to Support Mitigation	Web Address
Orange County Fire Authority			
Personnel Resource	Fire Chief, Suppression, Rescue, Paramedic Personnel	Provides emergency response, fire prevention education,	http://www.ocfa.org/AboutUs/AboutOCFA.aspx#message
Policy Resource	Orange County Fire; Building Inspections and Permits	The Orange County Fire Department provides recurring fire prevention inspections of buildings in the city and provides plan check and permit functions for commercial development addressing fire code standards.	http://www.ocfa.org/Business/PlanningAndDevelopment.aspx
Orange County Water District			
Plan Resource	Groundwater Management Plan	A long-range planning document to aid in updating city and county general plans and for preparation of environmental documents under the California Environmental Quality Act. Serves as a detailed source of information to coordinate local water supply availability and certain land use decisions made by cities and counties. Identifies adequate water supplies and proper planning and funding of future water infrastructure improvements.	http://www.ocwd.com/Portals/0/News/PublicationsReports/GWMPJuly2009Update.pdf
Plan Resource	Water Emergency Response Organization of Orange County (WEROC)	WEROC coordinates and supports an effective emergency response to a major disaster on behalf of all Orange County water and wastewater agencies. To carry out this mission, WEROC provides services that promote planning and preparedness activities for both the agencies, as well as its own Emergency Operations Center (EOC) volunteer staff. The program also takes an active role in maintaining two EOCs.	http://www.mwdoc.com/weroc
County of Orange			
Technical Resource	Flood Control (Department of Public Works)	Provides flood protection and regulation and stormwater services. Assists the City in protecting the public's health, safety, and welfare through superior engineering, maintenance, operations, and administrative services that incorporate customer service and integrity with competence and productivity for a sustained commitment to excellence.	http://media.ocgov.com/gov/pw/om/sections/flood/default.asp
Plan Resource	Operational Area Hazard Mitigation Plan	Identifies hazards and mitigation actions for Orange County critical facilities.	http://hazardmitigation.calema.ca.gov/docs/lhmp/Orange_County_LHMP.pdf

Table 4.3: Westminster Capabilities Assessment

Type of Resource	Resource Name	Ability to Support Mitigation	Web Address
Plan Resource	Operational Area Emergency Operations Plan	Overall emergency management plan for the Orange County Operational Area.	http://cams.ocgov.com/Web_Publisher/Agenda06_24_2014_files/images/O00214-000956E.PDF
Plan Resource	Orange County General Plan 2005	Provides policies intended to reduce hazards and disasters within Orange County.	http://ocplanning.net/planning/generalplan2005
State and Federal Agencies			
Technical Resource	National Weather Service (NWS)	Decision Support Program (improved forecast interpretations for making informed decisions).	http://www.weather.gov/
Technical Resource	California Office of Emergency Services (Cal OES)	Hazard Mitigation Web Portal provides guidance and examples of hazard mitigation planning as well as notifications regarding available funding.	http://hazardmitigation.calema.ca.gov/
Technical Resource	Federal Emergency Management Agency (FEMA)	Guidance for hazard mitigation planning processes and resources.	http://www.fema.gov/multi-hazard-mitigation-planning

FISCAL CAPABILITY

City of Westminster Budget Department Overview

The following summarizes Westminster's fiscal capabilities in terms of the City's financial resources and allocated spending. Sales tax and property tax are the primary sources of Westminster's financial resources. The City has allocated the majority of these financial resources to City Council, City Manager, Community Development, Community Services, Administrative Services (Finance and Human Resources/Risk Management), Police, and Public Works departments, which are all relevant for implementing hazard mitigation actions. These departments all have a general fund that could be used toward mitigation activities. These departments also have budgets used to employ City staff members who are an integral part of the mitigation planning process:

- The **City Council** is comprised of a Mayor, Mayor Pro Tem, and three City Council members.
- The **City Manager's** office includes the City Manager, Assistant City Manager, and an Executive Assistant
- The **Community Services Department** includes the Community Services Director and a variety of full time and part time staff positions that support recreation and community service needs for residents of the City.
- The **Administrative Services Department** oversees the City's Finance and Human Resources and Risk Management Departments. The Administrative Services Director manages this department for the City.
    - The ***Finance Department*** is housed within the Administrative Services Department and includes an Accounting Manager and Financial Services Manager as well as a variety of support staff that handle the City's accountin and financial needs.
    - The ***Human Resources and Risk Management Department*** is housed within the Administrative Services Department and oversees the City's insurance, benefits and human resource needs.
- The **Community Development Department** includes a Community Development Director, Planning Division Manager, five planners/technicians, Housing coordinator, housing administrative analyst, Building Official, plan check engineer, and two inspectors, as well as supporting staff.
- The **Public Works Department** includes a public works director/chief engineer, water superintendent, public works manager, civil engineer principal and a variety of maintenance, operations, engineering, and administrative support staff.
- The **Police Department** employs a command staff, police officers, and public safety staff.

Capital Improvement Projects: 2013-2015

The Capital Improvement Projects (CIP) Budget is an important part of the City's budget and was adopted by the City Council on June 26, 2013 as part of the Fiscal Year 2013-15 budget process. The CIP Budget presents a total 99 ongoing capital improvement projects with existing capital appropriations totaling over $48 million and 18 new capital improvement projects totaling $8.6 million in funding for fiscal year 2013-14. These projects provide funding for needed repairs, replacements, and improvements to streets, water infrastructure, parks, public buildings, vehicles and equipment.

Orange County Fire Authority Financial Statements

The City of Westminster contracts with the Orange County Fire Authority (OCFA) for fire protection services. In addition, OCFA provides public education programs to schools, businesses, community associations, childcare providers and other members of the community. They also coordinate the inspection of all commercial buildings, investigate all fires and enforce hazardous materials regulation. The City of Westminster's 2014/15 budget for fire services is approximately $11.4 million, which is paid from the City's General Fund. This funding level supports 63 full time equivalent positions within the three fire stations located within the City.

Orange County Water District Financial Statements

The Orange County Water District budget includes infrastructure maintenance, implementation of surface/groundwater management, water conservation, and customer maintenance, all of which help ensure access to water for the residents of Westminster.

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CHAPTER 5
PLAN MAINTENANCE AND CAPABILITIES

This chapter identifies the formal process that will ensure that the Plan remains an active and relevant document. The Plan maintenance process includes a schedule for monitoring and evaluating the Plan annually and revising the plan every five years.

This chapter describes how Westminster will integrate public participation throughout the Plan maintenance and implementation process. It also describes how the City intends to incorporate the mitigation actions outlined in this Plan into existing planning mechanisms and programs. These include the Westminster General Plan and the City's Capital Improvement Program, as well as code enforcement and implementation. The Plan's format allows the City to readily update sections when new data becomes available, resulting in a Plan that will remain current and relevant to the City of Westminster.

5.1 MONITORING, EVALUATING, AND UPDATING THE PLAN

COORDINATING BODY

The Westminster LHMP team will be responsible for the maintenance of this LHMP. The City of Westminster Police Department under the direction of the Emergency Management Coordinator will take the lead in LHMP maintenance issues, by coordinating maintenance of this Plan and undertaking the formal review process and the future updates of the LHMP. Key City departments and staff positions are identified below:

- **Community Development Department**
  - Community Development Director
  - Planning Manager
  - Building Official
- **Public Works Department**
  - Public Works Director / City Engineer
  - Public Works Manager
  - Water Superintendent
  - Civil Engineer Principal
- **Police Department**
  - Chief of Police
  - Emergency Management Coordinator
  - Code Enforcement Manager
  - Crime Prevention Specialist
- **Administrative Services Department**
  - Administrative Services Director

- **Finance Department**
  - Accounting Manager
  - Financial Services Manager
- **Human Resources/Risk Management**
  - Risk Management/Benefits Officer
- **Community Services**
  - Community Services Director

The City of Westminster Emergency Management Coordinator will facilitate the LHMP team meetings, and will assign tasks such as updating and presenting the Plan to other departments, stakeholder groups, and/or elected officials. Plan implementation and evaluation will be a shared responsibility among all LHMP team members.

EVALUATION

The minimum task of the ongoing annual LHMP team meeting will be the evaluation of the progress of the Plan and incorporating the actions into other planning documents. These annual meetings will commence in 2017. These annual meetings will be conducted during the month of April in conjunction with departmental budget planning for the next fiscal year. This review will include the following:

- Summary of any hazard events that occurred during the prior year and their impacts on the community.
- Review of successful mitigation initiatives identified in the Plan.
- Brief discussion about why targeted mitigation strategies were not completed.
- Reevaluation of the mitigation actions to determine if the timeline for identified projects needs to be amended (such as changing a long-term project to a short-term project due to funding availability).
- Recommendations for new mitigation actions.
- Changes in, or potential for, new funding options/grant opportunities.
- Integration of new GIS data and maps that can be used to inform the Plan.
- Evaluation of any other planning programs or initiatives within the city that involve hazard mitigation.

The City will create a template to guide the LHMP team in preparing a progress report. The City will also prepare a formal annual report on the progress of the LHMP. This report will be used as follows:

- Distributed to City department heads for review.
- Posted on the City website on the page dedicated to the Plan, with the ability for the public to provide comments.
- Provided to the local media through a press release.
- Presented in the form of a council report to the City Council.

5.2 METHOD AND SCHEDULE FOR UPDATING THE PLAN WITHIN FIVE YEARS

Section 201.6.(d)(3) of Title 44 of the Code of Federal Regulations requires that local hazard mitigation plans be reviewed, revised if appropriate, and resubmitted for approval in order to remain eligible for benefits awarded under the DMA. The City intends to update the Plan on a five-year cycle from the date of initial plan adoption. It is anticipated that this update process will occur one year prior to expiration of the existing plan. This cycle may be accelerated to less than five years based on the following triggers:

- A presidential disaster declaration that impacts the City of Westminster.
- A hazard event that causes loss of life.

The intent of the update process will be to add new planning process methods, community profile data, hazard data and events, vulnerability analyses, mitigation actions, and goals to the adopted Plan so that the Plan will always be current and up to date. Based on the needs identified by the planning team, the update will, at a minimum, include the elements below:

1) The update process will be convened through a committee appointed by the Director of each City department and will consist of at least one staff member from each department to ensure consistency between Plans. The City should reach out to local agencies at the onset of the update process and involve any relevant external agencies that are interested in participating in the LHMP update. This update process will begin in 2020, one year prior to the expiration of this Plan.
2) The hazard risk assessment will be reviewed and updated using best available information and technologies on an annual basis.
3) The evaluation of critical structures and mapping will be updated and improved as funding becomes available.
4) The mitigation actions will be reviewed and revised to account for any actions completed, deferred, or changed to account for changes in the risk assessment or new City policies identified under other planning mechanisms, as appropriate (such as the General Plan).
5) The draft update will be sent to appropriate agencies for comment.
6) The public will be given an opportunity to comment prior to adoption.
7) The draft update will be transmitted to Cal OES and FEMA for review and approval.
8) The Westminster City Council will adopt the updated Plan within one year of the commencement of the update process.

5.3 ADOPTION

The Westminster City Council is responsible for final adoption of the Plan. This adoption should take place every five years upon receipt of notification from FEMA that the plan is Approved Pending Adoption (APA). Once the Plan has been adopted, the City of Westminster Police Department will be responsible for transmitting the adopted version to FEMA for their records.

5.4 IMPLEMENTATION THROUGH EXISTING PROGRAMS

The effectiveness of the City's non-regulatory LHMP depends on the implementation of the Plan and incorporation of the outlined mitigation action items into existing City plans, policies, and programs. The Plan includes a range of action items that, if implemented, would reduce loss from hazard events in the city. Together, the mitigation action items in the Plan provide the framework for activities that the City can choose to implement over the next five years. The City has prioritized the Plan's goals and identified actions that will be implemented (resources permitting) through existing plans, policies, and programs.

The Police Department has the responsibility for overseeing the Plan's implementation and maintenance through the City's existing programs. The Emergency Management Coordinator, or designated appointee, will assume lead responsibility for facilitating LHMP implementation and maintenance meetings. Although the Police Department will have primary responsibility for review, coordination, and promotion, plan implementation and evaluation will be a shared responsibility among all departments identified as lead departments in the mitigation action plan. Incorporating into Existing Planning Mechanisms

The information on hazards, risk, vulnerability, and mitigation contained in this Plan is based on the best information and technology available at the time the LHMP was prepared. As previously stated, the City's General Plan is considered to be an integral part of this plan. The City, through adoption of its General Plan Safety Element goals, has planned for the impact of natural hazards. The LHMP process has allowed the City to review and expand upon the policies contained within the General Plan Safety Element. The City views the General Plan and the LHMP as complementary planning documents that work together to achieve the ultimate goal of the reduction of risk exposure to the citizens of Westminster. Many of the ongoing recommendations identified in the mitigation strategy are programs recommended by the General Plan and other adopted plans. The City will coordinate the recommendations of the LHMP with other planning processes and programs including the following:

- Westminster Capital Improvement Program
- Westminster Building Codes
- Westminster Emergency Operations Plan

5.5 CONTINUED PUBLIC INVOLVEMENT

The public will continue to be apprised of the LHMP actions through the City website and through the provision of copies of the annual progress report to the media. Copies of the Plan will be distributed to the Orange County Library System. Upon initiation of the LHMP update process, a new public involvement strategy will be developed based on guidance from the planning team. This strategy will be based on the needs and capabilities of the City at the time of the update. At a minimum, this strategy will include the use of the City's website as well as local media outlets within the planning area.

5.6 POINT OF CONTACT

Preparation and future update of the City's Local Hazard Mitigation Plan will be the responsibility of the City's Emergency Management Coordinator:

City of Westminster Police Department

714 898-3315 x4664

CITY OF WESTMINSTER

LOCAL HAZARD MITIGATION PLAN

TECHNICAL APPENDICES

Prepared for:

CITY OF WESTMINSTER
8200 WESTMINSTER BLVD.
WESTMINSTER, CA 92683

Prepared by:

Michael Baker INTERNATIONAL

3900 KILROY AIRPORT WAY, SUITE 120
LONG BEACH, CA 90806

March 2016

APPENDIX A – LHMP TEAM DOCUMENTS

1. LHMP TEAM MEETING DOCUMENTATION

Meeting Materials

Westminster Hazard Mitigation Planning Technical Advisory Committee

Kickoff Meeting: October 1, 2014

Included Materials:

- Meeting agenda
- Project overview
- Planning teams and advisory committee
- Schedule and next steps
- Sign-in sheet

City of Westminster Kick Off Meeting

Date: October 1, 2014

Agenda

1. **Introductions** (5 minutes)
2. **Project Overview** (20 minutes)
    a. **Local Hazard Mitigation Plan**
    b. **Emergency Operations Plan**
3. **LHMP/EOP Planning Teams** (5 minutes)
4. **LHMP Technical Advisory Committee** (5 minutes)
5. **Critical Facilities** (20 minutes)
6. **Schedule/Next Steps** (5 minutes)

Project Overview

The City of Westminster received a grant from the Disaster Recovery Initiative administered through the State of California Housing and Community Development Department. Based on the grant funding received, the City is embarking on an update to the existing Emergency Operations Plan and preparation of a Local Hazard Mitigation Plan.

Local Hazard Mitigation Plan

DMA 2000 (Public Law 106-390) provides the legal basis for FEMA mitigation planning requirements for State, local and Indian Tribal governments as a condition of mitigation grant assistance. DMA 2000 amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act by repealing the previous mitigation planning provisions and replacing them with a new set of requirements that emphasize the need for State, local, and Indian Tribal entities to closely coordinate mitigation planning and implementation efforts. The requirement for a State mitigation plan is continued as a condition of disaster assistance, adding incentives for increased coordination and integration of mitigation activities at the State level through the establishment of requirements for two different levels of state plans. DMA 2000 also established a new requirement for local mitigation plans and authorized up to 7 percent of HMGP funds available to a State for development of State, local, and Indian Tribal mitigation plans.

Completion and acceptance of the City's LHMP by FEMA opens up access to the following competitive FEMA grant programs for the next 5 years:

- Hazard Mitigation Grant Program (HMGP)
- Pre-Disaster Mitigation (PDM)

Under these programs up to 75% of the cost of an implementation project would be covered by a FEMA grant.

Emergency Operations Plan (consistent with CPG 101)

Comprehensive Preparedness Guide (CPG) 101 provides guidelines on developing emergency operations plans (EOP). It promotes a common understanding of the fundamentals of risk-informed planning and decision making to help planners examine a hazard or threat and produce integrated, coordinated, and synchronized plans. The goal is to make the planning process routine across all phases of emergency management and for all homeland security mission areas. This Guide helps planners at all levels of government in their efforts to develop and maintain viable all-hazards, all-threats EOPs. Accomplished properly, planning provides a methodical way to engage the whole community in thinking through the life cycle of a potential crisis, determining required capabilities, and establishing a framework for roles and responsibilities. It shapes how a community envisions and shares a desired outcome, selects effective ways to achieve it, and communicates expected results. Each jurisdiction's plans must reflect what that community will do to address its specific risks with the unique resources it has or can obtain.

Goals of the Project:

1. Ensure reliable and resilient infrastructure for today and future generations.
2. Ensure the effective delivery of emergency services during a disaster.
3. Maintain adequate City function and quality of life.

Project Objectives as discussed in the meeting:

A. Continued coordination and mutual aid with surrounding agencies and entities.
B. Conduct routine training and exercises to ensure preparedness for emergencies and disasters.
C. Improve communication and access to data/information in the field during an emergency/disaster event.
D. Foster better communication and coordination within the City and surrounding areas.
E. Address aging infrastructure issues to reduce/minimize future hazards and disasters.

LHMP/EOP Planning Teams

This core team of City staff members will participate in actively reviewing and commenting on the City's Local Hazard Mitigation Plan and Emergency Operations Plan. The following is a listing of City departments that should be involved, with those identified in bold as key participants for the LHMP. At least one staff member from each department should be in attendance for any meetings schedule for the project.

- Administrative Services
- Building Division
- City Clerk
- City Manager
- Community Services
- Fire (Orange County Fire Authority)
- Housing Division
- Planning Division
- Police
- Public Works

LHMP Technical Advisory Committee (TAC)

In addition to the Hazard Mitigation Planning Team, it is recommended that a larger TAC be created to review and comment on the plan/process. This TAC will include all Planning Team members from above, as well as members selected by the City. Below is a list of suggested agencies that could be engaged, with recommendations provided in bold.

- California Highway Patrol
- Coastline Community College
- Garden Grove Unified School District
- Huntington Beach Union High School District
- Kindred Hospital Westminster (employer)
- Midway City Sanitary District
- Orange County Flood Control District
- Orange County Health Care Agency
- Orange County Public Administrator
- Orange County Public Libraries – Westminster Branch Library
- Orange County Public Works
- Orange County Sanitation District
- Orange County Sheriff's Department
- Red Cross of Santa Ana
- Southern California Edison (employer)
- Vietnamese Chamber of Commerce
- Westminster Chamber of Commerce
- Westminster Mall
- Westminster Memorial Park & Mortuary
- Westminster School District

Critical Facilities

See attached excel spreadsheet.

Schedule/Next Steps

LHMP Schedule

Kick Off Meeting	10/1/2014
LHMP Meeting #1	November 12th, 2014
LHMP Meeting #2	January 2015
LHMP Meeting #3	March 2015
Draft LHMP Document Complete	April 2015
Public Review Draft LHMP Released	May 2015
Draft LHMP Submitted to FEMA	July 2015
FEMA Review Complete	TBD (May take 6 months)
City Council Adoption	TBD (Dependent on FEMA review schedule)

EOP Schedule

Kick Off Meeting	10/1/2014
EOP Meeting #1	December 9th 2014
EOP Meeting #2	February 2015
EOP Meeting #3	April 2015
EOP Meeting #4	June 2015
Basic Plan Complete	August 2015
Implementation/Maintenance	September 2015

Attendee Sign In Sheet

Name	Department/Company	Telephone	Email
Diana Dobbert	Community Services	714-548-8665	ddobbert@westminster-ca.gov
Michael Solorza	Administrative Services	714-548-3190	msolorza@westminster-ca.gov
Jim Kingsmill	Police Department	714-548-3846	jkingsmill@westminster-ca.gov
Chet Simmons	City Manager's Office	714-548-3169	csimmons@westminster-ca.gov
Robert Acosta	Orange County Fire Authority	714-483-0911	robertacosta@ocfa.org
Marwan Youssef	Public Works	714-548-3860	myoussef@westminster-ca.gov
Soroosh Rahbari	Building Division	714-548-3468	srahbari@westminster-ca.gov
Art Bashmakian	Community Development	714-548-3484	abashmakian@westminster-ca.gov
Robin Roberts	City Clerk's Office	714-548-3177	rroberts@westminster-ca.gov
Marc Stone	Orange County Fire Authority	714-319-4657	marcstone@ocfa.org

Attendee Sign-In Sheet

Name	Department/Company	Telephone	E-Mail
ROBERT ACOSTA	OCFA (FIRE)	714-783-0911	robertacosta@ocfa.org
Marwan Youssef	PW	714-548-3460	myoussef@westminster-ca.gov
SOROOSH RAHBARI	BLDG	" " -3468	SRAHBARI@ " "
Art Bashmakian	Community Development	714-548-3484	abashmakian@ " "
Robert Ruiz	City Clerk	714 548 3177	Rruiz@westminster-ca.gov
MARC STONE	OCFA (FIRE)	714-319-4657	MARCSTONE@OCFA.ORG

Attendee Sign-In Sheet

Name	Department/Company	Telephone	E-Mail
Diana Dobbert	Community Services	714-548-3665	ddobbert@westminster-ca.gov
MICHAEL SOLORZA	ADMIN SERVICES DEPT	714-548-3190	msolorza@westminster-ca.gov
JIM KINGSMILL	POLICE DEPARTMENT	714 548-3846	JKINGSMILL@WESTMINSTER-CA.GOV
Chet Simmons	City Manager Office	714 548-3169	csimmons@westminster-ca.gov

Meeting Materials

Westminster Hazard Mitigation Planning Technical Advisory Committee

Meeting 1: November 12, 2014

Included Materials:

- Meeting agenda
- Meeting presentation
- List of critical facilities
- Sign-in sheet

City of Westminster Hazard Mitigation Planning TAC

Meeting Agenda

Subject:	Hazard Mitigation Plan TAC Meeting 1	**Date:** **Time:**	November 12, 2014 9:30 AM -11:30 AM
Leader:	Aaron Pfannenstiel Project Manager	**Location:**	Emergency Operations Center 8200 Westminster Blvd. Westminster, CA 92683
Purpose:	Overview of LHMP process, Identification and prioritization of community hazards		
Attendees:	Refer to Sign-In Sheet		
Primary POC	City of Westminster – Sgt. Jim Kingsmill, (714) 548-3846, jkingsmill@westminster-ca.gov PMC – Aaron Pfannenstiel, 909-806-0450, ajp@pmcworld.com		

Item	Description	Lead	Est. Time
1	Welcome and Introductions	Aaron/ Al Panella	5-10 Minutes
2	Overview of hazard mitigation plan requirements/process	Aaron	10-15 minutes
3	Finalize critical facilities list Discuss Project Goals	Aaron	10-15 minutes
4	Identify/Discuss past hazard events	Aaron	30-45 minutes
5	Determine hazards and prioritization	Aaron	20-30 minutes
6	Action Items / Closing	Aaron/ Al Panella	5-10 minutes

City of Westminster
Local Hazard Mitigation Plan

Advisory Committee Meeting 1

November 12, 2014

Meeting Objectives

- Overview of hazard mitigation plan requirements/process
- Finalize critical facilities list
- Discuss Project Goals
- Discuss past hazard events
- Determine hazards and prioritization
- Review action items

LHMP Development

Plan Requirements – Hazard Identification and Risk Assessment

- Describe all hazards that affect the community.
- Provide rationale for excluding recognized hazards.
- Hazard profile
  - Location
  - Extent
  - Past occurrences
  - Chance of future events
- Vulnerability Assessment
  - City's vulnerability to each hazard
  - Potential impacts of each hazard (number and importance of affected structures and areas)
  - Identifies repetitive loss properties
  - Includes potential dollar losses

Plan Requirements – Mitigation Strategy

- Goals
- Identification and analysis of mitigation actions
  - Comprehensive
  - Focus on built environment
- Action Plan
  - Prioritizes actions
  - Describes implementation and administration
  - Includes cost-benefit review
- Strategy identifies existing authorities, policies, programs, and resources to mitigate hazards
- Includes description of participation in National Flood Insurance Program

