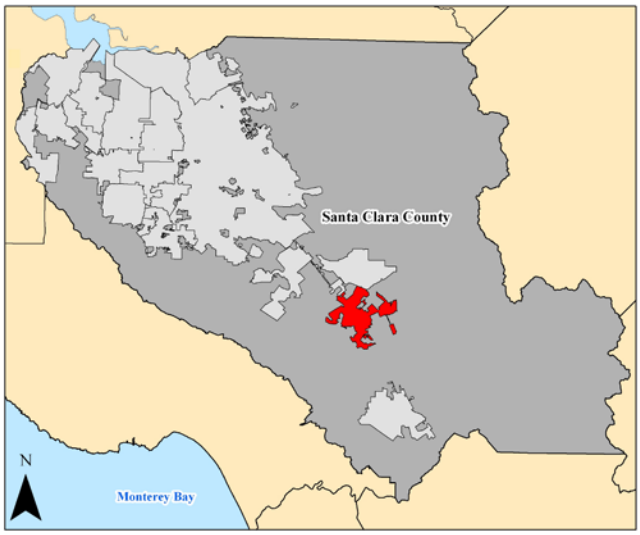
SECTION 16 CITY OF MORGAN HILL

16.1 INTRODUCTION

This City of Morgan Hill Annex serves as an annex to the Santa Clara County Local Hazard Mitigation Plan which is an annex to the 2010 Association of Bay Area Local Hazard Mitigation Plan, *Taming Natural Disasters.* Pursuant to the Disaster Mitigation Act of 2000, the City Council adopted this annex on March 21, 2012.

This annex is an update to the City's annex to the 2005 Association of Bay Area Local Hazard Mitigation Plan, Taming Natural Disasters, as adopted on October 28, 2005.

The City of Morgan Hill is a small, semi-rural city in Santa Clara County, California. The City has a population of 40,246 people, based on the 2010 California State Department of Finance Population Unit figures. While the City provides local police services, the fire services are supplied by Santa Clara County Fire and the California Department of Forestry.



Founded on November 10, 1906, the city was named after Hiram Morgan Hill, a San Franciscan who built a country retreat home there in 1884. Originally a community of ranchers, farmers and orchardists, the city has evolved into a bedroom community for the high-tech industries in Silicon Valley.

Geography

Morgan Hill is approximately 39 kilometers (24 miles) south of downtown San Jose, 21 kilometers (13 miles) north of Gilroy, and 24 kilometers (15 miles) inland from the Pacific coast. Lying in a roughly six kilometer wide (four mile wide) southern extension of the Santa Clara Valley, it is bounded by the Santa Cruz Mountains to the west and the Diablo Range to the east. At the valley floor, Morgan Hill lies at an elevation of about 107 meters (350 feet) above mean Sea Level.

According to the Morgan Hill Community Development Department, the city encompasses an area of 12.884 square miles, all land. Although there are no natural lakes or ponds within the city limits, there are several flood-control and water storage reservoirs in the adjacent hills, which are

operated by the Santa Clara Valley Water District, with recreational activities such as boating administered by the Santa Clara County Department of Parks and Recreation.

Morgan Hill is located within the seismically active San Francisco Bay region. The significant earthquakes in the region are generally associated with crustal movements along well-defined, active fault zones. The nearest known active faults are the San Andreas Fault, approximately 19 kilometers (12 miles) southwest, and the Calaveras Fault, approximately 1.6 kilometers (1 mile) northeast. Both faults have produced major earthquakes in the past, and have estimated maximum credible Richter magnitudes of 8.3 and 7.3 respectively. The Sargent-Berrocal Fault, a potentially active fault, lies 16 kilometers (10 miles) away from the sites and has an estimated maximum credible Richter magnitude of 7.4. The Coyote Creek Fault is located in Morgan Hill and is classified as potentially active as well. In addition, several unnamed faults traverse the western slopes of the upland areas. Geomorphic evidence suggests that these faults were active during recent geologic time. However, these fault-related geomorphic features are not as fresh as those of the active Calaveras Fault and are considered to be somewhat older.