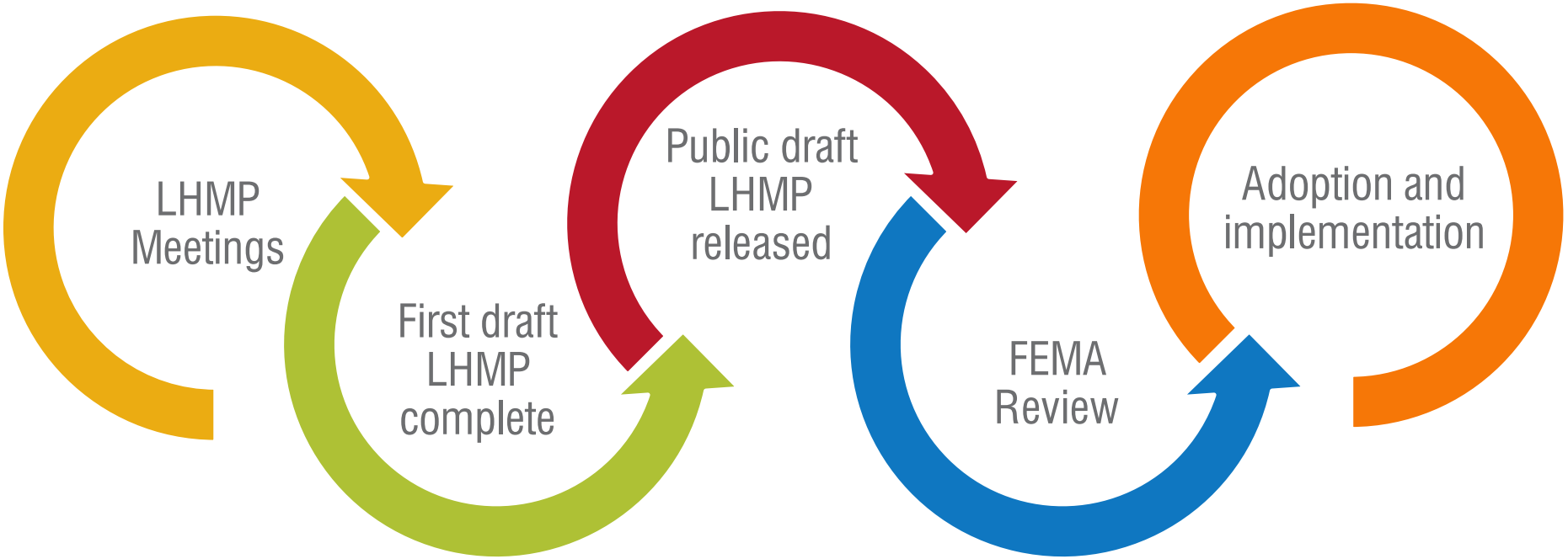
Responsibilities

- Our job
  - Facilitate the process
  - Provide technical expertise
  - Do the heavy work
- Your job
  - Participate
  - Make final decisions
  - Ensure plan is feasible and meets needs

Timeline

Task	Timeframe
Kick-off meeting	October 2014
LHMP Meeting 1	**November 2014**
LHMP Meeting 2	January 2015
LHMP Meeting 3	March 2015
Draft LHMP complete	April 2015
Public Review Draft LHMP complete	May 2015
Draft LHMP submitted to FEMA	July 2015
FEMA review	Up to 6 months
City Council adoption	Following FEMA review

Timeline



November 2014 – March 2015	April 2015	May 2015	Second half 2015	Following FEMA review

Data Needs

- Every person can provide vital data
  - GIS data
  - Information and experience about past events
  - Institutional knowledge
- If you have useful data, please contact Jim Kingsmill

(714) 548-3846
jkingsmill@westminster-ca.gov

Critical Facilities

Critical Facilities

- City Facility
  - Westminster City Hall
  - City Senior Center
  - Water Department
  - Police Department
  - Municipal Corporation Yard
  - Family Resource Center
- OCFA Facility
  - Fire Station 25
  - Fire Station 64
  - Fire Station 65
  - Fire Station 66
- Infrastructure
  - I-405 Overpass at Valley View Street
  - I-405 Overpass at Westminster Boulevard
  - Westminster Boulevard SR-22 Overpass at Beach Boulevard

Critical Facilities Part II

Public Facility (Non-City Ownership)

- DeMille Elementary School
- Eastwood Elementary School
- Finley Elementary School
- Fryberger Elementary School
- Hayden Elementary School
- John Marshall Elementary School
- Johnson Intermediate School/Finley Elementary School
- Johnson Middle School
- La Quinta High School
- Land Student Services and Child Development
- Leo Carillo Elementary School
- Post Elementary School
- Sarah McGarvin Intermediate School
- Schmitt Elementary School
- Sequoia Elementary School
- Star View Elementary School
- Susan B. Anthony Elementary School
- Warner Middle School
- Webber Elementary School
- Westminster High School
- Willmore Elementary School

Critical Facilities Part III

Private Properties (Facilities of Concern)

- Cambridge Heights
- Cinnamon Creek Apartments
- Coventry Heights
- Edison Facility
- Emeritus Assisted Living
- Huntington Westminster
- Kindred Hospital Westminster
- Little Saigon Plaza
- Los Alisos Mobile Home Park
- Magnolia Place
- Orange Gate Plaza
- Pacific Royale
- Springdale Villa Apartments
- U-Haul
- Westminster Center
- Westminster Gateway
- Westminster Mall
- Westminster Senior Apartments
- Westminster Terrace

Goals for Hazard Mitigation Planning

PMC®

Goals

1: Ensure reliable and resilient infrastructure for today and future generations.

2: Ensure the effective delivery of emergency services during a disaster.

3: Maintain adequate City functions and quality of life.

Hazard Identification and Prioritization

FEMA-Suggested Hazards

Avalanche	Flood	Seismic hazards
Climate change	Geological hazards	Severe winter storm
Coastal erosion	Hailstorm	Tornado
Coastal storm	Hazardous materials	Tsunami
Dam failure	Human-caused hazards	Volcano
Disease/pest management	Hurricane	Wildfire
Drought	Land subsidence	Wind
Earthquake fault rupture	Landslide and mudflow	Windstorm
Expansive soils	Liquefaction	
Extreme heat	Sea level rise	

Relevant Hazards

Avalanche	Flood	Seismic hazards
Climate change	Geological hazards	Severe winter storm
Coastal erosion	Hailstorm	Tornado
Coastal storm	Hazardous materials	Tsunami
Dam failure	Human-caused hazards	Volcano
Disease/pest management	Hurricane	Wildfire
Drought	Land subsidence	Wind
Earthquake fault rupture	Landslide and mudflow	Windstorm
Expansive soils	Liquefaction	
Extreme heat	Sea level rise	

Hazard Prioritization

- Four criteria
  - Probability (likelihood of occurrence)
  - Location (size of potentially affected area)
  - Maximum Probable Extent (intensity of damage)
  - Secondary Impacts (severity of impacts to community)
- A value of 1-4 is assigned for each criteria
- Every criteria has an Importance Score
  - Can be used to weigh the influence of an individual criterion
  - Criteria and Importance values are combined to calculate a Total Score

Score Example: Windstorm

Probability

Importance score: 2.0

Unlikely (1)	Occasional (2)	**Likely (3)**	Highly Likely (4)

Probability score: 2.0 x 3 = 6

Location

Importance score: 0.8

Negligible (1)	Limited (2)	Significant (3)	**Extensive (4)**

Affected Area score: 0.8 x 4 = 3.2

Score Example: Windstorm

Maximum Probable Extent

Importance score: 0.7

Weak (1)	**Moderate (2)**	Severe (3)	Extreme (4)

Primary Impact score: 0.7 x 2 = 1.4

Secondary Impacts

Importance score: 0.5

Negligible (1)	Limited (2)	Moderate (3)	High (4)

Secondary Impacts score: 0.5 x 4 = 0.5

Score Example: Windstorm

Impact

Affected Area Score (3.2)	Primary Impact Score (1.4)	Secondary Impact Score (0.5)

Impact score: 3.2 + 1.4 + 0.5 = 5.1

Total Score

Impact Score (5.1)	Probability Score (6)

Total Score: 5.1 x 6 = 30.6

Low: 0-12	Medium: 12.1-42	High: 42.1 and up

Hazard Prioritization Exercise

- Go to the Workbook

Plan Requirements – Planning Process

- Describe:
  - How the plan was prepared
  - Who was involved
  - Opportunities for public and stakeholder involvement
  - Review and inclusion of existing plans, reports, studies, etc.
  - Continual public participation
  - Monitoring and updating of the plan
- Stakeholders must include:
  - Local and regional agencies involved in hazard mitigation
  - Agencies that regulate development
  - Neighborhood communities

Plan Requirements – Planning Process
Planning Team

- Administrative Services
- Building Division
- City Clerk
- City Manager
- Community Services
- Fire (Orange County Fire Authority)
- Housing Division
- Planning Division
- Police
- Public Works

Plan Requirements – Planning Process Technical Advisors

- California Highway Patrol
- Coastline Community College
- Garden Grove Unified School District
- Huntington Beach Union High School District
- Kindred Hospital Westminster
- Midway City Sanitation District
- Orange County Flood Control District
- Orange County Health Care Agency
- Orange County Public Administrator
- Orange County Public Libraries – Westminster Branch
- Orange County Public Works
- Orange County Sanitation District
- Orange County Sheriff's Department
- Southern California Edison
- Vietnamese Chamber of Commerce
- Westminster Chamber of Commerce
- Westminster Mall
- Westminster Memorial Park and Mortuary
- Westminster School District

FC Channel @ Beach & Hazard
10th Street 100-lying Flooding

Facility ID	Facility Name/Description	Facility Address	Ownership
1	Westminster City Hall	8200 Wesminster Boulevard, Westminster, CA 92683	City facility
2	~~City Senior Center~~	8200 Wesminster Boulevard, Westminster, CA, 92683	City facility
3	Water Department	8200 Wesminster Boulevard, Westminster, CA, 92683	City facility
4	Police Department	8200 Wesminster Boulevard, Westminster, CA, 92683	City facility
5	Municipal Corporation Yard	14381 Olive Street, Westminster, CA 92683	City facility
6	Family Resource Center	7200 Plaza Street, Westminster, CA 92683	City facility
7	Fire Station 25	8171 Bolsa Avenue, Midway City, CA 92655	County facility
8	Fire Station 64	7351 Westminster Boulevard, Westminster, CA 92683	City ~~County~~ facility
9	Fire Station 65	6061 Hefley Street, Westminster, CA 92683	City ~~County~~ facility
10	Fire Station 66	15061 Moran Street, Westminster, CA 92683	City. ~~County~~ facility
11	I-405 Overpass at Valley View Street	33.774625, -118.037716	Public infrastructure
12	I-405 Overpass at Westminster Boulevard	33.759021, -118.021945	Public infrastructure
13	SR-22 Overpass at Beach Boulevard	33.771127, -117.992398	Public infrastructure
14	DeMille Elementary School	15400 Van Buren, Midway City, CA 92655	Public facility (non-City ownership)
15	Eastwood Elementary School	13552 University Street, Westminster, CA, 92683	Public facility (non-City ownership)
16	Finley Elementary School	13521 Edwards Street, Westminster, CA 92683	Public facility (non-City ownership)
17	Fryberger Elementary School	6952 Hood Drive, Westminster, CA 92683	Public facility (non-City ownership)
18	Hayden Elementary School	14782 Eden Street, Midway City, CA 92655	Public facility (non-City ownership)
19	John Marshall Elementary School	15791 Bushard Street, Westminster, CA 92683	Public facility (non-City ownership)

Facility ID	Facility Name/Description	Facility Address	Ownership
20	Johnson Intermediate School/Finley Elementary School	13521 - 13603 Edwards Street, Westminster, CA, 92683	Public facility (non-City ownership)
21	Johnson Middle School	13603 Edwards Street, Westminster, CA 92683	Public facility (non-City ownership)
22	La Quinta High School	10372 West McFadden Avenue, Westminster, CA, 92683	Public facility (non-City ownership)
23	Land Student Services and Child Development	15151 Temple Street, Westminster, CA 92683	Public facility (non-City ownership)
24	Leo Carillo Elementary School	15270 Bushard Street, Westminster, CA 92683	Public facility (non-City ownership)
25	Post Elementary School	14641 Ward Street, Westminster, CA 92683	Public facility (non-City ownership)
26	Sarah McGarvin Intermediate School	9802 Bishop Place, Westminster, CA 92683	Public facility (non-City ownership)
27	Schmitt Elementary School	7200 Trask Avenue, Westminster, CA 92683	Public facility (non-City ownership)
28	Sequoia Elementary School	5900 Iroquois Road, Westminster, CA, 92683	Public facility (non-City ownership)
29	Star View Elementary School	8411 Worthy Drive, Midway City, CA, 92655	Public facility (non-City ownership)
30	Susan B. Anthony Elementary School	15320 Pickford Street, Wesminster, CA 92683	Public facility (non-City ownership)
31	Warner Middle School	14171 Newland Street, Westminster, CA 92683	Public facility (non-City ownership)
32	Webber Elementary School	14142 Hoover Street, Westminster, CA 92683	Public facility (non-City ownership)
33	Westminster High School	14325 Goldenwest Street, Westminster, CA, 92683	Public facility (non-City ownership)
34	Willmore Elementary School	7122 Maple Street, Westminster, CA 92683	Public facility (non-City ownership)

Facility ID	Facility Name/Description	Facility Address	Ownership
35	Cambridge Heights	7541 Wyoming Street, Westminster, CA, 92683	Private property
36	Cinnamon Creek Apartments	15123 Brookhurst Street, Westminster, CA, 92683	Private property
36	Coventry Heights	7521 Wyoming Street, Westminster, CA, 92683	Private property
38	Edison Facility	7300 Fenwick Lane, Westminster, CA 92683	Private property
39	Emeritus Assisted Living	15302 Brookhurst Street, Westminster, CA, 92683	Private property
40	Huntington Westminster	13810 - 13960 Hoover Street, Westminster, CA, 92683	Private property
41	Kindred Hospital Westminster	200 Westminster Circle, Westminster, CA, 92683	Private property
42	Little Saigon Plaza	14841 Moran Street, Westminster, CA 92683	Private property
43	Los Alisos Mobile Home Park	5772 Garden Grove Boulevard, Westminster, CA, 92683	Private property
44	Magnolia Plaza	14014-14085 Magnolia Street, Westminster, CA 96283	Private property
45	Orange Gate Plaza	5405 Garden Grove Boulevard, Westminster, CA 92683	Private property
46	Pacific Royale	15200 Pacific Street, Midway City, CA, 92655	Private property
47	Springdale Villa Apartments	6000 Garden Grove Boulevard, Westminster, CA, 92683	Private property
48	U-Haul	15182 Beach Boulevard, Westminster, CA, 92683	Private property
49	Westminster Center	6611 - 6971 Westminster Boulevard, Westminster, CA, 92683	Private property
50	Westminster Gateway	13225 - 13441 Beach Boulevard, Westminster, CA, 92683	Private property
51	Westminster Mall	1025 Westminster Mall, Westminster, CA, 92683	Private property
52	Westminster Senior Apartments	7632 21st Street, Westminster, CA, 92683	Private property
53	Westminster Terrace	7571 Westminster Boulevard, Westminster, CA, 92683	Private property

SIGN-IN SHEET

City of Westminster Local Hazard Mitigation Plan Technical Advisory Committee
Wednesday, November 12, 2014 9:30 - 11:30 am

Name	Organization/ Dept.	Phone	Email address	Attendance (Initial)
Robert Acosta	Orange County Fire Authority	(714) 483-0911	robertacosta@ofca.org	
Art Bashmakian	Community Development	(714) 548-3484	abashmakian@westminster-ca.gov	AB
Diana Dobbert	Community Services	(714) 548-8665	ddobbert@westminster-ca.gov	DD
Jim Kingsmill	Police Department	(714) 548-3846	jkingsmill@westminster-ca.gov	
Soroosh Rahbari ✓	Building Division	(714) 548-3468	srahbari@westminster-ca.gov	SR
For Amanda Jensen Robin Roberts	City Clerk's Office	714 548-3174 (714) 548-3177	ajensen@westminster-ca.gov rroberts@westminster-ca.gov	AJ.
Chet Simmons	City Manager's Office	(714) 548-3169	csimmsons@westminster-ca.gov	
Michael Solorza	Administrative Services	(714) 548-3190	msolorza@westminster-ca.gov	

Marwan Youssef Public Work (714)548-3460 myoussef@ ——

Name	Organization/ Dept.	Phone	Email address	Attendance (Initial)
Marc Stone	Orange County Fire Authority	(714) 319-4657	marcstone@ofca.org	
Marwan Youssef	Public Works	(714) 548-3860	myoussef@westminster-ca.gov	
Craig Herrick	OC Public Works	(714) 955-0208	Craig.Herrick@ocpw.ocgov.com	
Sue Stoffel	OC Public Works	(714) 955-0241	sue.stoffel@ocpw.ocgov.com	SS
AL PANELLA	POLICE	714-552-8771	APANELLA@WESTMINSTER-CA.GOV	
KEN CRUZ	OCFA	(714) 616-2321	Kencruz@ocfa.org	KC
RYAN FREERKS	OCFA	(714) 397-7916	RYANFREERKS@OCFA.ORG	
Penny Lew	OC Public Works/Flood	714-647-3990	Penny.Lew@ocpw.ocgov.com	
Diana Dobbert	City of Westminster	714 548-3405	ddobbert@westminster-ca.gov	
Chet Simmons	City of Westminster	714 548-3169	csimmons@westminster-ca.gov	CS

Meeting Materials

Westminster Hazard Mitigation Planning Technical Advisory Committee

Meeting 2: January 21, 2015

Included Materials:

- Meeting agenda
- Meeting presentation
- Sign-in sheet

City of Westminster Hazard Mitigation Planning Team

Meeting Agenda

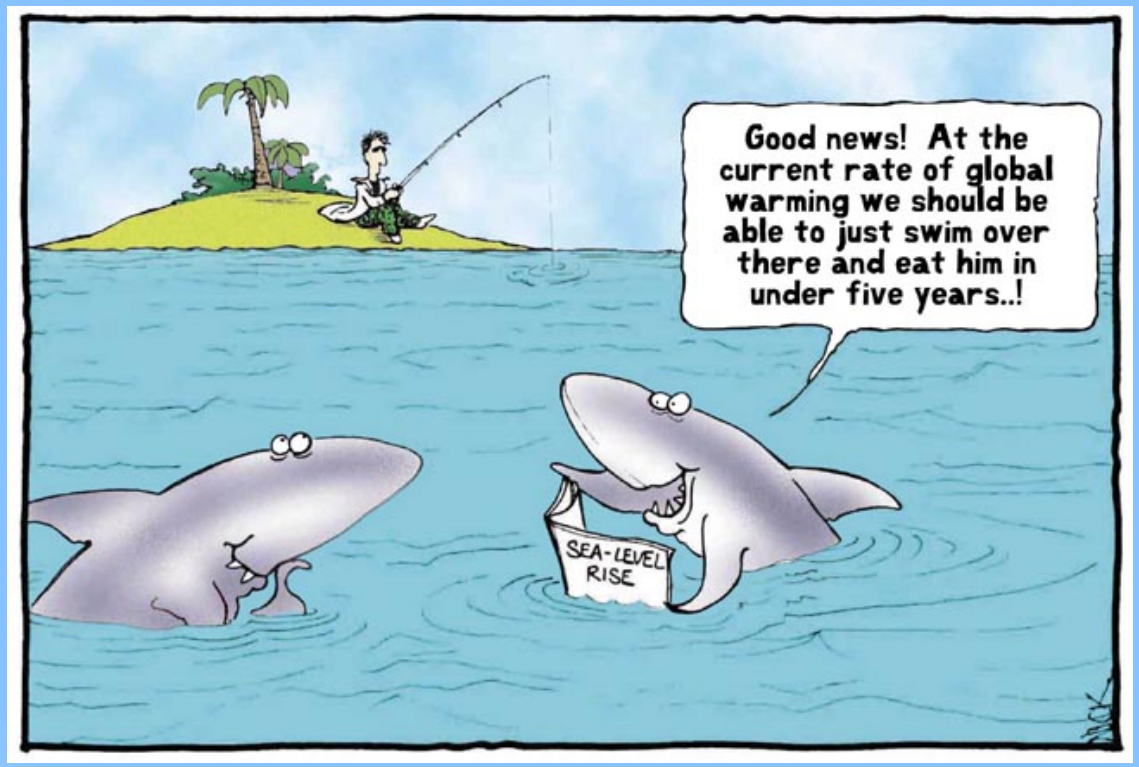
Subject:	Hazard Mitigation Plan Team Meeting 2	**Date:** **Time:**	January 21, 2015 9:30 AM -11:30 AM
Leader:	Aaron Pfannenstiel Project Manager	**Location:**	Emergency Operations Center 8200 Westminster Blvd. Westminster, CA 92683
Purpose:	Overview of Hazard Profiles and Risk Assessment Methodology		
Attendees:	Refer to Sign-In Sheet		
Primary POC	City of Westminster – Sgt. Jim Kingsmill, (714) 548-3846, jkingsmill@westminster-ca.gov PMC – Aaron Pfannenstiel, 909-806-0450, ajp@pmcworld.com		

Item	Description	Lead	Est. Time
1	**Welcome and Introductions**	**Aaron/ Jim Kingsmill**	**5-10 Minutes**
2	**Overview of hazard profiles**	**Aaron**	**30-45 minutes**
3	**Overview of Risk Assessment Methodology**	**Aaron**	**20-30 minutes**
4	**Action Items / Closing**	**Aaron/ Jim Kingsmill**	**5-10 minutes**

City of Westminster Hazard Mitigation Plan

Hazard Mitigation Planning Team Meeting 2

January 21, 2015 9:30 am
Westminster Emergency Operations Center



HÄGAR the Horrible ® By Dik Browne

Meeting Agenda

- Present Summary of Westminster Hazard Profiles
- Methodology for Risk Assessment

City of Westminster
Hazard Profiles

Anatomy of a Hazard Profile

- Identification of the Hazard
- Profile of the Hazard
  - Location
  - Extent
- Past Occurrences
- Probability of Future Occurrences
- Climate Change Considerations
- Vulnerabilities/ Risk Assessment
- Utilities Considerations

Westminster Hazard Ranking

Hazard Type	Probability	Impact			Total Score	Hazard Planning Consideration
		Affected Area	Primary Impact	Secondary Impacts		
Drought	4	4	4	4	64.00	High
Seismic Hazards	4	4	4	4	64.00	High
Flood	4	3	3	3	48.00	High
Liquefaction	3	4	4	4	48.00	High
Hazardous Materials	3	2	4	4	38.40	Medium
Extreme Heat	3	3	3	3	36.00	Medium
Severe Weather (wind/rain)	3	3	3	3	36.00	Medium
Disease/Pest Management	2	4	2	2	22.40	Medium
Dam Failure	1	4	4	4	16.00	Medium

Note: Scores are based on a scale of 1 to 4, where 4 is the highest score, and 1 is the lowest score. See Table 3.3 for more information.

Note: Total score is based on an equation that weights categories by importance. See Table 3.3 for more information.

Climate Change Considerations

- Since many of the effects associated with climate change can exacerbate current conditions we discussed Climate Change considerations in applicable hazard profiles

  - Example: Increased temperatures and changes in precipitation regimes throughout southern California, could exacerbate drought hazards affecting the City.

Utilities Considerations

- Many of the hazards identified within the City could affect utilities in a number of ways. As part of the mitigation strategy development, actions that address particular hazards and safeguard utilities will be identified
  - Example: Appropriate and timely tree trimming activities should be conducted prior to Santa Ana wind season to reduce potential power failures associated with down trees and falling limbs.

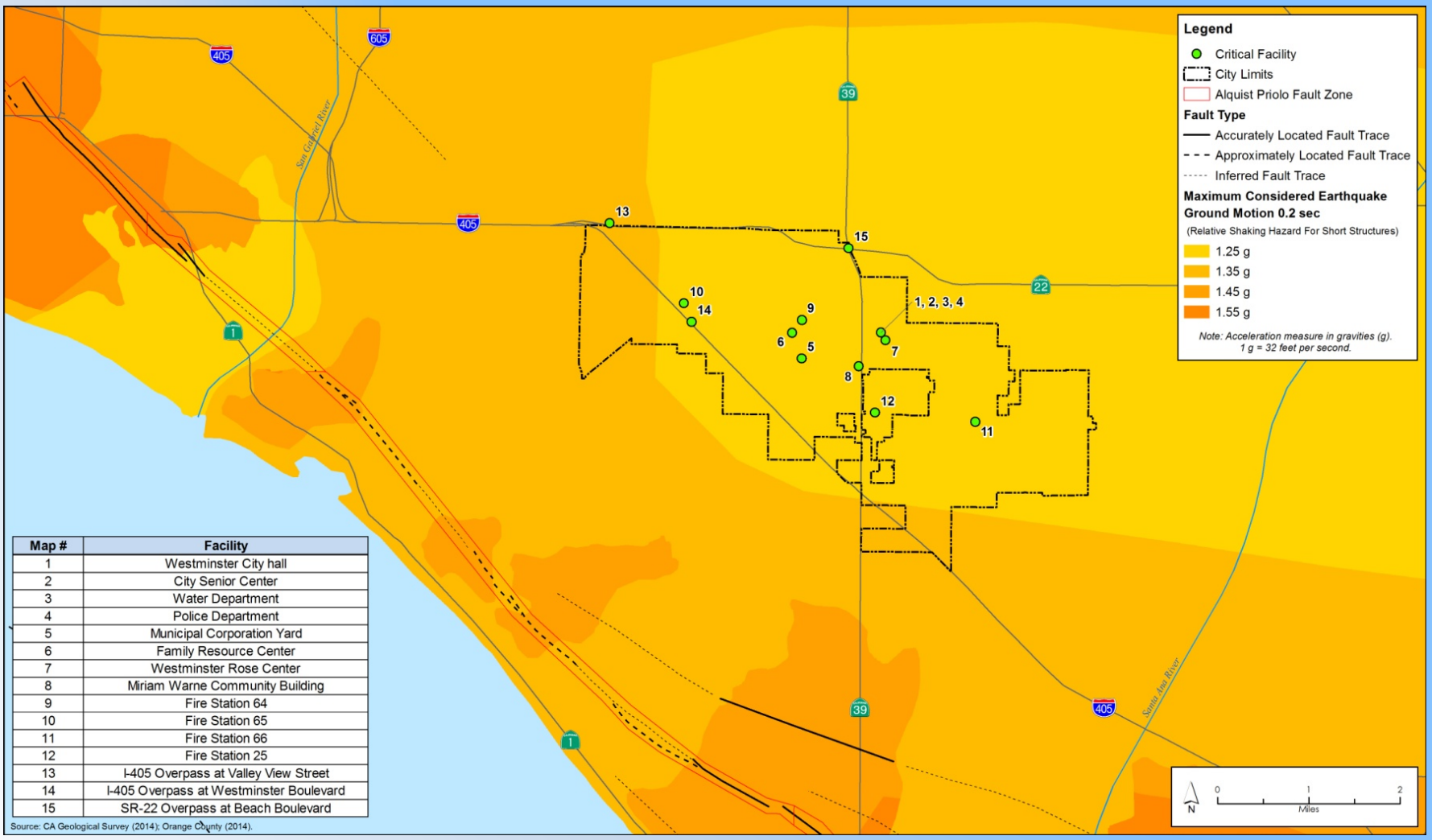
Drought

- Location and Extent
  - The entire City
- Past Occurrences
  - 10 events since 1917, average three to five years in duration.
- Probability of Future Occurrences
  - High probability given the prevalence of drought throughout the state over the last 100 years.
- Climate Change Considerations
  - Anticipated changes in precipitation regimes may reduce groundwater levels within the City, further increasing risks to drought.

Seismic Hazards (Seismic Shaking)

- Location and Extent – The entire City
- Past Occurrences – Most Notable
  - San Fernando(2-9-1971, M 6.6)
  - Northridge(1-17-1994, M 6.7)
- Probability of Future Occurrences
  - Over 97% chance of a M≥ 6.7 in next 30 years
- Climate Change Considerations
  - N/A

Seismic Hazards (Seismic Shaking)



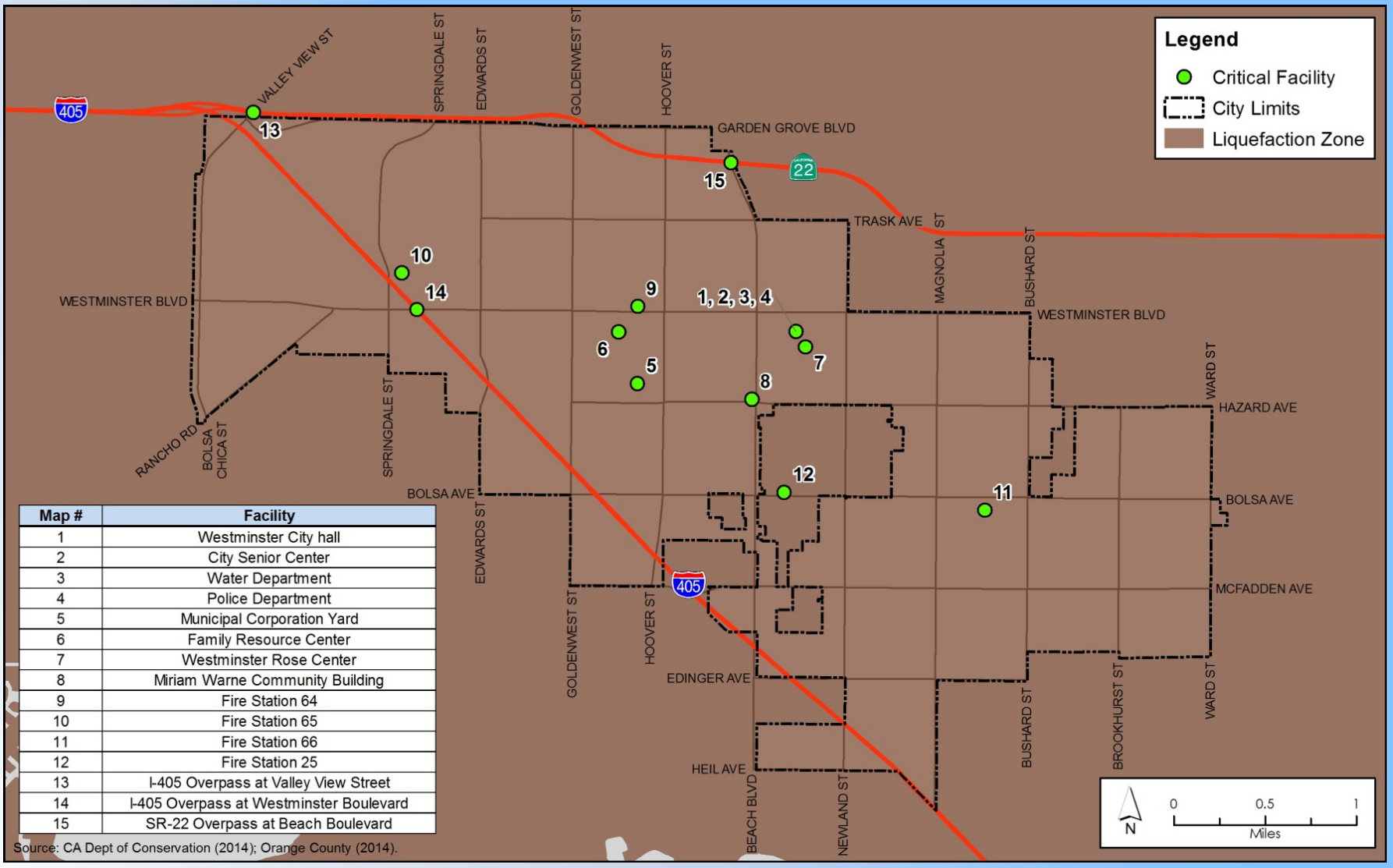
Map #	Facility
1	Westminster City hall
2	City Senior Center
3	Water Department
4	Police Department
5	Municipal Corporation Yard
6	Family Resource Center
7	Westminster Rose Center
8	Miriam Warne Community Building
9	Fire Station 64
10	Fire Station 65
11	Fire Station 66
12	Fire Station 25
13	I-405 Overpass at Valley View Street
14	I-405 Overpass at Westminster Boulevard
15	SR-22 Overpass at Beach Boulevard

Source: CA Geological Survey (2014); Orange County (2014).

Seismic Hazards (Liquefaction)

- Location and Extent
  - The entire City is underlain by loose soils and shallow groundwater.
- Past Occurrences
  - No past occurrences identified to date.
- Probability of Future Occurrences
  - Typically occurs with a large earthquake (see EQ probability).
  - Although lack of past occurrences indicates that liquefaction has not been an issue for Westminster there is still potential for liquefaction to occur.
- Climate Change Considerations
  - Changes in precipitation regimes in the future could affect subsurface water levels, expanding saturation zone and potentially liquefiable areas within the City.

Seismic Hazards (Liquefaction)



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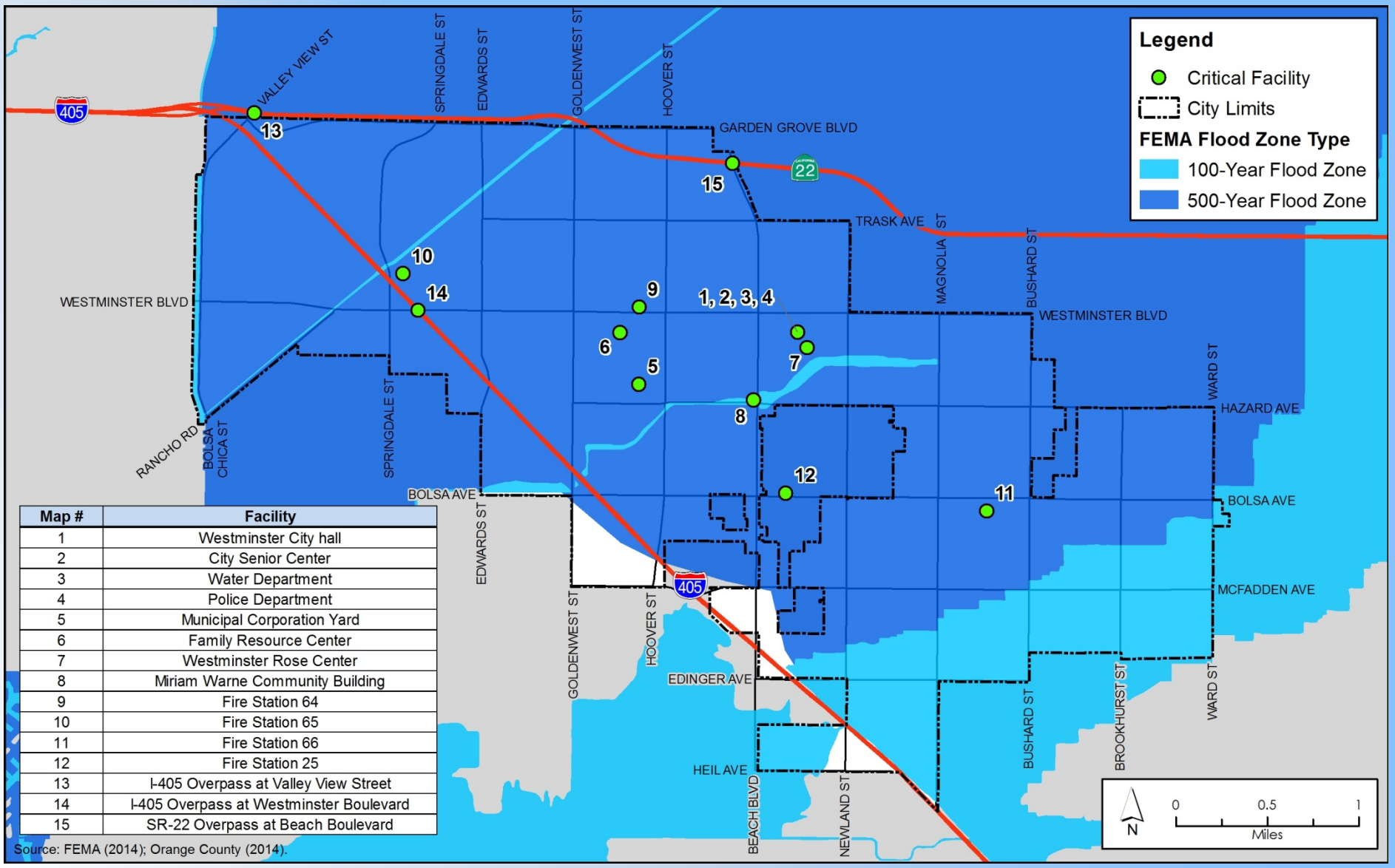
Source: CA Dept of Conservation (2014); Orange County (2014).

Flood

- Location and Extent
  - Nearly entire City located in 500-year floodplain. Portions of City located in 100-year floodplain.
- Past Occurrences
  - Between 1950 and 2012, 18 major events have impacted Orange County. Many of these events contributed to the urban flooding that typically occurs during wet winter storms.
- Probability of Future Occurrences
  - It is anticipated that urban flooding will continue to occur during wet winter storms.
- Climate Change Considerations
  - Increase storm intensity could increase urban flooding issues within the City.

Flood



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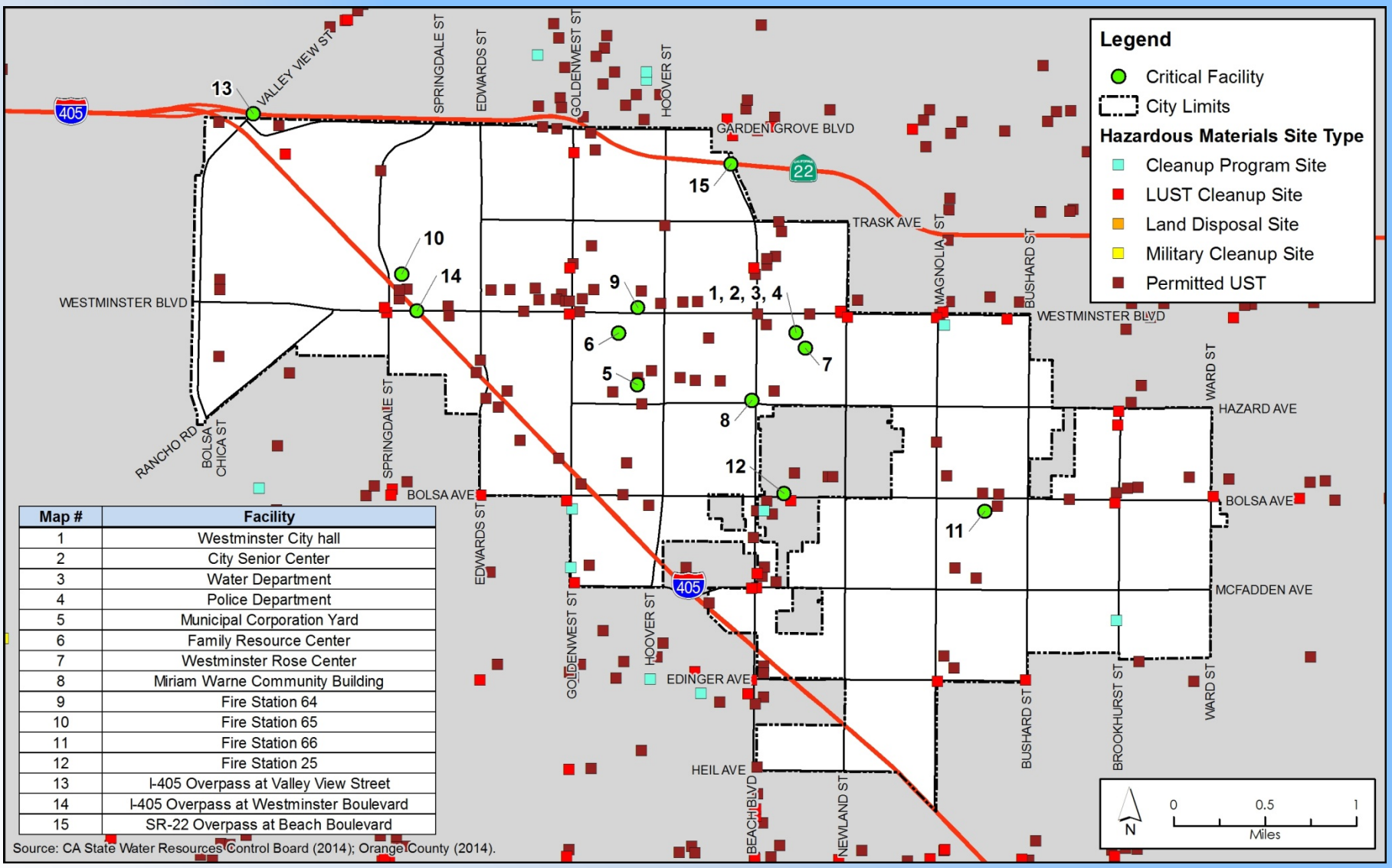
Source: FEMA (2014); Orange County (2014).

Hazardous Materials

- Location and Extent
  - A majority of the City contains locations that manufacture, store, and/or dispose of hazardous materials.
- Past Occurrences
  - 94 reported incidents reported between 1993 and 2014 within the City.
- Probability of Future Occurrences
  - On average approximately nine incidents occur in Westminster every two years.
  - Infrastructure age could increase risk
  - New regulations and technologies can reduce risk
- Climate Change Considerations
  - Greater opportunity for release of hazardous materials due to climate change (i.e. higher temperatures, greater storm intensity)

Hazardous Materials



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Source: CA State Water Resources Control Board (2014); Orange County (2014).

Extreme Heat

- Location and Extent
  - The entire City
- Past Occurrences
  - On average 4 extreme heat days per year
  - On average 0-1 heat wave per year
- Probability of Future Occurrences
  - High certainty that extreme heat conditions will occur in the future.
- Climate Change Considerations
  - Future climatic conditions could increase the number of extreme heat events based on increased temperatures resulting from climate change.
  - 15-35 extreme heat days expected by 2050.

Severe Weather

- Location and Extent
  - Citywide/ Countywide hazard
- Past Occurrences (Tornado, High Winds, Strong Winds)
  - 18 major windstorm (Santa Ana) events recorded in Southern California between (1956 and 2007)
  - 5 of these events caused significant damage within Orange County
- Probability of Future Occurrences
  - Future occurrences are expected
    - Santa Ana conditions occur on a yearly basis
- Climate Change Considerations
  - Changes in atmospheric conditions could change the frequency, severity, and duration of future windstorm events, however to what degree is uncertain.

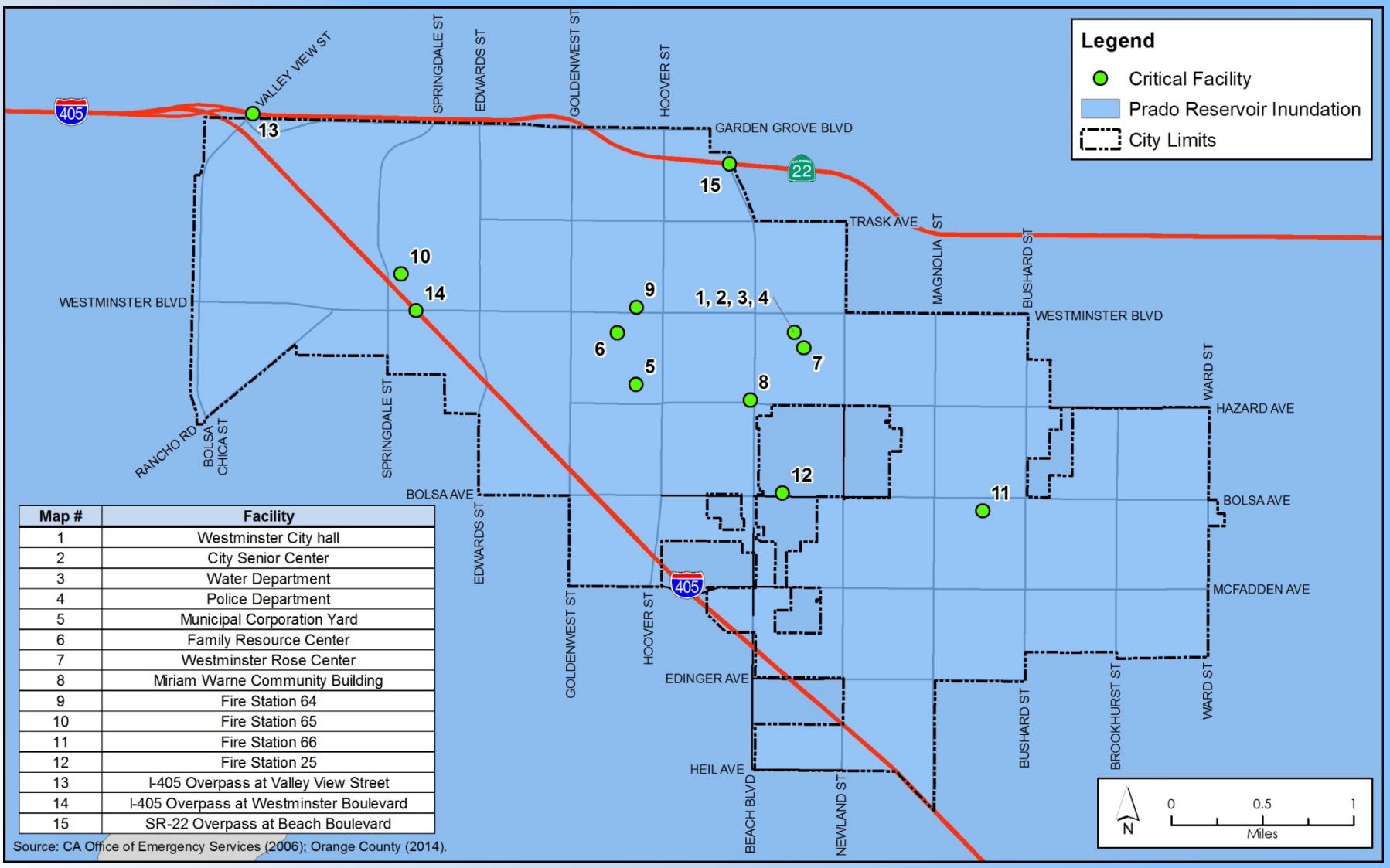
Disease/ Pest Management

- Location and Extent
  - The entire City
- Past Occurrences
  - No major occurrences identified.
- Probability of Future Occurrences
  - High probability of future occurrence associated with the favorable climatic conditions that allow diseases and insects to propagate.
- Climate Change Considerations
  - It is anticipated that a warmer climate would not only stress native plants and animals but could also create favorable conditions for existing and new invasive species/diseases to be introduced into southern California.

Dam Failure

- Location and Extent
  - The entire City
- Past Occurrences
  - No dam failure incidents have affected Westminster in the past.
- Probability of Future Occurrences
  - Future probability is anticipated to be low, especially given recent upgrades to the Santa Ana River main stem and Prado Dam.
- Climate Change Considerations
  - Changes in precipitation regimes could increase stresses on flood control facilities increasing the risk associated with dam failure.

Dam Failure



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Source: CA Office of Emergency Services (2006); Orange County (2014).

City of Westminster
Critical Facilities

Critical Facilities List

Map #	Facility
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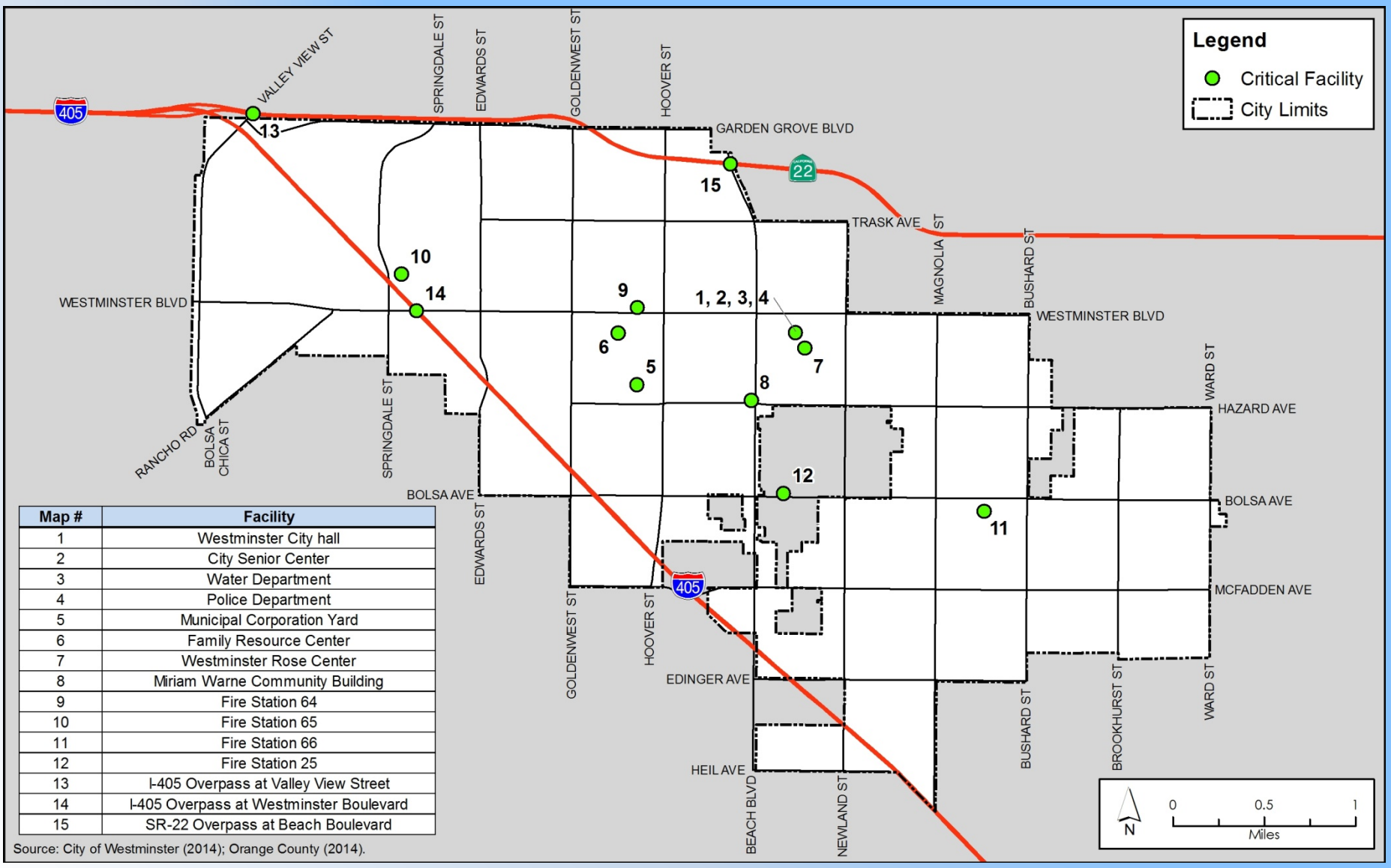
7	Westminster Rose Center
8	Miriam Warne Community Building
9	Fire Station 64
10	Fire Station 65
11	Fire Station 66
12*	Fire Station 25
13	I-405 Overpass at Valley View Street
14	I-405 Overpass at Westminster Boulevard
15	SR-22 Overpass at Beach Boulevard

**Fire Station 66 is in Midway City, which is in the City of Westminster's sphere of influence.*

Critical Facilities List



Map #	Facility
1	Westminster City hall
2	City Senior Center
3	Water Department
4	Police Department
5	Municipal Corporation Yard
6	Family Resource Center
7	Westminster Rose Center
8	Miriam Warne Community Building
9	Fire Station 64
10	Fire Station 65
11	Fire Station 66
12	Fire Station 25
13	I-405 Overpass at Valley View Street
14	I-405 Overpass at Westminster Boulevard
15	SR-22 Overpass at Beach Boulevard

Source: City of Westminster (2014); Orange County (2014).

Methodology for Risk Assessment

Within each hazard area:

- Population (based on an average population factor)
- Land area (portion of City affected by hazard)
- Critical Facilities
- Potential damage / loss estimations (based on building and content replacement values)

- An appendix will be added to the document that will contain the Facilities of Concern (school sites) and the Facilities of Interest (private properties). As part of the appendix, these facilities will also be assessed for risk similar to the critical facilities.

Risk Assessment

Facility		Drought	Seismic Hazards		Flood (500 ft of 100 year flood zone)	Hazardous Materials (1,000 ft)	Extreme Heat	Severe Weather (Wind)	Disease and Pest Mgmt	Dam Failure
			Ground Shaking	Liquefaction						
1	Westminster City Hall	Y	Y	Y	N	Y	Y	Y	Y	Y
2	City Senior Center	Y	Y	Y	N	Y	Y	Y	Y	Y
3	Water Department	Y	Y	Y	N	Y	Y	Y	Y	Y
4	Police Department	Y	Y	Y	N	Y	Y	Y	Y	Y
5	Municipal Corporation Yard	Y	Y	Y	N	Y	Y	Y	Y	Y
6	Family Resource Center	Y	Y	Y	N	N	Y	Y	Y	Y
7	Westminster Rose Center	Y	Y	Y	Y	Y	Y	Y	Y	Y
8	Miriam Warne Community Building	Y	Y	Y	Y	Y	Y	Y	Y	Y
9	Fire Station 64	Y	Y	Y	N	Y	Y	Y	Y	Y
10	Fire Station 65	Y	Y	Y	Y	Y	Y	Y	Y	Y
11	Fire Station 66	Y	Y	Y	N	Y	Y	Y	Y	Y
12	Fire Station 25	Y	Y	Y	N	Y	Y	Y	Y	Y
13	I-405 Overpass at Valley View Street	Y	Y	Y	N	Y	Y	Y	Y	Y
14	I-405 Overpass at Westminster Boulevard	Y	Y	Y	N	Y	Y	Y	Y	Y
15	SR-22 Overpass at Beach Boulevard	Y	Y	Y	N	Y	Y	Y	Y	Y

Y denotes that the critical facility intersects the hazard layer

N denotes that the critical facility does not intersect the hazard layer

Questions/ Comments

- Additional thoughts, data, information, and suggestions can be provided to:
  - Jim Kingsmill – Emergency Services Coordinator
    jkingsmill@westminster-ca.gov
  - Aaron Pfannenstiel – LHMP Project Manager
    ajp@pmcworld.com

SIGN-IN SHEET

City of Westminster Local Hazard Mitigation Plan Team Meeting
Wednesday, January 21, 2015 9:30 - 11:30 am

Name	Organization/ Dept.	Phone	Email address	Attendance (Initial)
Robert Acosta	Orange County Fire Authority	(714) 483-0911	robertacosta@ocfa.org	
Art Bashmakian	Community Development	(714) 548-3484	abashmakian@westminster-ca.gov	AB
Diana Dobbert	Community Services	(714) 548-8665	ddobbert@westminster-ca.gov	
Jim Kingsmill	Police Department	(714) 548-3846	jkingsmill@westminster-ca.gov	JK
Soroosh Rahbari	Building Division	(714) 548-3468	srahbari@westminster-ca.gov	
Robin Roberts Megan Ducat	City Clerk's Office	(714) 548-3177	rroberts@westminster-ca.gov	MD
Chet Simmons	City Manager's Office	(714) 548-3169	csimmsons@westminster-ca.gov	
Michael Solorza	Administrative Services	(714) 548-3190	msolorza@westminster-ca.gov	

Name	Organization/ Dept.	Phone	Email address	Attendance (Initial)
Marc Stone	Orange County Fire Authority	(714) 319-4657	marcstone@ocfa.org	
Marwan Youssef	Public Works	(714) 548-3860	myoussef@westminster-ca.gov	M.Y.
Vanessa Johnson	Community Services	(714) 548 3067	VJohnson@westminster-CA.gov	
Tracy McClellan	OCFA	(714) 824-0219	TracyMcclellan@ocfa.org	
Mika Takayasu	Housing	(714) 548- 3493	MTakayasu@westminster-ca.gov	

Meeting Materials

Westminster Hazard Mitigation Planning Technical Advisory Committee

Meeting 3: March 11, 2015

Included Materials:

- Sign-in sheet

SIGN-IN SHEET

City of Westminster Local Hazard Mitigation Plan Team Meeting 3
Wednesday, March 11, 2015 9:30 - 11:30 am

Name	Organization/ Dept.	Phone	Email address	Attendance Initial
Robert Acosta	OCFA	714-483-0911	robertacosta@ocfa.org	
Art Bashmakian	Community Development	714-548-3484	abashmakian@westminster-ca.gov	
Ken Cruz	OCFA	714-616-2321	kencruz@ocfa.org	
Diana Dobbert	Community Services	714-548-3665	ddobbert@westminster-ca.gov	
Megan Ducat	City Clerk's Office		mducat@westminster-ca.gov	
~~Ryan Freerks~~	OCFA	714-397-7916	ryanfreerks@ocfa.org	
Craig Herrick	OC Public Works	714-955-0208	Craig.herrick@ocpw.ocgov.com	
Amanda Jensen	City Clerk's Office	714-548-3174	ajensen@westminster-ca.gov	
Vanessa Johnson	Community Services	714-548-3667	vjohnson@westminster-ca.gov	
Jim Kingsmill	Police Department	714-548-3846	jkingsmill@westminster-ca.gov	
Penny Lew	OC Public Works/Flood	714-647-3998	Penny.Lew@ocpw.ocgov.com	
Tracy McClelland	OCFA	714-824-0219	tracymcclelland@ocfa.org	
Al Panella	Police Department	714-552-8771	apanella@westminster-ca.gov	

Name	Organization/ Dept.	Phone	Email address	Attendance Initial
Soroosh Rahbari	Building Division	714-548-3468	srahbari@westminster-ca.gov	
Robin Roberts	City Clerk's Office	714-548-3177	rroberts@westminster-ca.gov	
Chet Simmons	City Manager's Office	714-548-3169	csimmsons@westminster-ca.gov	
Michael Solorza	Administrative Services	714-548-3190	msolorza@westminster-ca.gov	
Sue Stoffel	OC Public Works	714-955-0241	Sue.stoffel@ocpw.ocgov.com	
Marc Stone	OCFA	714-319-4657	marcstone@ocfa.org	
Mika Takayasu	Housing	714-548-3493	mtakayasu@westminster-ca.gov	
Marwan Youssef	Public Works	714-548-3460	myoussef@westminster-ca.gov	
Kevin Bass	OCFA	714 527 9431	kevinbass@ocfa.org	

APPENDIX A – LHMP TEAM DOCUMENTS

2. MASTER FACILITIES LIST

Westminster Master Facilities List

	Facility ID	Facility Name/Description	Facility Address	Ownership
Critical Facilities	1	Westminster City Hall	8200 Wesminster Boulevard, Westminster, CA 92683	City facility
	2	City Senior Center	8200 Wesminster Boulevard, Westminster, CA, 92683	City facility
	3	Police Department	8200 Wesminster Boulevard, Westminster, CA, 92683	City facility
	4	Municipal Corporation Yard	14381 Olive Street, Westminster, CA 92683	City facility
	5	Family Resource Center	7200 Plaza Street, Westminster, CA 92683	City facility
	6	Westminster Rose Center	14140 All American Way, Westminster, CA 92683	City facility
	7	Miriam Warne Community Building	14491 Beach Boulevard, Westminster, CA 92683	City facility
	8	Fire Station 64	7351 Westminster Boulevard, Westminster, CA 92683	City facility
	9	Fire Station 65	6061 Hefley Street, Westminster, CA 92683	City facility
	10	Fire Station 66	15061 Moran Street, Westminster, CA 92683	City facility
	11	Fire Station 25	8171 Bolsa Avenue, Midway City, CA 92655	County facility
	12	I-405 Overpass at Valley View Street	33.774625, -118.037716	Public infrastructure
	13	I-405 Overpass at Westminster Boulevard	33.759021, -118.021945	Public infrastructure
	14	SR-22 Overpass at Beach Boulevard	33.771127, -117.992398	Public infrastructure

Westminster Master Facilities List

	Facility ID	Facility Name/Description	Facility Address	Ownership
Facilities of Concern (City of Westminster)	15	Le-Jao Coastline Community College	14120 All American Way, Westminster, CA 92683	Public facility (non-City ownership)
	16	DeMille Elementary School	15400 Van Buren, Midway City, CA 92655	Public facility (non-City ownership)
	17	Eastwood Elementary School	13552 University Street, Westminster, CA, 92683	Public facility (non-City ownership)
	18	Finley Elementary School	13521 Edwards Street, Westminster, CA 92683	Public facility (non-City ownership)
	19	Fryberger Elementary School	6952 Hood Drive, Westminster, CA 92683	Public facility (non-City ownership)
	20	Hayden Elementary School	14782 Eden Street, Midway City, CA 92655	Public facility (non-City ownership)
	21	John Marshall Elementary School	15791 Bushard Street, Westminster, CA 92683	Public facility (non-City ownership)
	22	Johnson Intermediate School/Finley Elementary School	13521 - 13603 Edwards Street, Westminster, CA, 92683	Public facility (non-City ownership)
	23	Johnson Middle School	13603 Edwards Street, Westminster, CA 92683	Public facility (non-City ownership)
	24	La Quinta High School	10372 West McFadden Avenue, Westminster, CA, 92683	Public facility (non-City ownership)
	25	Land Student Services and Child Development	15151 Temple Street, Westminster, CA 92683	Public facility (non-City ownership)
	26	Leo Carillo Elementary School	15270 Bushard Street, Westminster, CA 92683	Public facility (non-City ownership)
	27	Post Elementary School	14641 Ward Street, Westminster, CA 92683	Public facility (non-City ownership)
	28	Sarah McGarvin Intermediate School	9802 Bishop Place, Westminster, CA 92683	Public facility (non-City ownership)
	29	Schmitt Elementary School	7200 Trask Avenue, Westminster, CA 92683	Public facility (non-City ownership)
	30	Sequoia Elementary School	5900 Iroquois Road, Westminster, CA, 92683	Public facility (non-City ownership)
	31	Star View Elementary School	8411 Worthy Drive, Midway City, CA, 92655	Public facility (non-City ownership)
	32	Susan B. Anthony Elementary School	15320 Pickford Street, Wesminster, CA 92683	Public facility (non-City ownership)
	33	Warner Middle School	14171 Newland Street, Westminster, CA 92683	Public facility (non-City ownership)
	34	Webber Elementary School	14142 Hoover Street, Westminster, CA 92683	Public facility (non-City ownership)
	35	Westminster High School	14325 Goldenwest Street, Westminster, CA, 92683	Public facility (non-City ownership)
	36	Willmore Elementary School	7122 Maple Street, Westminster, CA 92683	Public facility (non-City ownership)

Westminster Master Facilities List

	Facility ID	Facility Name/Description	Facility Address	Ownership
Facilities of Interest (OCFA)	37	Cambridge Heights	7541 Wyoming Street, Westminster, CA, 92683	Private property
	38	Cinnamon Creek Apartments	15123 Brookhurst Street, Westminster, CA, 92683	Private property
	39	Coventry Heights	7521 Wyoming Street, Westminster, CA, 92683	Private property
	40	Edison Facility	7300 Fenwick Lane, Westminster, CA 92683	Private property
	41	Emeritus Assisted Living	15302 Brookhurst Street, Westminster, CA, 92683	Private property
	42	Huntington Westminster	13810 - 13960 Hoover Street, Westminster, CA, 92683	Private property
	43	Kindred Hospital Westminster	200 Westminster Circle, Westminster, CA, 92683	Private property
	44	Little Saigon Plaza	14841 Moran Street, Westminster, CA 92683	Private property
	45	Los Alisos Mobile Home Park	5772 Garden Grove Boulevard, Westminster, CA, 92683	Private property
	46	Magnolia Plaza	14014-14085 Magnolia Street, Westminster, CA 96283	Private property
	47	Orange Gate Plaza	5405 Garden Grove Boulevard, Westminster, CA 92683	Private property
	48	Pacific Royale	15200 Pacific Street, Midway City, CA, 92655	Private property
	49	Springdale Villa Apartments	6000 Garden Grove Boulevard, Westminster, CA, 92683	Private property
	50	U-Haul	15182 Beach Boulevard, Westminster, CA, 92683	Private property
	51	Westminster Center	6611 - 6971 Westminster Boulevard, Westminster, CA, 92683	Private property
	52	Westminster Gateway	13225 - 13441 Beach Boulevard, Westminster, CA, 92683	Private property
	53	Westminster Mall	1025 Westminster Mall, Westminster, CA, 92683	Private property
	54	Westminster Senior Apartments	7632 21st Street, Westminster, CA, 92683	Private property
	55	Westminster Terrace	7571 Westminster Boulevard, Westminster, CA, 92683	Private property

APPENDIX A – LHMP DOCUMENTS

3. LHMP TEAM INVITATIONS

City of W stminster

8200 Westminster Boulevard, Westminster, CA 92683 714.898.3311
www.westminster-ca.gov

TRI TA
Mayor

MARGIE L. RICE
Mayor Pro Tem

DIANA LEE CAREY
Council Member

SERGIO CONTRERAS
Council Member

ANDY QUACH
Council Member

EDDIE MANFRO
City Manager

October 31, 2014

Westminster School District
14121 Cedarwood Avenue
Westminster, CA 92683
ATTN: Dr. Marian Kim-Phelps, Superintendent

RE: EMERGENCY PREPAREDNESS

Dear Ms. Kim-Phelps,

The City of Westminster is in the process of preparing its first Local Hazard Mitigation Plan (LHMP) to identify and mitigate potential hazards that may impact the City and its nearby facilities. As part of the LHMP process, the City is actively reaching out to agencies that could provide critical input on identifying resources readily available to mitigate these potential hazards.

We are interested in receiving your agency's input related to the City's Local Hazard Mitigation Plan, and any recommendations you may have in addressing the potential risks to the City and community. We will be holding a meeting with City staff and outside agencies to discuss these topics, and hope that a representative of your agency can attend. We would greatly appreciate it if you could RSVP no later than November 10th, 2014 to the following email address: **mtakayasu@westminster-ca.gov**

City of Westminster: Disaster Recovery Initiative (DRI) - Local Hazard Mitigation Plan
Wednesday, November 12, 2014 - 9:30-11:30 a.m.
Location: Westminster Police Department Building (EOC Room)
8200 Westminster Boulevard
Westminster, CA 92683

Light refreshments will be provided

If you have any questions, please feel free to contact me at (714) 548-3493 or send an email to **mtakayasu@westminster-ca.gov**.

Sincerely,

Sgt. James Kingsmill

SERGEANT JAMES KINGSMILL

City of Westminster
8200 Westminster Boulevard, Westminster, CA 92683 714.898.3311
www.westminster-ca.gov

TRI TA
Mayor

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Mayor Pro Tem

DIANA LEE CAREY
Council Member

SERGIO CONTRERAS
Council Member

ANDY QUACH
Council Member

EDDIE MANFRO
City Manager

October 31, 2014

Southern California Edison
7333 Bolsa Avenue
Westminster, CA 92683
ATTN: Jenelle Godges, Region Manager Local Public Affairs

RE: EMERGENCY PREPAREDNESS

Dear Ms. Godges,

The City of Westminster is in the process of preparing its first Local Hazard Mitigation Plan (LHMP) to identify and mitigate potential hazards that may impact the City and its nearby facilities. As part of the LHMP process, the City is actively reaching out to agencies that could provide critical input on identifying resources readily available to mitigate these potential hazards.

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Sincerely,

Sgt. James Kingsmill

SERGEANT JAMES KINGSMILL

City of V stminster

8200 Westminster Boulevard, Westminster, CA 92683 714.898.3311
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Council Member

ANDY QUACH
Council Member

EDDIE MANFRO
City Manager

October 31, 2014

Kindred Hospital Westminster
200 Hospital Circle
Westminster, CA 92683
ATTN: Brooke Saunders, Chief Executive Officer

RE: EMERGENCY PREPAREDNESS

Dear Ms. Saunders,

The City of Westminster is in the process of preparing its first Local Hazard Mitigation Plan (LHMP) to identify and mitigate potential hazards that may impact the City and its nearby facilities. As part of the LHMP process, the City is actively reaching out to agencies that could provide critical input on identifying resources readily available to mitigate these potential hazards.

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Sincerely,

Sgt. James Kingsmill

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City of W. stminster
8200 Westminster Boulevard, Westminster, CA 92683 714.898.3311
www.westminster-ca.gov

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MARGIE L. RICE
Mayor Pro Tem

DIANA LEE CAREY
Council Member

SERGIO CONTRERAS
Council Member

ANDY QUACH
Council Member

EDDIE MANFRO
City Manager

October 31, 2014

Red Cross of Orange County
601 N. Golden Circle Drive
Santa Ana, CA 92705
ATTN: Pedro Ayala, Emergency Preparedness

RE: EMERGENCY PREPAREDNESS

Dear Mr. Ayala,

The City of Westminster is in the process of preparing its first Local Hazard Mitigation Plan (LHMP) to identify and mitigate potential hazards that may impact the City and its nearby facilities. As part of the LHMP process, the City is actively reaching out to agencies that could provide critical input on identifying resources readily available to mitigate these potential hazards.

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Westminster, CA 92683

Light refreshments will be provided

If you have any questions, please feel free to contact me at (714) 548-3493 or send an email to **mtakayasu@westminster-ca.gov**.

Sincerely,

Sgt. James Kingsmill

SERGEANT JAMES KINGSMILL

City of V stminster

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Council Member

ANDY QUACH
Council Member

EDDIE MANFRO
City Manager

October 31, 2014

Orange County Public Works, Flood Division
300 North Flower Street, 7th floor
Santa Ana, CA 92703
ATTN: Mehdi Sobhani

RE: EMERGENCY PREPAREDNESS

Dear Mr. Sobhani,

The City of Westminster is in the process of preparing its first Local Hazard Mitigation Plan (LHMP) to identify and mitigate potential hazards that may impact the City and its nearby facilities. As part of the LHMP process, the City is actively reaching out to agencies that could provide critical input on identifying resources readily available to mitigate these potential hazards.

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Sincerely,

Sgt. James Kingsmill

SERGEANT JAMES KINGSMILL

City of V. stminster

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Mayor Pro Tem

DIANA LEE CAREY
Council Member

SERGIO CONTRERAS
Council Member

ANDY QUACH
Council Member

EDDIE MANFRO
City Manager

October 31, 2014

Orange County Sheriff's Department
Emergency Management Division
22644 Santiago Canyon Road
Silverado, CA 92676
ATTN: Donna Boston, Director of Emergency Management

RE: EMERGENCY PREPAREDNESS

Dear Ms. Boston,

The City of Westminster is in the process of preparing its first Local Hazard Mitigation Plan (LHMP) to identify and mitigate potential hazards that may impact the City and its nearby facilities. As part of the LHMP process, the City is actively reaching out to agencies that could provide critical input on identifying resources readily available to mitigate these potential hazards.

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Sincerely,

Sgt. James Kingsmill

SERGEANT JAMES KINGSMILL

APPENDIX B – PUBLIC OUTREACH MATERIALS

1. LHMP PUBLIC OUTREACH/ENGAGEMENT SUMMARY

Westminster LHMP Public Engagement/Outreach Summary

As part of the public engagement and outreach process for the LHMP, the City of Westminster published an online survey for community members. The survey asked respondents about potential hazards facing Westminster and what steps community members have taken or are interested in taking to reduce the threats from these hazards. A link to the survey was posted on the City's website (screenshot provided), on the City's Facebook page, and on the City's Twitter feed. The survey was open from April 14, 2015 to June 8, 2014 and received 36 responses.

As part of the outreach process, Project staff also attended four public meetings conducted by the City and gave a presentation highlighting the LHMP process, the work completed by the Hazard Mitigation Planning Team, and encouraging community members to take the survey.

The following meetings were attended:

Meeting	Date	Public Attendees	Comments/ Questions received from the Public
Planning Commission	May 6, 2015	6	0
Commission on Aging	May 18, 2015	2	0
Community Services and Recreation Commission	May 13, 2015	0	0
Senior Citizens Advisory Team (SCAT)	May 15, 2015	0	0

Online Survey Questionnaire

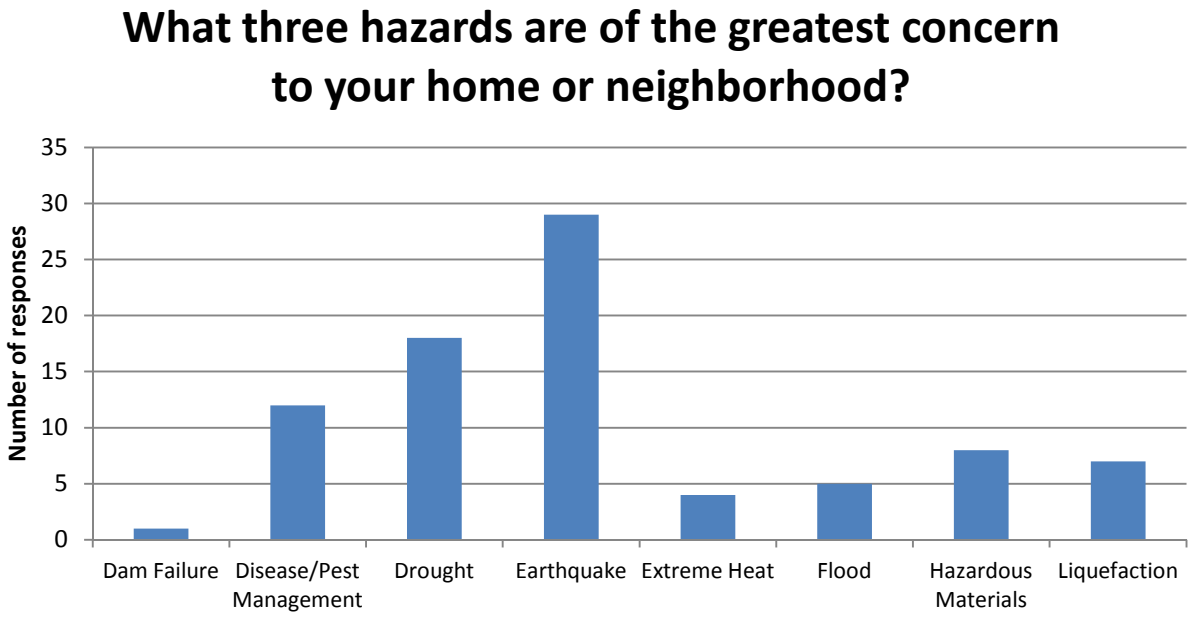
Below is a summary of the questions and results of the online questionnaire.

Potential Hazards

Community members were asked whether they felt their home or neighborhood could be impacted by a disaster. More respondents answered that such a disaster was at least somewhat likely than not likely, although a large number of respondents were uncertain.

How likely is your home or neighborhood to be impacted by a disaster?		
Response	**Number**	**Percent**
Very likely	7	19%
Somewhat likely	8	22%
Not very likely	5	14%
Don't know/Unsure	13	36%
Declined to state	3	8%
Total	36	100%

Community members were asked which disasters they were most concerned about. Earthquakes were the disaster of greatest concern, with drought and disease/pest management risks coming in second and third, respectively. Among disasters that may be exacerbated by climate change, community members were more worried about some (e.g. drought) and less worried about others (e.g. extreme heat).



Community members were also asked what structural or physical steps they have taken at their property to reduce potential damage from a future disaster. Four responders stated that they have strengthened building openings (to reduce risks from high winds), two have conducted earthquake retrofits, and one respondent installed a backflow prevention device to reduce flood risks. However, the vast majority of respondents had not taken any action.

Personal Preparedness

Respondents were asked a number of questions about what steps they have taken to respond more effectively to a disaster and to recover more quickly, including about insurance. The greatest number of community members felt that their homeowners insurance was insufficient to cover the disasters that they were worried about, although a significant number of homeowners felt that their insurance coverage was adequate.

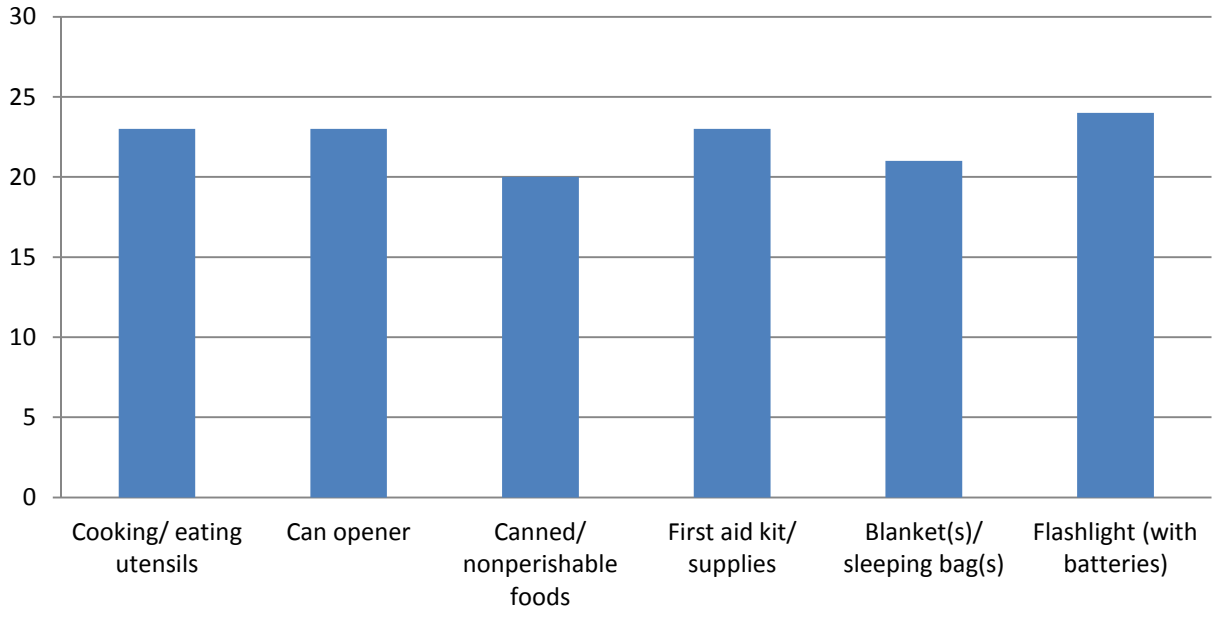
Do you have adequate basic homeowners insurance to cover the hazards that could impact your home?		
Response	**Number**	**Percent**
Yes	10	28%
No	12	33%
Unsure	3	8%
Not applicable	3	8%
Declined to state	8	22%
Total	36	100%

Virtually all of Westminster is at risk of a 500-year flood event, and some parts of the community are vulnerable to a 100-year flood event. However, among respondents who answered this question, community members without flood insurance outnumbered those with flood coverage.

Do you have flood insurance for your home?		
Response	**Number**	**Percent**
Yes (homeowner)	9	25%
Yes (renter)	2	6%
No	14	39%
Declined to state	11	31%
Total	36	100%

Most respondents have stores of some basic supplies or items that would be necessary in the 72-hour period immediately after an emergency situation. However, of the 18 items included in the survey, a majority of respondents only had access to 6 of the items. Additionally, only two-thirds of respondents had access to the most common item, a flashlight with batteries.

Which items do you have a 72-hour supply of at your home? (top six responses)



Which items do you have a 72-hour supply of at home? (all responses)		
Response	**Number**	**Percent**
Potable water (at least 3 gallons per person)	17	47%
Cooking and eating utensils	23	64%
Can opener	23	64%
Ready-to-eat canned/nonperishable foods	20	56%
Gas grill or camping stove	15	42%
Extra medication	16	44%
First aid kit or supplies	23	64%
Portable AM/FM radio	14	39%
Walkie-talkie radios	3	8%
Important family documents in a damage-resistant box	4	11%
Extra clothes and shoes	17	47%
Blankets or sleeping bags	21	58%
Cash	11	31%
Flashlight with batteries	24	67%
Gasoline	1	3%
Telephone with batteries	14	39%
Pet supplies	9	25%
Secondary source of heat	8	22%

Community Preparedness

In a disaster situation, community members can provide vital assistance to their neighbors on a short-term basis until emergency response personnel arrive. While some respondents are familiar with any special needs their neighbors might have, and therefore are able to better assist during emergency situations, close to three-quarters of respondents who answered the question were not.

Are you familiar with the special needs of your neighbors?		
Response	**Number**	**Percent**
Yes	7	19%
No	19	53%
Declined to state	10	28%
Total	36	100%

Another way to improve community preparedness is to encourage residents to participate in the Community Emergency Response Team (CERT) program. CERT volunteers are trained in basic emergency response skills, including search and rescue, team organization, and evacuation safety procedures. During an emergency, CERT volunteers can assist professional response personnel or supplement them as needed. While participation in CERT was fairly low among responders, a number of community members indicated interest in the program.

Are you a trained member of the Community Emergency Response Team (CERT)?		
Response	**Number**	**Percent**
Yes	2	6%
No, but I would like to learn more about CERT	9	25%
No, I am not interested in becoming a CERT participant	15	42%
Declined to state	10	28%
Total	36	100%

Lastly, survey respondents were asked which of three basic recommendations they had for the City of Westminster to help improve resiliency to future disasters. Respondents generally favored outreach and education over increased regulations.

What recommendations do you have for the city to increase resiliency?		
Response	**Number**	**Percent**
Perform outreach to ensure people are aware of their environment and the inherent risks	13	36%
Provide training and materials on how residents can be prepared for the identified risks	7	19%
Enforce and update building codes	3	8%
Declined to state	13	36%
Total	36	100%

APPENDIX B – PUBLIC OUTREACH MATERIALS

2. LHMP MEETING PRESENTATION

City of Westminster
Hazard Mitigation Plan

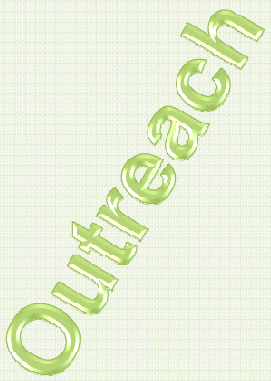
Meeting Agenda

- Overview of the Hazard Mitigation Process
- Summary of Westminster Hazard Profiles
- Community Input
- Next Steps

Development of this Plan is funded by a Community Development Block Grant (CDBG) Component Award for the 2008 Disaster Recovery Initiative (DRI) Program

Overview of the Hazard Mitigation Planning Process

1. Assemble the Planning Team (Planning Team Meetings December thru April)
2. Identify Goals
3. Identify Critical Facilities
4. Identify/Prioritize Hazards Of Concern
5. Conduct a Risk Assessment
6. Identify Potential Mitigation Actions
7. Develop Draft Local Hazard Mitigation Plan
8. Distribute Plan for Public Review/Comment
9. Submit Draft Plan to California Office of Emergency Services/FEMA



Westminster Hazard Mitigation Planning Team

- Administrative Services
- Building Division
- City Clerk
- City Manager
- Community Services
- Fire (Orange County Fire Authority)
- Housing Division
- Planning Division
- Police
- Public Works

Westminster Hazard Mitigation Planning Goals

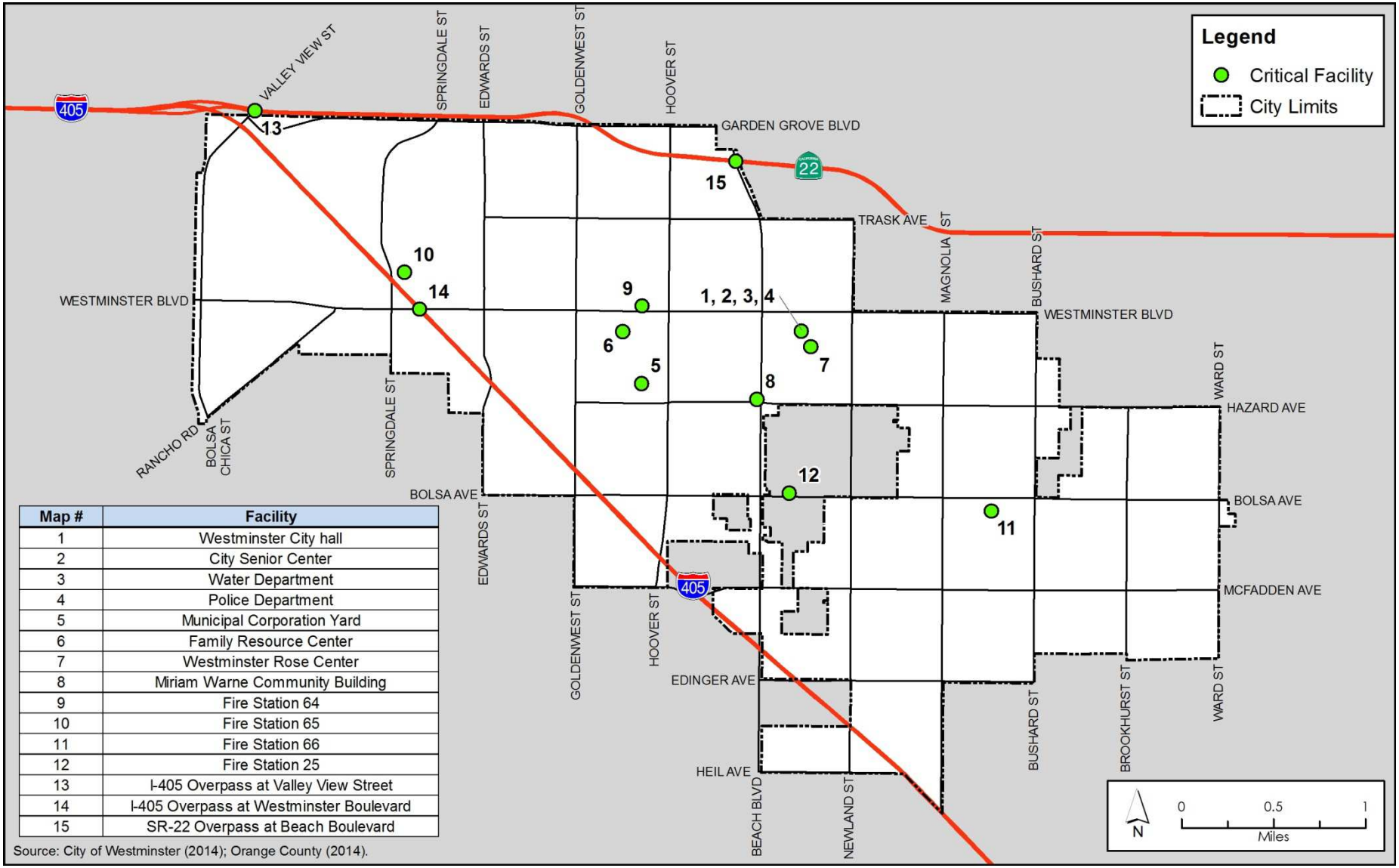
- Ensure reliable and resilient infrastructure for today and future generations.
- Ensure the effective delivery of emergency services during a disaster.
- Maintain adequate City functions and quality of life.

Critical Facilities List

Map #	Facility
1	Westminster City Hall
2	City Senior Center
3	Water Department
4	Police Department
5	Municipal Corporation Yard
6	Family Resource Center
7	Westminster Rose Center
8	Miriam Warne Community Building
9	Fire Station 64
10	Fire Station 65
11	Fire Station 66
12*	Fire Station 25
13	I-405 Overpass at Valley View Street
14	I-405 Overpass at Westminster Boulevard
15	SR-22 Overpass at Beach Boulevard

**Fire Station 66 is in Midway City, which is in the City of Westminster's sphere of influence.*

Critical Facilities List



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Source: City of Westminster (2014); Orange County (2014).

Relevant Hazards

Avalanche	Flood	Seismic hazards
Climate change	Geological hazards	Severe winter storm
Coastal erosion	Hailstorm	Tornado
Coastal storm	Hazardous materials	Tsunami
Dam failure	Human-caused hazards	Volcano
Disease/pest management	Hurricane	Wildfire
Drought	Land subsidence	Wind
Earthquake fault rupture	Landslide and mudflow	Windstorm
Expansive soils	Liquefaction	
Extreme heat	Sea level rise	

Westminster Hazard Ranking

Hazard Type	Probability	Impact			Total Score	Hazard Planning Consideration
		Affected Area	Primary Impact	Secondary Impacts		
Drought	4	4	4	4	64.00	High
Seismic Hazards	4	4	4	4	64.00	High
Flood	4	3	3	3	48.00	High
Liquefaction	3	4	4	4	48.00	High
Hazardous Materials	3	2	4	4	38.40	Medium
Extreme Heat	3	3	3	3	36.00	Medium
Severe Weather (wind/rain)	3	3	3	3	36.00	Medium
Disease/Pest Management	2	4	2	2	22.40	Medium
Dam Failure	1	4	4	4	16.00	Medium

Note: Scores are based on a scale of 1 to 4, where 4 is the highest score, and 1 is the lowest score. See Table 3.3 for more information.

Note: Total score is based on an equation that weights categories by importance. See Table 3.3 for more information.

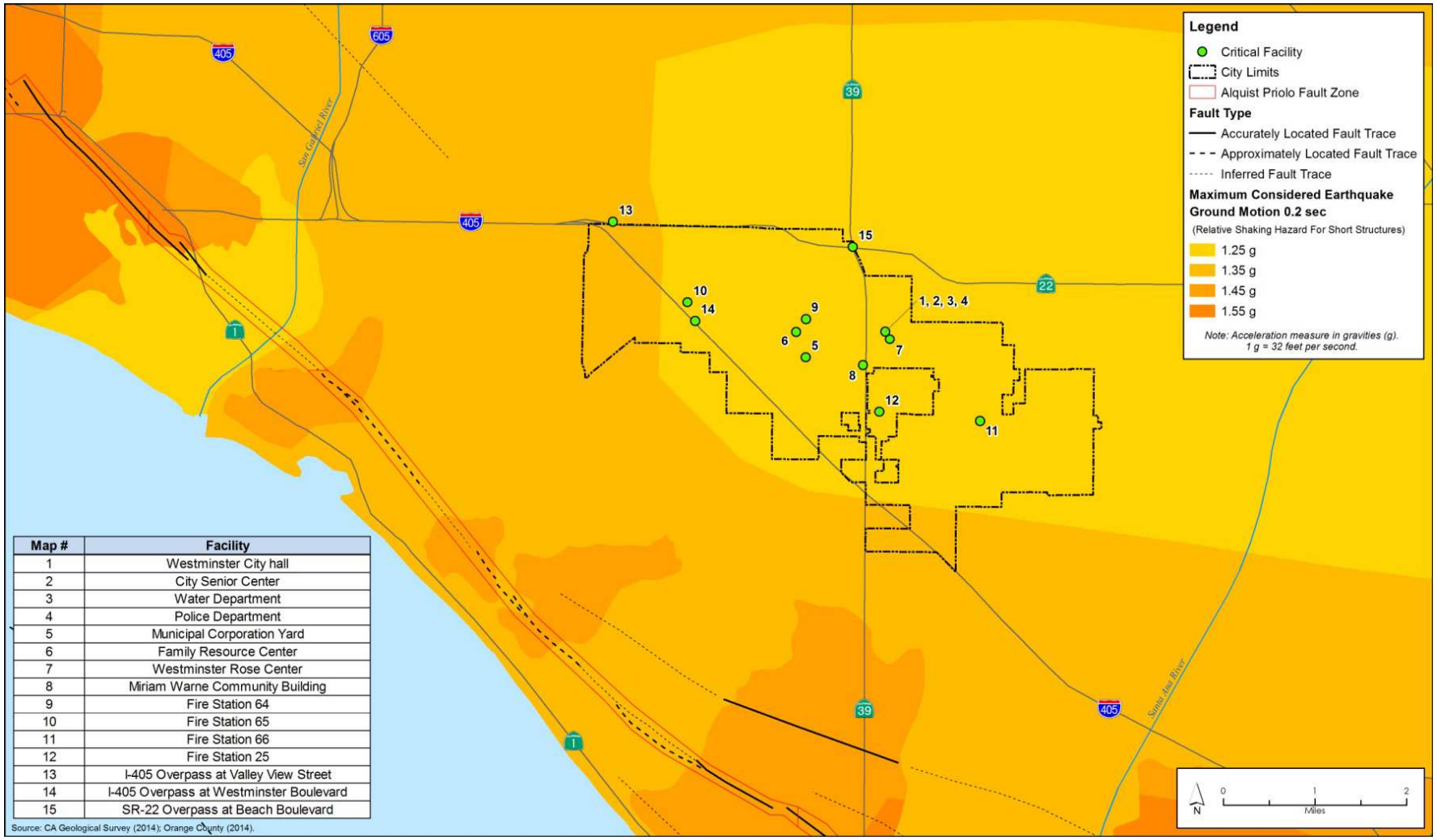
Hazard Profile

- Identification of the Hazard
- Profile of the Hazard
  - Location
  - Extent
- Past Occurrences
- Probability of Future Occurrences
- Climate Change Considerations
- Vulnerabilities/ Risk Assessment
- Utilities Considerations

Drought

- Location and Extent
  - The entire City
- Past Occurrences
  - 10 events since 1917, average three to five years in duration.
- Probability of Future Occurrences
  - High probability given the prevalence of drought throughout the state over the last 100 years.
- Climate Change Considerations
  - Anticipated changes in precipitation regimes may reduce groundwater levels within the City, further increasing risks to drought.

Seismic Hazards (Seismic Shaking)



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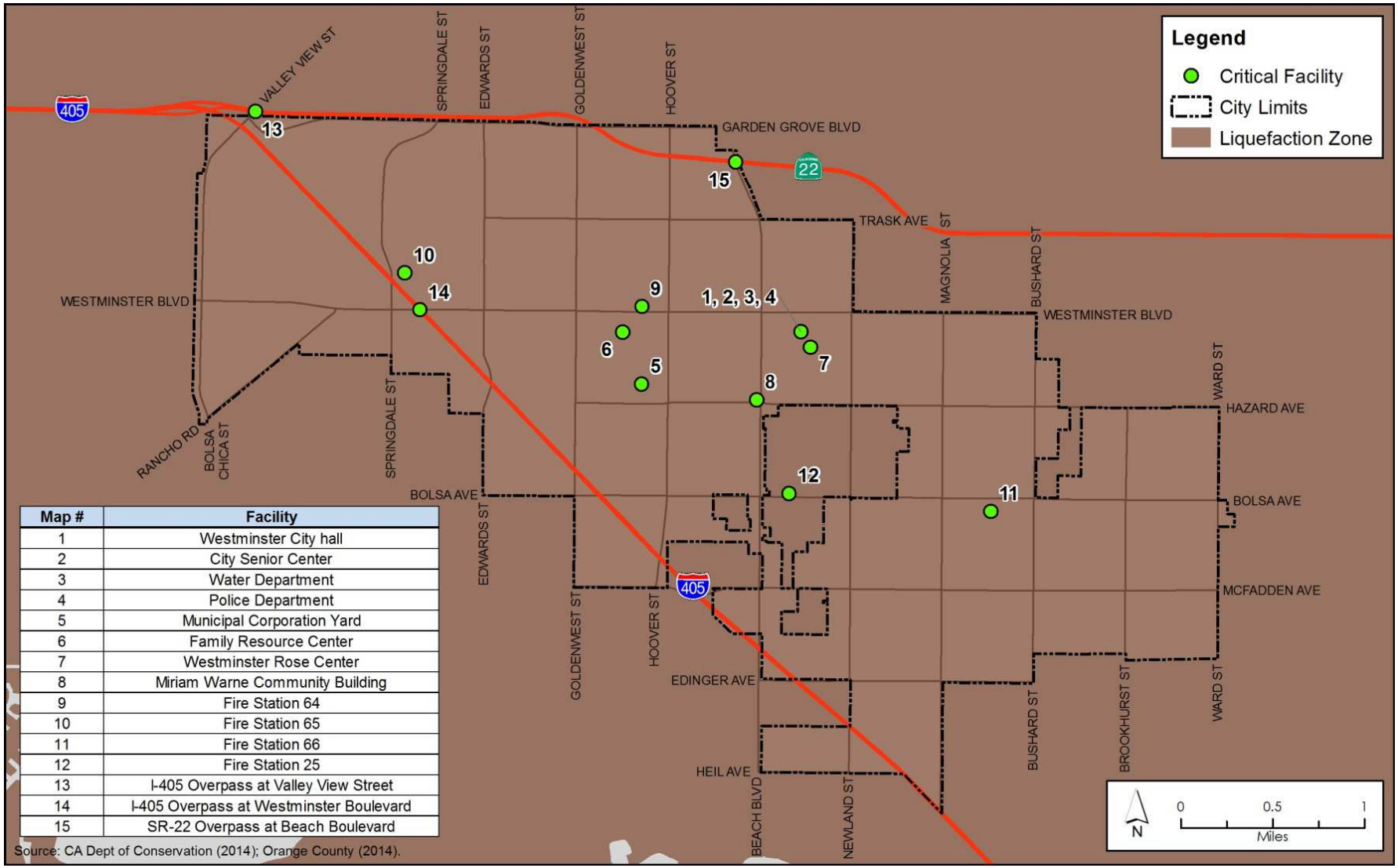
Source: CA Geological Survey (2014); Orange County (2014).

Seismic Hazards (Liquefaction)



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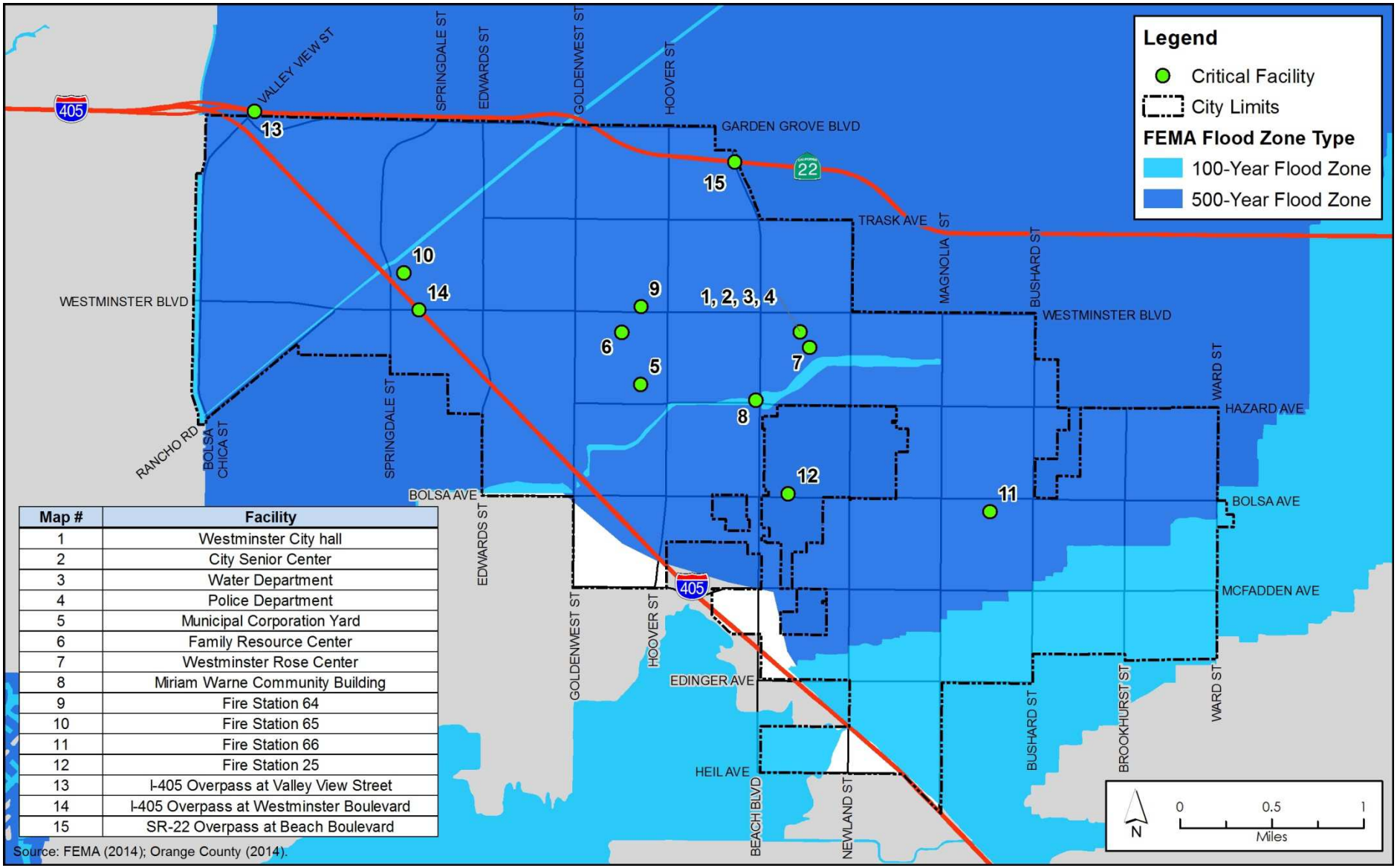
Source: CA Dept of Conservation (2014); Orange County (2014).

Flood



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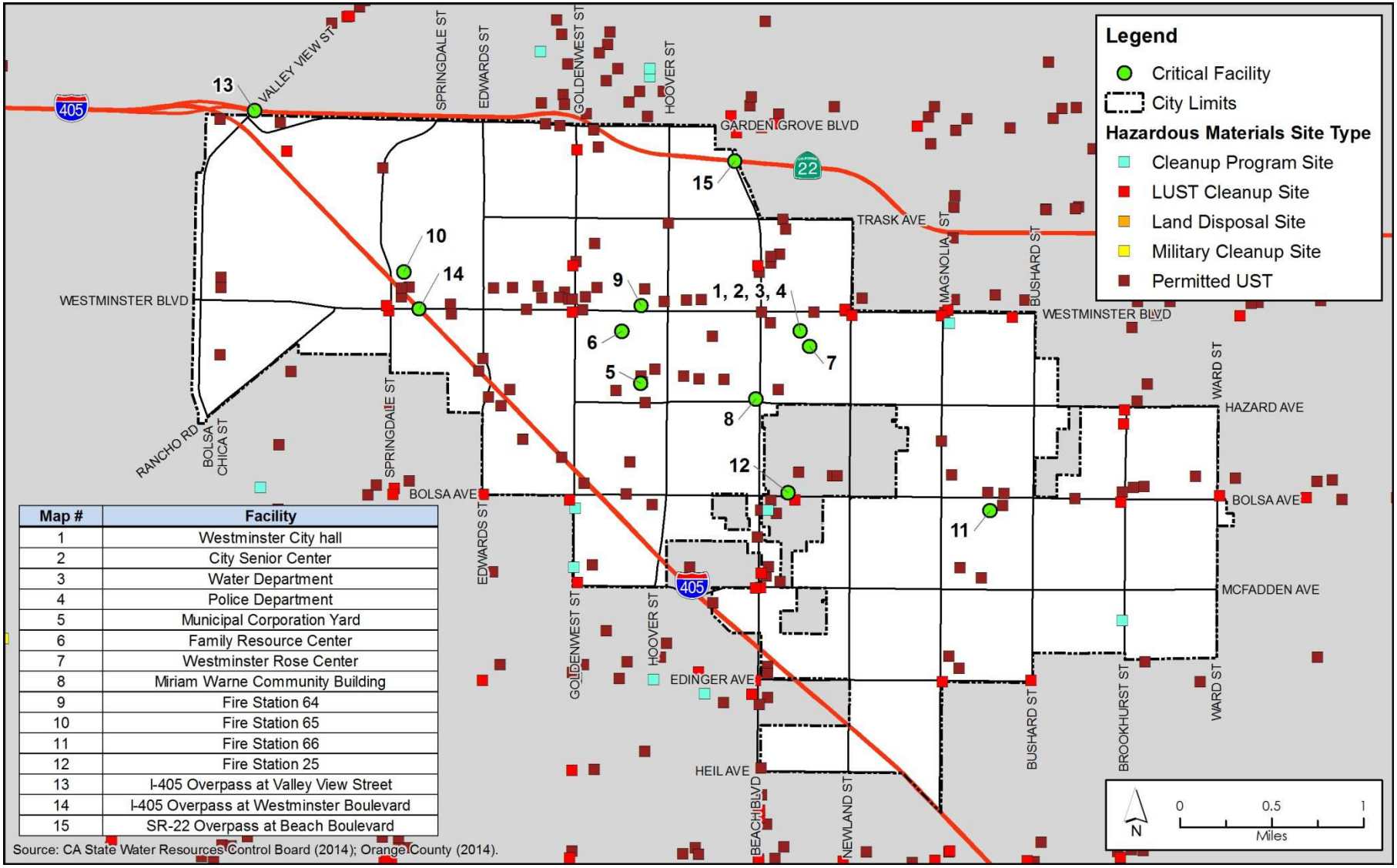
Source: FEMA (2014); Orange County (2014).

Hazardous Materials



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Source: CA State Water Resources Control Board (2014); Orange County (2014).

Extreme Heat

- Location and Extent
  - The entire City
- Past Occurrences
  - On average 4 extreme heat days per year
  - On average 0-1 heat wave per year
- Probability of Future Occurrences
  - High certainty that extreme heat conditions will occur in the future.
- Climate Change Considerations
  - Future climatic conditions could increase the number of extreme heat events based on increased temperatures resulting from climate change.
  - 15-35 extreme heat days expected by 2050.

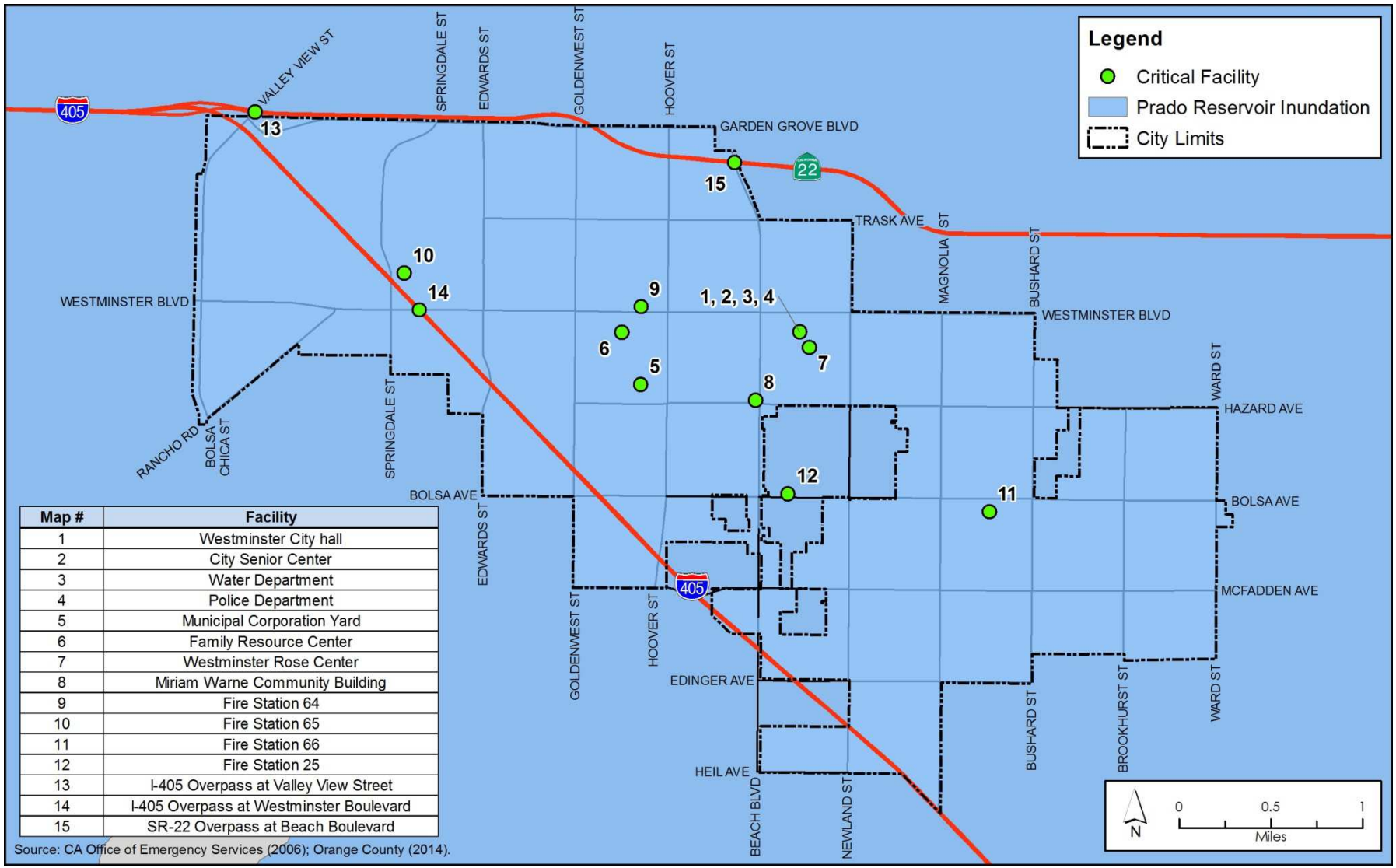
Severe Weather

- Location and Extent
  - Citywide/ Countywide hazard
- Past Occurrences (Tornado, High Winds, Strong Winds)
  - 18 major windstorm (Santa Ana) events recorded in Southern California between (1956 and 2007)
  - 5 of these events caused significant damage within Orange County
- Probability of Future Occurrences
  - Future occurrences are expected
    - Santa Ana conditions occur on a yearly basis
- Climate Change Considerations
  - Changes in atmospheric conditions could change the frequency, severity, and duration of future windstorm events, however to what degree is uncertain.

Disease/ Pest Management

- Location and Extent
  - The entire City
- Past Occurrences
  - No major occurrences identified.
- Probability of Future Occurrences
  - High probability of future occurrence associated with the favorable climatic conditions that allow diseases and insects to propagate.
- Climate Change Considerations
  - It is anticipated that a warmer climate would not only stress native plants and animals but could also create favorable conditions for existing and new invasive species/diseases to be introduced into southern California.

Dam Failure



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Source: CA Office of Emergency Services (2006); Orange County (2014).

Community Feedback

The City of Westminster CA is currently developing a plan to better understand our community's risks from natural hazards. This plan will help to identify which areas of the City are prone to certain types of hazards and how the City can reduce vulnerability to them. There are several things we can do as a community to prepare for these threats and become more resilient, including:

- Creating better emergency warning systems.
- Building new infrastructure and strengthening existing structures to be more resistant to hazards.
- Developing public education and outreach programs on how to prepare for and withstand an emergency/disaster event.
- Working with county, state, and federal agencies and stakeholder groups to exchange information and assistance.

As part of this planning effort, the City wants to hear from you. We have developed an online survey for community members to help us better understand your concerns. This survey will enable us to determine how prepared our community is and where we need improvement. We also want to take this opportunity to get more citizens of Westminster involved in this process. We would greatly appreciate a few minutes of your time to help us with this important plan. To take the survey, visit https://www.surveymonkey.com/s/HVN7VJX. All answers are anonymous.

Next Steps

- Conduct Online Survey (May)
- Prepare Draft Local Hazard Mitigation Plan for Public Review (June)
- Conduct Public Review of Draft Local Hazard Mitigation Plan (June/July)
- Submit Plan to Cal OES/FEMA (July/August)

Questions/ Comments

- Additional thoughts, questions, and/or suggestions can be provided to:
  - Jim Kingsmill – Emergency Services Coordinator
    jkingsmill@westminster-ca.gov
  - Aaron Pfannenstiel – LHMP Project Manager
    ajp@pmcworld.com

APPENDIX C – HAZUS RISK ASSESSMENT

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Memorandum

To:	Aaron Pfannenstiel, PMC	**Date:**	March 9, 2015
From:	Hope Seligson, MMI		
Subject:	City of Westminster Local Hazard Mitigation Plan Risk Assessment MMI Engineering Project No. MMHB071, Memo MMHB071-TM-001, Rev. 0		

To support the development of a Local Hazard Mitigation Plan (LHMP) for the City of Westminster, California, MMI Engineering (MMI) has conducted earthquake and flood risk assessments for both City-owned critical facilities and community-wide building stock. The earthquake and flood risk assessments have been conducted using Hazus (HAZards U.S.) - FEMA's GIS-based nationally applicable earthquake, flood and hurricane risk assessment software. This memo presents a summary of the earthquake and flood hazards, describes the critical facility and community level data used in the assessment, and summarizes the results.

Hazards - Earthquake

Three earthquake scenarios have been modelled for the current assessment, as follows:

- A M6.9 earthquake scenario on the Newport-Inglewood Fault
- A M6.6 earthquake scenario on the San Joaquin Hills Fault
- The M7.8 "ShakeOut" Scenario on the Southern San Andreas Fault

The first two events were previously modelled in Hazus in a regional risk assessment conducted for FEMA (the Orange County Essential Facilities Risk Assessment, or OCEFRA, Project; FEMA, 2009), and are included in the 2010 Orange County Hazard Mitigation Plan. The last event, the "ShakeOut" event, was extensively studied as part of a multi-disciplinary effort spearheaded by the United States Geological Survey (USGS, see Jones et al., 2008).

Earthquake ground motion data utilized in the current Hazus assessment were developed by the USGS ShakeMap program; for each scenario developed by the USGS, a Hazus-specific zip file (HAZUS.ZIP) is created and made available on the download page. Regional ground motions for each of the three scenarios are shown in **Figures 1 - 3**.

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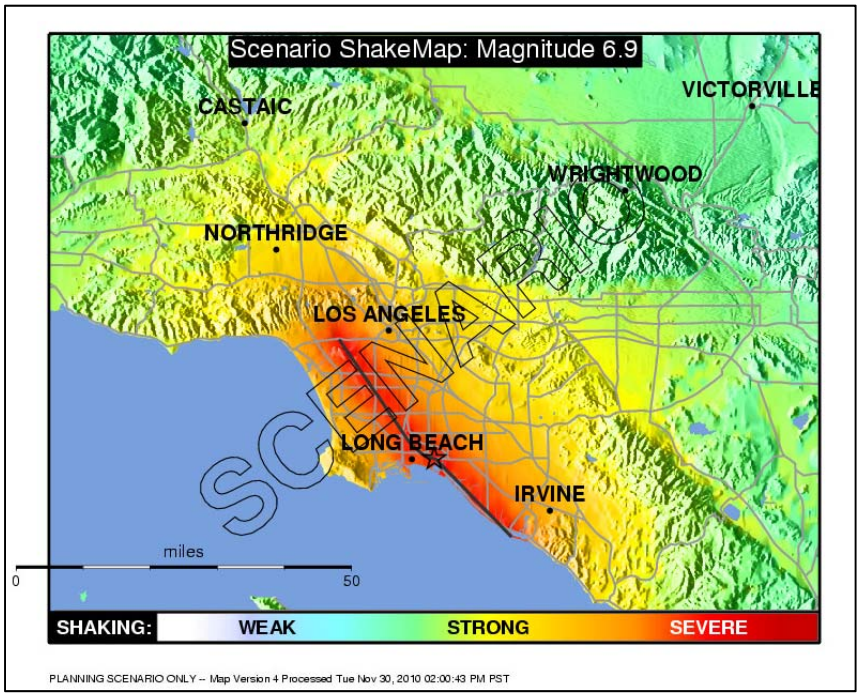

Figure 1: USGS ShakeMap for a M6.9 Scenario Earthquake on the Newport-Inglewood Fault

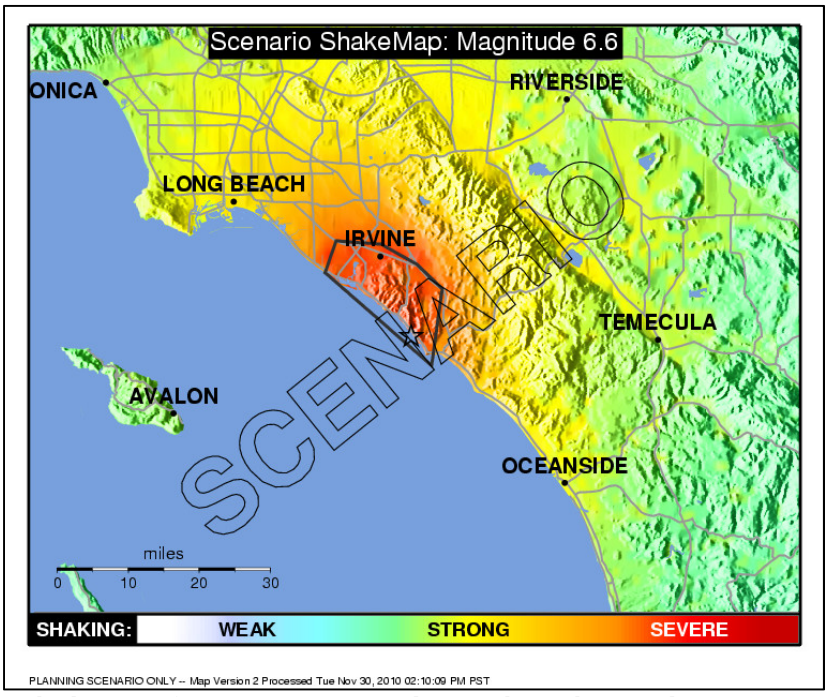

Figure 2: USGS ShakeMap for a M6.6 Scenario Earthquake on the San Joaquin Hills Fault

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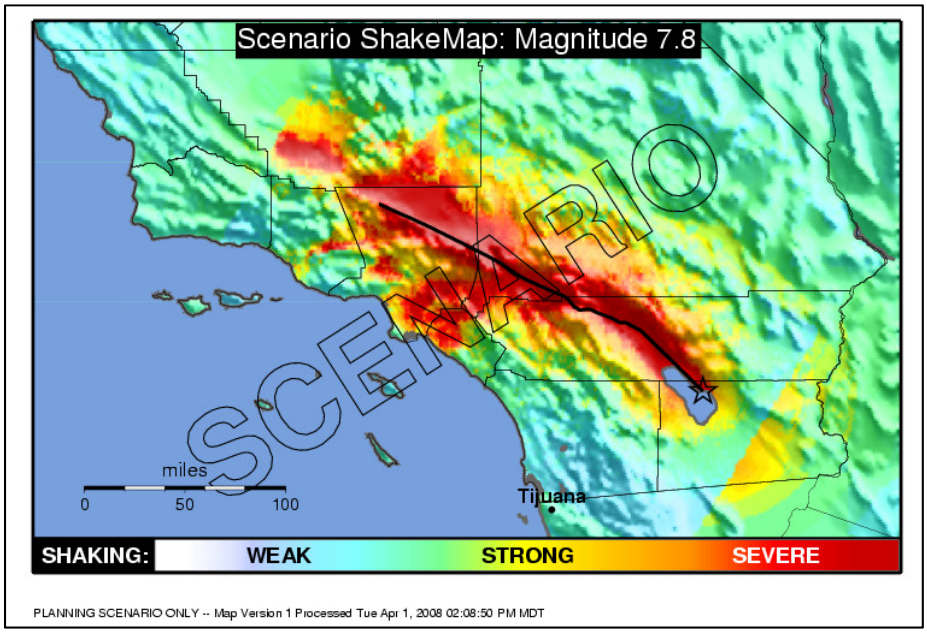

Figure 3: USGS ShakeMap for the M7.8 "ShakeOut" Scenario on the Southern San Andreas Fault

Hazards – Liquefaction Susceptibility

In addition to earthquake ground shaking, the current assessment also considers additional damage due to liquefaction. Liquefaction, the loss of strength of saturated sandy, cohesionless soils, can cause ground failure in the form of lateral spreading and differential settlement. Both of these types of failures can cause damage to building foundations.

Regional liquefaction susceptibility data for southern California were assembled by the USGS as part of the "ShakeOut" Scenario modeling effort (Ponti, et al., 2008). Liquefaction susceptibility data for Orange County are shown in **Figure 4** (top), along with a close-up view in the vicinity of the City of Westminster (bottom). For the current assessment, only the regional data were available. For the City's critical facilities, site-specific data and reports would reflect local conditions in more detail, and could produce a different liquefaction susceptibility assignment, affecting the resultant damage and loss estimated. In particular, no data were available on whether building design and construction incorporated specific features intended to mitigate potential liquefaction impacts. The presence of such features could also change the assigned liquefaction susceptibility and affect damage estimates.

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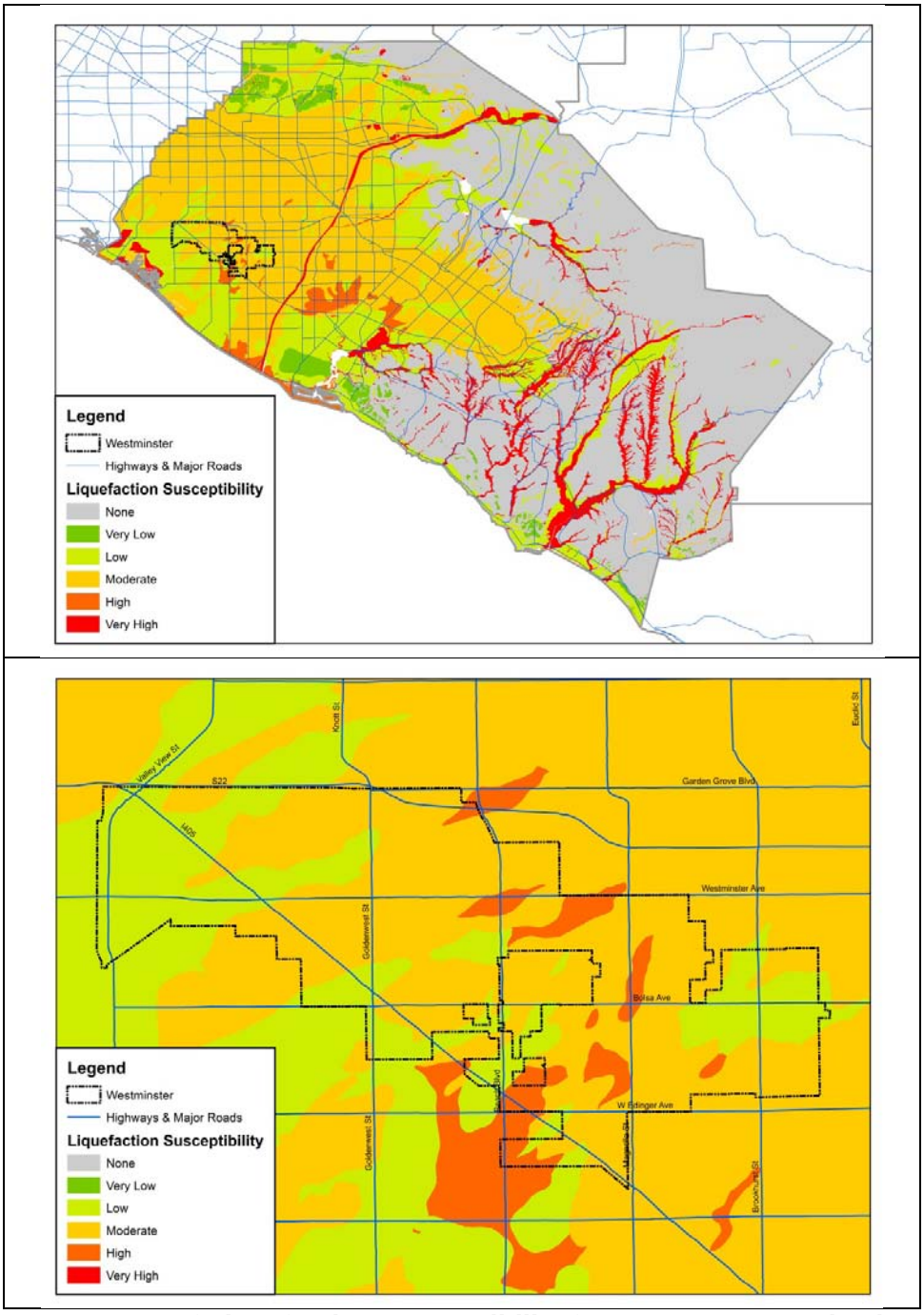

Figure 4: USGS Map of Liquefaction Susceptibility for Orange County (top) and in the Vicinity of the City of Westminster (bottom) [After Ponti et al., 2008]

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Hazards – Flooding

Hazus' built-in (default) flood modelling capabilities have been utilized to develop maps of potential flood depths for the one-percent chance annual flood (the 100-year flood), and the 0.2 percent chance annual flood (the 500-year flood), shown in **Figures 5 and 6**, respectively, for Orange County (top) and in the vicinity of the City of Westminster (bottom).

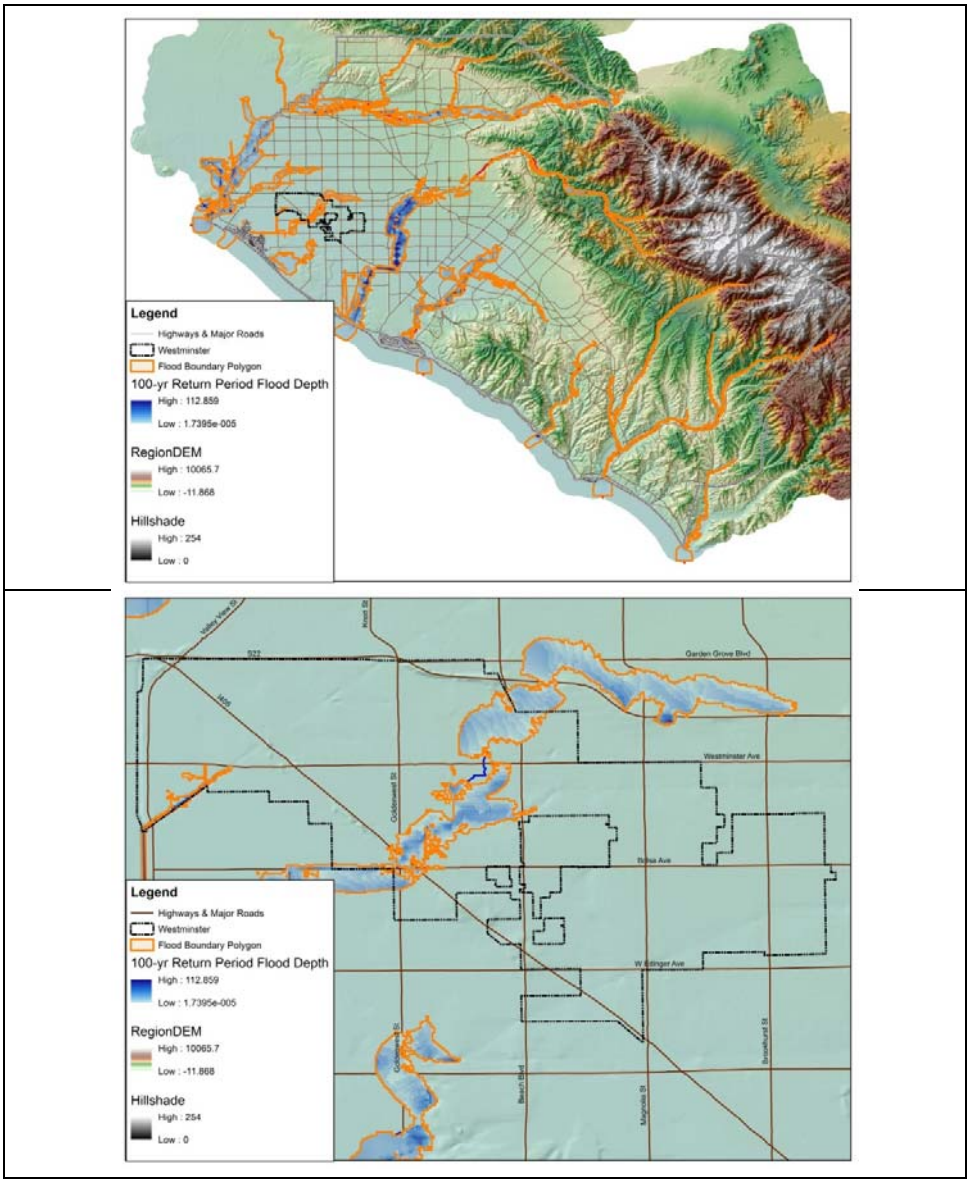

Figure 5: Hazus-estimated Flood Depths for the 1-percent Chance Annual (100-year) Flood for Orange County (top) and in the Vicinity of the City of Westminster (bottom)

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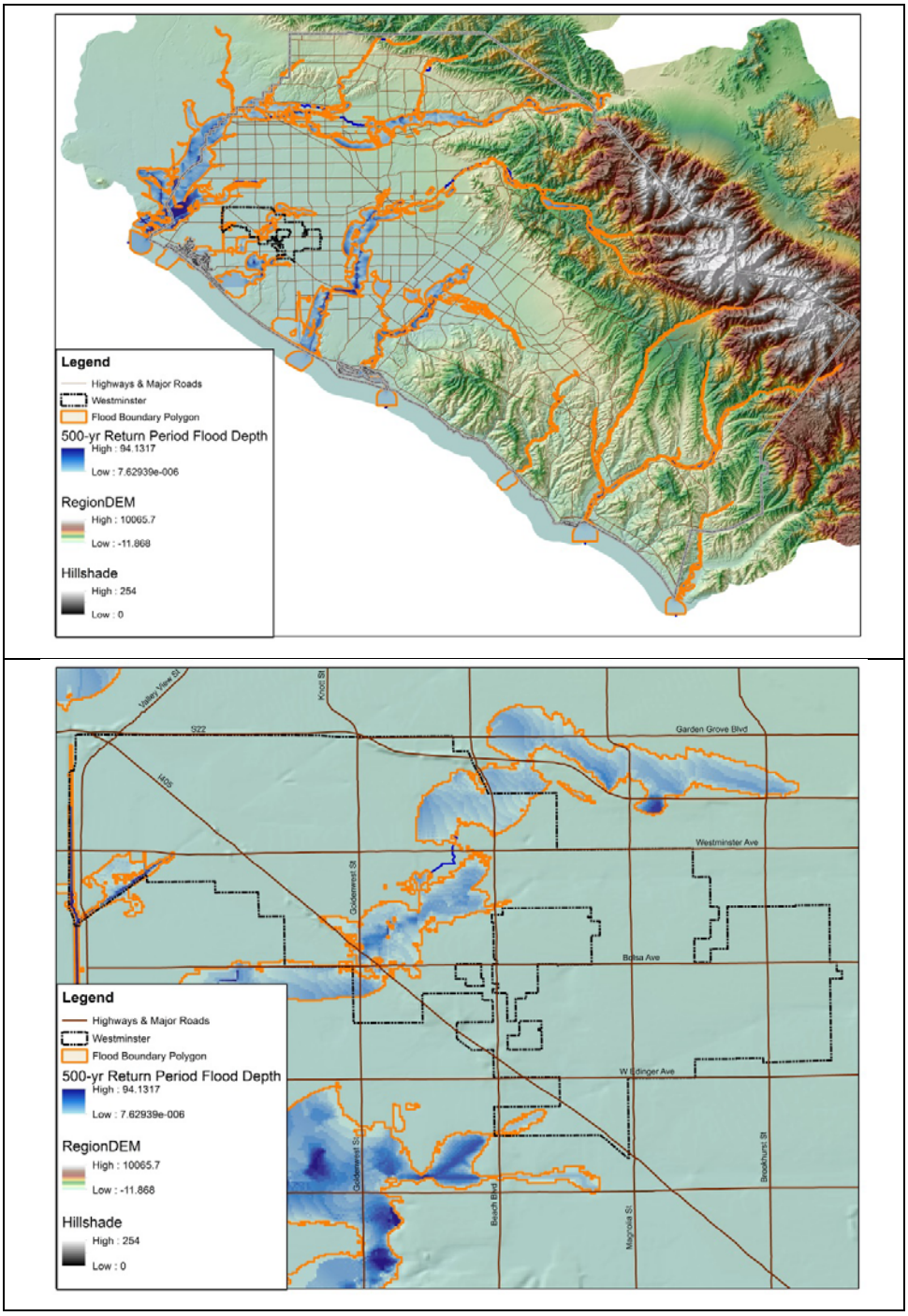

Figure 6: Hazus-estimated Flood Depths for the 0.2-percent Chance Annual (500-year) Flood for Orange County (top) and in the Vicinity of the City of Westminster (bottom)

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Data – City-Owned Critical Facilities Data

A list of eleven City-owned critical facilities, along with structural information, was assembled by PMC, and is summarized in **Table 1**. These data were used to execute the Hazus earthquake and flood risk assessments. The eleven city-owned buildings represent more than $94 million in building replacement values, along with close to $10 million in building contents value.

Using the data provided by PMC, each facility was assigned Hazus-specific classifications required for analysis. These parameters are described below, and are provided for each building in **Table 2**.

- There are just two government-related *Occupancy Classes* in Hazus; GOV1 for general services facilities (e.g., offices) and GOV2 for emergency response facilities (e.g., police stations, fire stations and EOCs).
- Buildings are classified into Hazus *Model Building Types* according to their lateral force resisting systems and number of stories. Relevant examples include low-rise reinforced masonry bearing wall buildings with wood or metal deck diaphragms (RM1L), low-rise steel moment frame construction (S1L), low-rise steel braced frame construction (S2L), low-rise concrete shear wall buildings (C2L) and light wood frame (W1). The critical facility building type categorizations for the masonry, concrete and wood buildings were straightforward. Based on available information[1], the "non-combustible steel frame" Police Department Building was assumed to be steel braced frame. Similar information for the "non-combustible steel frame" Miriam Warne Community Building was not found; the building was assumed to be steel moment frame in accordance with Hazus default structural data for similar facilities.
- For the Hazus earthquake model, seismic *Design Level* is based on the building code in place at the time of construction, generally determined from the year built. For most buildings, pre-1941 construction would be considered "Low Code" design level, buildings build between 1941 and 1975 would be considered "Moderate Code", and post 1975 construction would be considered "High Code". The Superior sub-classes (e.g., "High Superior") are generally reserved for buildings built as essential facilities, with an increased factor of safety reflected in the design.
- For communities participating in the National Flood Insurance Program, the Hazus Flood *Design Level* is determined by comparing a facility's construction date to the date that the initial Flood Insurance Rate Map (FIRM) was issued for the community. For the City of Westminster, the initial FIRM date is 1977 (FEMA, 2015); for the County of Orange (i.e., for Midway City), the initial FIRM date is 1979.

[1] http://www.mccarthy.com/news/2010/01/27/westminster-police-department-headquarters/

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Table 1: City-Owned Critical Facility Data, as Provided by PMC

#	Name	Address	City	Zip	Building Area (Sq. Ft.)	Building Value ($M)	Contents Value ($M)	Latitude	Longitude	Year Built	Structure Type	Foundation	# Stories
1	Westminster City Hall	8200 Westminster Blvd.	Westminster	92683	19,478	7.2	2.1	33.757823	-117.985891	1968	Masonry Const/Wood Roof	slab on grade	1
2	City Senior Center	8200 Westminster Blvd.	Westminster	92683	34,350	5.1	0.6	33.758972	-117.98706	1968	Masonry Const/Wood Roof	slab on grade	1
3	Police Department	8200 Westminster Blvd.	Westminster	92683	88,000	56.2	4.2	33.756506	-117.985987	2011	Non Comb Steel Frame	slab on grade	3
4	Municipal Corp. Yard	14381 Olive Street	Westminster	92683	25,442	2.6	1.7	33.753412	-118.000549	1974	Masonry Const/Wood Roof	slab on grade	1
5	Family Resource Center	7200 Plaza Street	Westminster	92683	3,835	1.0	0.2	33.757834	-118.003512	1972	Masonry Const/Wood Roof	slab on grade	1
6	Westminster Rose Center	14140 All American Way	Westminster	92683	33,839	13.4	1.1	33.756538	-117.984966	2006	Masonry Const/Wood Roof	slab on grade	2
7	Miriam Warne Community Building	14491 Beach Boulevard	Westminster	92683	4,800	2.2	0.1	33.752129	-117.98968	2010	Non Comb Steel Frame	slab on grade	1
8	Fire Station 64	7351 Westminster Blvd.	Westminster	92683	15,400	3.9	0.012	33.75952	-118.000734	1982	Reinforced masonry	slab on grade	1
9	Fire Station 65	6061 Hefley Street	Westminster	92683	6,000	1.0	0.006	33.761071	-118.023235	1978	Reinforced masonry	slab on grade	1
10	Fire Station 66	15061 Moran Street	Westminster	92683	4,480	0.8	0.006	33.743798	-117.967787	1963	Concrete shear wall	slab on grade	1
11	Fire Station 25	8171 Bolsa Avenue	Midway City	92655	3,156	0.5	0	33.744983	-117.986632	1952	Wood Frame	slab on grade	1
	TOTAL				**238,780**	**94.09**	**9.98**						

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Table 2: Hazus Classifications for City-Owned Facilities

No.	Name	Occupancy	Model Building Type	EQ Design Level	Flood Design Level
1	Westminster City Hall	GOV1	RM1L	MC	Pre-FIRM
2	City Senior Center	GOV1	RM1L	MC	Pre-FIRM
3	Police Department	GOV2	S2L	HS	Post-FIRM
4	Municipal Corporation Yard	GOV1	RM1L	MC	Pre-FIRM
5	Family Resource Center	GOV1	RM1L	MC	Pre-FIRM
6	Westminster Rose Center	GOV1	RM1L	HC	Post-FIRM
7	Miriam Warne Community Building	GOV1	S1L	HC	Post-FIRM
8	Fire Station 64	GOV2	RM1L	HC	Post-FIRM
9	Fire Station 65	GOV2	RM1L	HC	Post-FIRM
10	Fire Station 66	GOV2	C2L	MC	Pre-FIRM
11	Fire Station 25	GOV2	W1	MC	Pre-FIRM

Occupancy Classes:

GOV1 = Government, General Services
GOV2 = Government, Emergency Response

Model Building Types:

RM1L = Reinforced Masonry Bearing Walls with Wood or Metal Deck Diaphragms, low-rise
S1L = Steel Moment Frame, low-rise
S2L = Steel Braced Frame, low-rise
C2L = Concrete Shear Walls, low-rise
W1 = Wood, Light Frame (≤ 5,000 sq. ft.)

Earthquake Design Levels:

MC = Moderate Code
HC = High Code
HS = High Superior

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Data - Community Level Building Inventory Data

Buildings within the City of Westminster include those used for Residential, Commercial, Industrial and other occupancies. Data on the total square footage and the number of buildings, tabulated at the census block and census tract levels, are stored within the Hazus default "General Building Stock" databases. For the City of Westminster Hazard Mitigation Plan, improved Hazus "General Building Stock" inventory databases, developed for the FEMA-funded Orange County Essential Facilities Risk Assessment (OCEFRA) Project (FEMA, 2009) were utilized. These improved databases were developed from available 2008 Assessor's parcel data for residential parcels, aggregated to the census block level.

Nineteen census tracts (2000 census) covering the City of Westminster have been identified, and are shown in **Figure 7**. It should be noted that the census tract south of Westminster Ave. at Bolsa Chica Rd. is quite large and was not included in order to avoid overestimating exposure for the City.

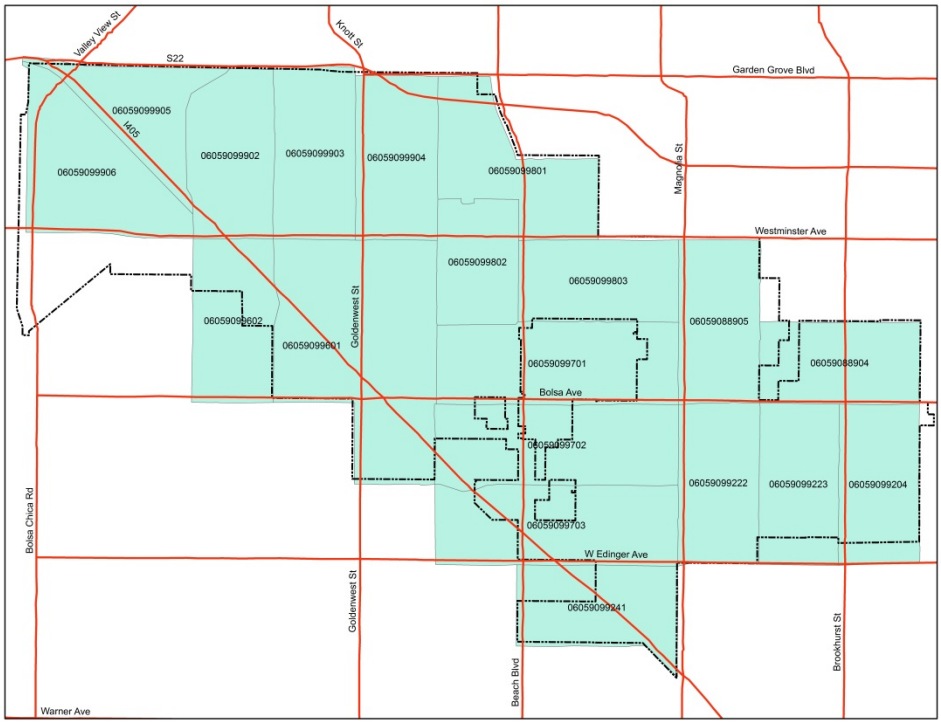

Figure 7: Census Tracts Approximately Covering the City of Westminster

Building inventory data for the identified census tracts have been extracted from the improved OCEFRA Hazus databases, and are summarized in **Tables 3 and 4**. **Table 3** provides a breakdown of building and content replacement value, square footage and building count by general occupancy (residential, commercial, industrial and other uses). The total estimated replacement cost of buildings in the City of Westminster exceeds $5.7 billion (in 2006 dollars). As shown, residential buildings account for the majority of the buildings (92%) and building value (81%). However, the average building replacement

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value for commercial buildings (approximately $627,000) exceeds that for residential buildings (approximately $203,000).

Table 3: Summary of Improved Hazus Building Inventory Data for the City of Westminster, by General Occupancy

General Occupancy	Building Replacement Value ($M)	Contents Replacement Value ($M)	Building Square Footage (1,000 Sq. Ft.)	Building Count
Residential	$4,639	$2,320	41,716	22,824
Commercial	$866	$921	7,222	1,381
Industrial	$107	$144	1,226	355
Other	$139	$142	1,085	181
TOTAL	$5,751	$3,527	51,249	24,741

Table 4 provides a different breakdown of the same database, this time summarizing the building replacement value and estimated building count by general construction type. It should be noted that the Hazus databases tabulate the inventory data by occupancy category, so that building counts by occupancy, if derived from Assessor's data, are "true" counts. Similar data reported by construction type are derived by multiplying the occupancy data by an assumed construction distribution or "mapping scheme" (e.g., office buildings may be 40% steel moment-frame, 30% concrete shear wall, etc.). Accordingly, construction type estimates have more uncertainty, and should be assumed to represent an ***order-of-magnitude*** estimate, rather than a precise figure. For example, the improved construction type distribution utilized in this study produces an estimate of 47 unreinforced masonry (URM) buildings in Westminster, whereas the California Seismic Safety Commission (CSSC, 2006) reports no URM buildings within the City (CSSC, 2006). As shown in the table, the majority of the construction is assumed to be wood frame, which is generally assumed to be fairly resistant to earthquake damage (except for the case of soft-story and buildings with "tuck-under" parking). More vulnerable construction types include URM, pre-cast concrete (including tilt-up construction), manufactured housing, and non-ductile concrete construction (a subset of the general concrete category). These construction types represent a small percentage of the building inventory within the City of Westminster.

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Table 4: Summary of Improved Hazus Building Inventory Data for the City of Westminster, by Building Type

General Building Type	Building Replacement Value ($M)	Building Replacement Value (%)	Estimated Building Count	% of Building Count
Concrete	$272	4.7%	368	1.5%
Manufactured Housing	$152	2.6%	3,376	13.6%
Pre-cast Concrete	$57	1.0%	93	0.4%
Reinforced Masonry	$336	5.9%	546	2.2%
Steel	$169	2.9%	230	0.9%
Unreinforced Masonry	$29	0.5%	47	0.2%
Wood Frame (Other)	$962	16.7%	1,658	6.7%
Wood Frame (Single-family)	$3,774	65.6%	18,423	74.5%
TOTAL	$5,751	100%	24,741	100%

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Results – Critical Facilities

Critical facility earthquake and flood losses have been estimated using Hazus (Hazus-MH Version 2.1).

Earthquake

The locations of critical facilities relative to ground shaking in each of the three earthquake scenarios are shown in **Figures 8 through 10**. As shown in the figures, ground shaking at the critical facilities reaches Modified Mercalli Intensity (MMI) VIII (Severe) in the Newport Inglewood Scenario, MMI VII and VIII (Very Strong – Severe) in the San Joaquin Hills Scenario and MMI VI-VII (Strong – Very Strong) in the ShakeOut Scenario. Exposure of critical facilities to mapped regional liquefaction susceptibility is shown in **Figure 11**, and summarized in **Table 5**. Earthquake damage estimates for the City's critical facilities, generated using Hazus' Advanced Engineering Building Module (AEBM), are provided in **Table 6,** and are discussed in more detail below.

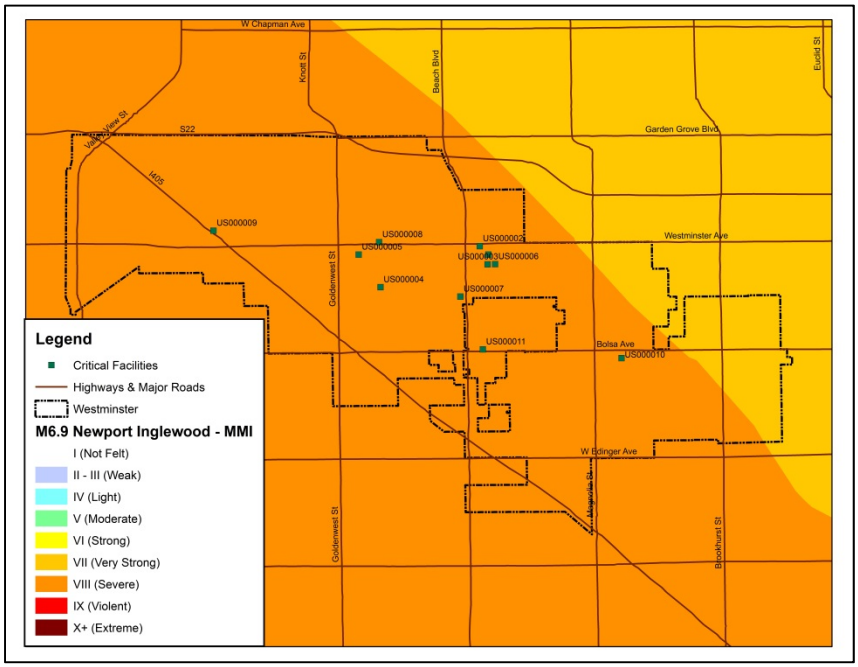

Figure 8: Critical Facilities and Ground Shaking in the M6.9 Newport-Inglewood Fault Scenario Earthquake

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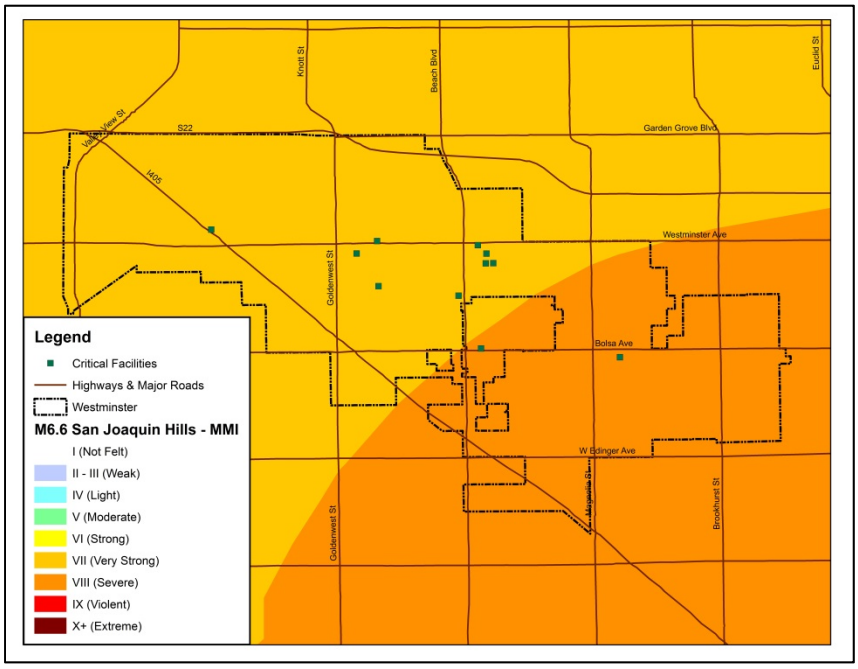

Figure 9: Critical Facilities and Ground Shaking in the M6.6 San Joaquin Hills Fault Scenario Earthquake

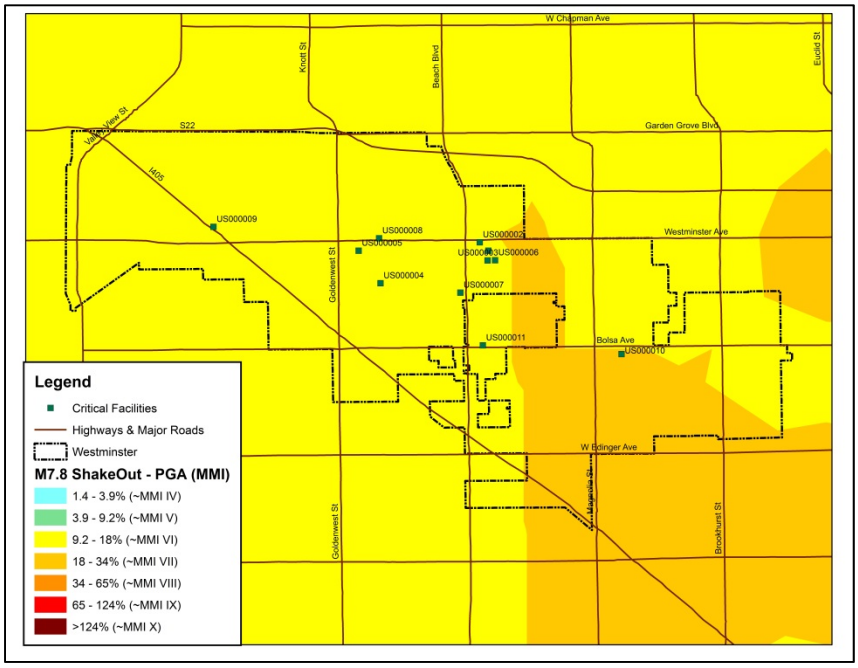

Figure 10: Critical Facilities and Ground Shaking in the M7.8 "ShakeOut" San Andreas Fault Scenario Earthquake

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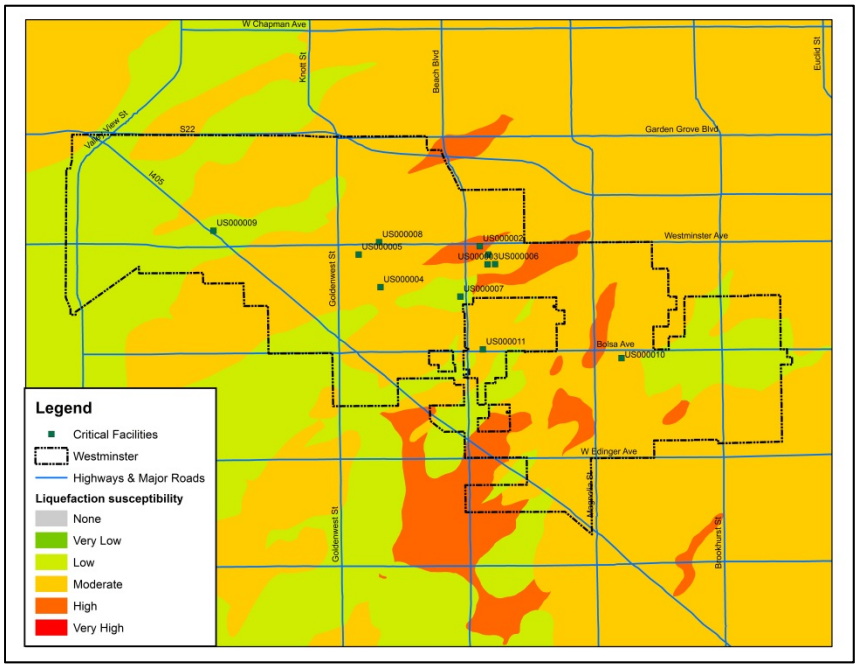

Figure 11: Critical Facilities and USGS Regional Liquefaction Susceptibility [After Ponti et al., 2008]

Table 5: Liquefaction Susceptibility Assignments for the City of Westminster's Critical Facilities

No.	Name	Liquefaction Susceptibility
1	Westminster City Hall	Moderate
2	City Senior Center	High
3	Police Department	Moderate
4	Municipal Corporation Yard	Moderate
5	Family Resource Center	Moderate
6	Westminster Rose Center	Moderate
7	Miriam Warne Community Building	Low
8	Fire Station 64	Moderate
9	Fire Station 65	Low
10	Fire Station 66	Moderate
11	Fire Station 25	Moderate

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Table 6: Hazus-estimated Earthquake Impacts for the City of Westminster's Critical Facilities (in $1,000)

	Critical Facilities											
Name	City Hall	Sr. Ctr.	PD	Corp Yard	Family Ctr.	Rose Ctr.	Warne Bldg	FS #64	FS #65	FS #66	FS #25	
Number	1	2	3	4	5	6	7	8	9	10	11	Total
M6.9 Newport-Inglewood Fault with Liquefaction												
Structural Damage	166.9	221.7	744.8	78.4	28.5	227.9	26.1	70.9	8.9	11.1	10.6	1,595.8
Non-Str. Damage	681.6	966.0	4,830.9	315.6	114.8	1,178.7	144.5	438.8	62.3	72.0	66.9	8,872.1
Building Damage (Str + Non-Str.)	848.5	1,187.7	5,575.7	394.0	143.3	1,406.6	170.6	509.7	71.2	83.2	77.5	10,467.9
Loss Ratio	12%	23%	10%	15%	15%	11%	8%	13%	7%	10%	14%	11%
Contents Damage	127.2	71.2	202.0	125.8	16.7	64.0	3.2	0.9	0.3	0.3	N/A	611.6
Total Loss	**975.7**	**1,258.9**	**5,777.7**	**519.8**	**159.9**	**1,470.6**	**173.9**	**510.6**	**71.4**	**83.5**	**77.5**	**11,079.5**
M6.6 San Joaquin Hills Fault with Liquefaction												
Structural Damage	152.5	201.7	702.9	52.3	15.7	212.9	17.0	40.0	5.9	13.3	7.8	1,421.9
Non-Str. Damage	641.3	903.8	4,591.8	227.2	64.9	1,107.4	103.4	250.5	42.7	85.5	50.5	8,068.8
Building Damage	793.7	1,105.5	5,294.6	279.5	80.6	1,320.4	120.4	290.5	48.5	98.8	58.3	9,490.8
Loss Ratio	11%	22%	9%	11%	8%	10%	5%	7%	5%	12%	11%	10%
Contents Damage	121.8	67.5	192.9	94.6	9.7	60.1	2.3	0.5	0.2	0.4	N/A	550.0
Total Loss	**915.5**	**1,173.0**	**5,487.5**	**374.1**	**90.3**	**1,380.5**	**122.7**	**291.0**	**48.7**	**99.2**	**58.3**	**10,040.8**
M7.8 ShakeOut Scenario with Liquefaction												
Structural Damage	16.1	57.0	43.9	7.3	2.6	17.0	2.6	5.2	0.4	3.9	0.6	156.7
Non-Str. Damage	85.6	269.5	392.8	36.9	13.4	112.1	27.6	39.6	4.8	25.3	4.9	1,012.5
Building Damage	101.8	326.5	436.7	44.1	16.1	129.1	30.2	44.8	5.3	29.3	5.4	1,169.2
Loss Ratio	1%	6%	1%	2%	2%	1%	1%	1%	1%	4%	1%	1%
Contents Damage	18.5	20.3	15.4	17.1	2.3	6.4	0.6	0.1	0.0	0.1	N/A	80.8
Total Loss	**120.2**	**346.8**	**452.1**	**61.3**	**18.3**	**135.6**	**30.8**	**44.9**	**5.3**	**29.4**	**5.4**	**1,250.0**

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As shown in **Table 6**, the event causing the greatest damage overall to the critical facilities in the Newport-Inglewood Scenario, followed closely by the San Joaquin Hills. Despite being a distant event, the ShakeOut scenario (expected to cause significant damage and disruption throughout Southern California) could still cause minor damage to the City's critical facilities.

The table also shows that older buildings and buildings potentially subject to liquefaction show higher levels of damage. The facility expected to suffer the largest loss ratio (the ratio of the expected structural and non-structural repair cost, relative to building replacement cost) in all three events is the City Senior Center (23%, 22%, and 6%, in the Newport-Inglewood, San Joaquin Hills and ShakeOut scenarios, respectively), which has been assumed to be subject to high liquefaction susceptibility. It is recommended that the City review any available site-specific studies or reports to confirm the applicability of this hazard assumption, if possible. The table also shows that despite its "High-Superior" Design Level, minor damage to the new Police Department building (most of which is non-structural) is possible in all three events, and because of its large replacement value ($56.2 million), this minor damage would result in the largest economic loss among the 11 critical facilities.

Flood

Critical facility exposure to expected flood depths are shown in **Figures 12 and 13** for the 1% annual chance flood (the 100-year flood) and the 0.2% chance annual flood (500-year flood), respectively. As shown, just one critical facility (Facility #7 – Westminster Rose Center) is located within the mapped flood boundary for both maps. In both cases, the facility is located close to the edge of the mapped flood zone, with very shallow water depths (<1 foot). Flood damage estimates were generated using the Hazus Flood "User-Defined Facility" module, with the results predicting no appreciable damage to the facility at either flood level.

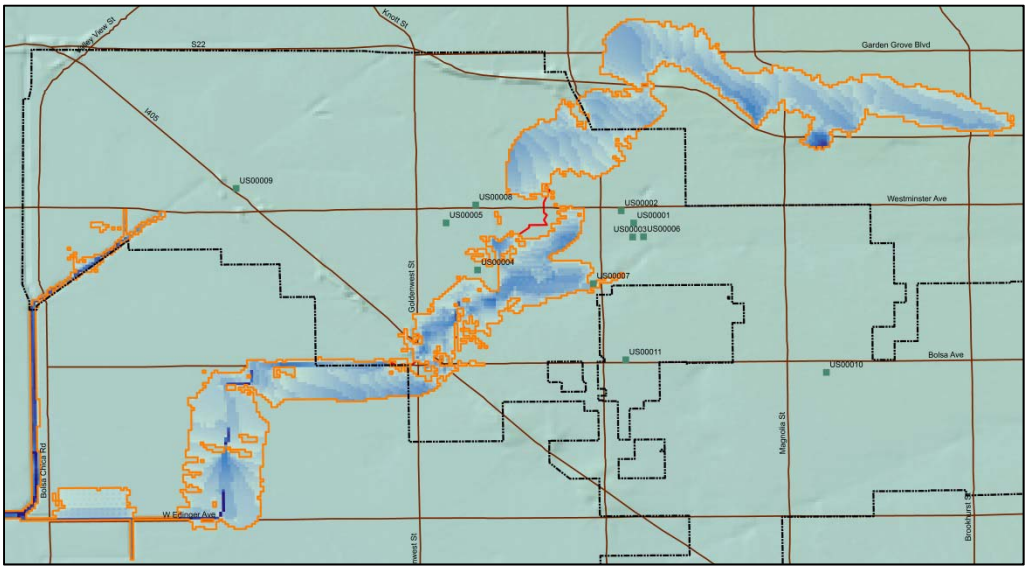

Figure 12: Critical Facilities and Hazus-estimated 1% Annual Chance Flood Depths

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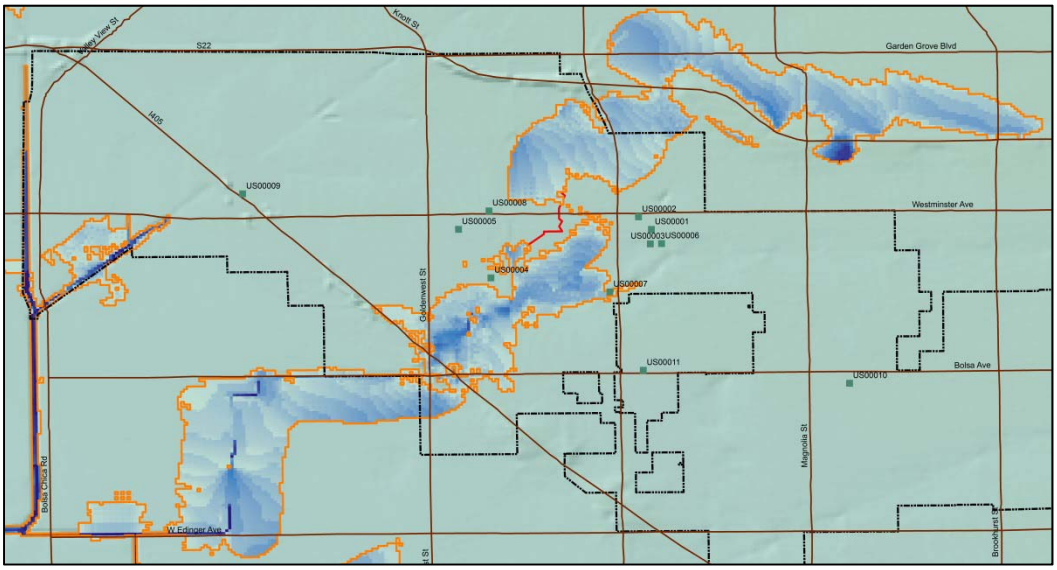

Figure 13: Critical Facilities and Hazus-estimated 0.2% Annual Chance Flood Depths

Results - Community Level Earthquake and Flood Losses

Regional (i.e., community-wide) earthquake and flood losses and population impacts have been estimated using Hazus (Hazus-MH Version 2.1), incorporating the improved regional building inventory databases developed under FEMA funding for the OCEFRA Project (FEMA, 2009).

Earthquake

A summary of the Hazus regional earthquake risk assessment results for the City of Westminster are provided in **Table 7** for the three earthquake scenarios, each including the impacts of liquefaction. Hazus results reported here include various direct economic losses (damage to buildings and their contents, commercial inventories, as well as building-damage related income losses, e.g., wage losses, relocation costs, rental income losses, etc.), population impacts (displaced households, shelter requirements, and casualties of various severity levels, including death), estimates of debris generated, and damage state distributions for various building types.

It should be noted that the casualty figures reported here are not direct Hazus outputs; they are estimates in more medically-meaningful categories derived from Hazus outputs using a "calibration" methodology developed from historic injury data from the 1994 Northridge and other California earthquakes (Seligson & Shoaf, 2003). The method was also applied for the San Andreas "ShakeOut" Scenario (Jones et al., 2008).

As noted previously, Hazus estimates earthquake impacts at the census tract level. Accordingly, building count totals in **Table 7** will be consistent with the data presented in **Tables 3 and 4**, but may differ from totals reported in the flood risk assessment in **Table 8**, which were developed at the census block level.

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Table 7: Hazus-estimated Earthquake Impacts for the City of Westminster

		Earthquake Scenario		
		M6.9 Newport-Inglewood Fault with Liquefaction	M6.6 San Joaquin Hills Fault with Liquefaction	M7.8 ShakeOut Scenario with Liquefaction
Direct Economic Losses for Buildings ($Million)				
	Total Building Exposure Value	5,750.9		
Capital Stock Losses	Cost of Structural Damage	65.3	40.2	17.7
	Cost of Non-Structural Damage	259.8	177.2	59.4
	Total Building Damage (Str. + Non-Str.)	325.1	217.4	77.1
	Building Loss Ratio %	5.7%	3.8%	1.3%
	Cost of Contents Damage	86.4	64.0	18.7
	Inventory Loss	1.8	0.9	0.6
Income Losses	Relocation Loss	40.9	25.6	12.2
	Capital-Related Loss	12.8	7.6	2.1
	Rental Income Loss	20.7	12.2	3.7
	Wage Losses	17.2	10.1	3.2
	Total Direct Economic Loss	504.9	337.8	117.6
	Percent (%) of Countywide Loss	5.5%	2.3%	3.5%
Casualties				
Day Casualties	**Casualties - 2 pm**			
	Fatalities	3	0	0
	Trauma injuries	1	0	0
	Other (non-trauma) hospitalized injuries	7	0	0
	Total hospitalized injuries	8	0	0
	Injuries requiring Emergency Department Visits	250	100	70
	Injuries treated on an Outpatient basis	470	210	140
	Total injuries	731	310	210
	Hospital visits requiring EMS transport	13	4	4
Night Casualties	**Casualties - 2 am**			
	Fatalities	2	1	1
	Trauma injuries	1	0	0
	Other (non-trauma) hospitalized injuries	7	0	0
	Total hospitalized injuries	8	0	0
	Injuries requiring Emergency Department Visits	380	180	200
	Injuries treated on an Outpatient basis	710	360	370
	Total injuries	1,100	541	571
	Hospital visits requiring EMS transport	19	7	11

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		Earthquake Scenario		
		M6.9 Newport-Inglewood Fault with Liquefaction	M6.6 San Joaquin Hills Fault with Liquefaction	M7.8 ShakeOut Scenario with Liquefaction
Shelter				
Shelter	Number of Displaced Households	1,450	900	100
	Number of People Requiring Short-term Shelter	550	350	50
Debris (thousands of tons)				
Debris	Brick, Wood & Other (Light) Debris	82.4	45.8	39.0
	Concrete & Steel (Heavy) Debris	77.7	34.8	30.4
	Total Debris	**160.1**	**80.6**	**69.4**
Building Damage Count by General Building Type*				
Concrete	None	49	104	267
	Slight	113	140	57
	Moderate	151	107	34
	Extensive	48	16	9
	Complete	7	1	1
	TOTAL	**368**	**368**	**368**
Manuf. Housing	None	2	29	124
	Slight	29	219	88
	Moderate	514	1,427	826
	Extensive	1,962	1,500	1,866
	Complete	869	201	472
	TOTAL	**3,376**	**3,376**	**3,376**
Precast Concrete	None	21	28	83
	Slight	40	40	9
	Moderate	30	24	1
	Extensive	2	1	0
	Complete	0	0	0
	TOTAL	**93**	**93**	**93**
Reinforced Masonry	None	159	219	501
	Slight	183	186	35
	Moderate	161	124	9
	Extensive	40	16	1
	Complete	3	1	0
	TOTAL	**546**	**546**	**546**

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		Earthquake Scenario		
		M6.9 Newport-Inglewood Fault with Liquefaction	M6.6 San Joaquin Hills Fault with Liquefaction	M7.8 ShakeOut Scenario with Liquefaction
Building Damage Count by General Building Type (Continued)				
Steel	None	23	63	97
	Slight	66	88	69
	Moderate	113	72	56
	Extensive	26	7	8
	Complete	2	0	0
	TOTAL	**230**	**230**	**230**
Unreinforced Masonry**	None	9	13	40
	Slight	17	18	6
	Moderate	15	13	1
	Extensive	5	3	0
	Complete	1	0	0
	TOTAL	**47**	**47**	**47**
Wood Frame (Other)	None	358	549	1,373
	Slight	707	786	235
	Moderate	507	304	48
	Extensive	79	17	2
	Complete	7	2	0
	TOTAL	**1,658**	**1,658**	**1,658**
Wood Frame (Single-family)	None	7,019	8,330	17,385
	Slight	9,287	8,550	1,000
	Moderate	1,929	1,434	25
	Extensive	161	94	11
	Complete	27	15	2
	TOTAL	**18,423**	**18,423**	**18,423**
ALL BUILDING TYPES	None	7,640	9,335	19,870
	Slight	10,442	10,027	1,499
	Moderate	3,420	3,505	1,000
	Extensive	2,323	1,654	1,897
	Complete	916	220	475
	TOTAL	**24,741**	**24,741**	**24,741**

* These data have been developed from a county-wide distribution of building occupancies across common construction types and do not represent building-specific data.

** According to published reports, there are no URM buildings in the City of Westminster (California Seismic Safety Commission, 2006).

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Flood

A summary of the Hazus regional flood risk assessment results for the City of Westminster are provided in **Table 8** for the 1-percent chance annual flood (the 100-year flood) and the 0.2-percent chance annual flood (500-year flood). The Hazus results reported here include the same direct economic losses and shelter estimates reported for earthquake, but no casualties are reported because the Hazus flood model does not include a flood casualty module. Debris estimates are broken down into flood-relevant sub-classes; finishes, structures and foundations. Finally, building damage counts are reported by occupancy and range of percent damage, reflecting the underlying structure of the Hazus flood damage model.

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Table 8: Hazus-estimated Flood Impacts for the City of Westminster

		Flood Scenario	
		1-percent chance annual flood (100-year flood)	0.2-percent chance annual flood (500-year flood)
Direct Economic Losses for Buildings ($Million)			
	Total Building Exposure Value	**5,750.9**	
Capital Stock Losses	Total Building Damage	22.1	34.6
	Building Loss Ratio %	0.4%	0.6%
	Cost of Contents Damage	34.1	50.2
	Inventory Loss	1.0	1.5
Income Losses	Relocation Loss	0.1	0.1
	Capital-Related Loss	0.1	0.2
	Rental Income Loss	0.0	0.1
	Wage Losses	0.3	0.3
	Total Direct Economic Loss	**57.7**	**87.0**
	Percent (%) of Countywide Loss	1.1%	1.0%
Shelter			
Shelter	Number of Displaced Households	5,300	7,300
	Number of People Requiring Short-term Shelter	4,900	6,800
Debris (thousands of tons)			
Debris	Finishes	2.4	3.5
	Structures	0.2	0.3
	Foundations	0.5	0.6
	Total Debris	**3.1**	**4.4**
Building Damage Count in Flooded Census Blocks by Occupancy			
Single Family Homes	None	291	440
	1 - 10%	0	0
	11 - 20%	21	46
	21 - 30%	89	163
	31 - 40%	1	2
	41 - 50%	0	0
	Substantial Damage	0	0
	TOTAL	**402**	**651**

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		Flood Scenario	
		1-percent chance annual flood (100-year flood)	0.2-percent chance annual flood (500-year flood)
Building Damage Count in Flooded Census Blocks by Occupancy (Continued)			
Manufactured Housing	None	58	63
	1 - 10%	0	0
	11 - 20%	0	0
	21 - 30%	0	0
	31 - 40%	0	0
	41 - 50%	1	2
	Substantial Damage	17	20
	TOTAL	**76**	**85**
Other Residential	None	50	61
	1 - 10%	4	4
	11 - 20%	5	9
	21 - 30%	18	27
	31 - 40%	0	0
	41 - 50%	0	0
	Substantial Damage	0	0
	TOTAL	**77**	**101**
Commercial	None	2	4
	1 - 10%	0	2
	11 - 20%	0	0
	21 - 30%	0	0
	31 - 40%	0	0
	41 - 50%	0	0
	Substantial Damage	0	0
	TOTAL	**2**	**6**
Industrial	None	3	2
	1 - 10%	0	0
	11 - 20%	0	1
	21 - 30%	0	0
	31 - 40%	0	0
	41 - 50%	0	0
	Substantial Damage	0	0
	TOTAL	**3**	**3**

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		Flood Scenario	
		1-percent chance annual flood (100-year flood)	0.2-percent chance annual flood (500-year flood)
Building Damage Count in Flooded Census Blocks by Occupancy (Continued)			
Other Occupancies	None	0	0
	1 - 10%	0	0
	11 - 20%	0	0
	21 - 30%	0	0
	31 - 40%	0	0
	41 - 50%	0	0
	Substantial Damage	0	0
	TOTAL	**0**	**0**
ALL OCCUPANCIES	None	404	570
	1 - 10%	4	6
	11 - 20%	26	56
	21 - 30%	107	190
	31 - 40%	1	2
	41 - 50%	1	2
	Substantial Damage	17	20
	TOTAL	**560**	**846**

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Conclusions and Recommendations

While the City's critical facilities do not appear to be vulnerable to flood damage, the facilities could suffer as much as $11 million in damage to the buildings and their contents in the Newport-Inglewood Fault scenario earthquake. Much of this damage is expected to be non-structural in nature. To minimize this type of damage and its effects on functionality, the City could conduct detailed non-structural evaluations of their facilities, in order to identify and mitigate potentially vulnerable non-structural components and systems. As noted above, the facility with the largest expected loss ratio (the City Senior Center) has been located within a mapped area of high liquefaction susceptibility; site specific conditions should be determined, if possible.

In the community at large, impacts from a large Newport-Inglewood Fault scenario could be significant, including more than $500 million in building-related losses and more than 700 injuries during a daytime event and 1,100 injuries in a night time event. Estimated flood losses are an order of magnitude smaller than the largest earthquake losses, with 500-year flood losses of less than $90 million. While the databases used to predict damage to specific building types have some uncertainty associated with them, a significant percent of mobile homes (26%) have been identified as potentially suffering "Complete" damage in the Newport-Inglewood Fault scenario, representing 95% of all buildings in this category. Further, a number of mobile homes are also located in potentially flooded areas and may suffer substantial flood damage. These buildings would be good candidates for a more detailed review. For example, a more detailed inventory could be developed, including information on the first floor elevation and whether the mobile homes are mounted with an earthquake restraint bracing system, which could be used to refine the damage estimates for these buildings.

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