Infrastructure

The main highway servicing Morgan Hill is U.S. Route 101. The Santa Clara Valley Transportation Authority provides local buses and express buses to Gilroy, San Martin, San Jose, Santa Clara, and Sunnyvale. Caltrain provides weekday rush-hour commuter rail service to the Santa Clara Valley, the San Francisco Peninsula and San Francisco. Monterey-Salinas Transit runs a rush-hour San Jose-Monterey express bus, Line 55, which also serves as an Amtrak Thruway Motorcoach connection.

Pacific Gas and Electric Company (PG&E) provides gas and electricity for the city. Water and sewer services are provided by the City of Morgan Hill. Household waste disposal and recycling are provided by Recology South Valley (formerly called South Valley Disposal & Recycling). Land line telephone and primary DSL Internet services within city limits and immediate environs are provided by Verizon Communications. Television and high-speed Internet are provided by Charter Communications.

In addition to several local medical clinics, Morgan Hill is served by the following nearby hospitals:

- Saint Louise Regional Hospital in Gilroy, co-located with CALSTAR air ambulance service
- Kaiser San Jose Medical Center
- Kaiser Permanente Gilroy Medical Offices
- Santa Clara Valley Medical Center in San Jose, with a satellite clinic in Gilroy
- DePaul Health Center

There are also a number of private hospitals in San Jose and several renowned medical centers are within two hours, located in the San Francisco Bay Area to the north.

RESOLUTION NO. 5954

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MORGAN HILL APPROVING THE ASSOCIATION OF BAY AREA GOVERNMENTS (ABAG) REPORT "TAMING NATURAL DISASTERS" AS THE CITY OF MORGAN HILL'S LOCAL HAZARD MITIGATION PLAN

WHEREAS, the Bay Area is subject to various earthquake-related hazards such as ground shaking, liquefaction, land sliding, fault surface rupture, and tsunamis; and

WHEREAS, the Bay Area is subject to various weather-related hazards including wildfires, floods, and landslides; and

WHEREAS, the City of Morgan Hill recognizes that disasters do not recognize city, county, or special district boundaries; and

WHEREAS, the City of Morgan Hill seeks to maintain and enhance both a disaster-resistant City/County/District and region by reducing the potential loss of life, property damage, and environmental degradation from natural disasters, while accelerating economic recovery from those disasters; and

WHEREAS, the City of Morgan Hill is committed to increasing the disaster resistance of the infrastructure, health, housing, economy, government services, education, environment, and land use systems in the City as well as in the Bay Area as a whole; and

WHEREAS, the federal Disaster Mitigation Act of 2000 requires all cities, counties, and special districts to have adopted a Local Hazard Mitigation Plan to receive disaster mitigation funding from FEMA; and

WHEREAS, ABAG has approved and adopted the ABAG report Taming Natural Disasters as the multi-jurisdictional Local Hazard Mitigation Plan for the San Francisco Bay Area;

NOW, THEREFORE, BE IT RESOLVED that the City of Morgan Hill adopts, and adapts with its local annex, this multi-jurisdictional plan as its Local Hazard Mitigation Plan.

NOW, THEREFORE, BE IT FURTHER RESOLVED that the City of Morgan Hill commits to continuing to take those actions and initiating further actions, as appropriate, as identified in the City of Morgan Hill Annex of that multi-jurisdictional Local Hazard Mitigation Plan.

PASSED AND ADOPTED by the City Council of Morgan Hill at a Special Meeting held on the 26th Day of October, 2005 by the following vote.

AYES:	**COUNCIL MEMBERS:**	**Larry Carr, Mark Grzan, Dennis Kennedy, Greg Sellers, Steve Tate**
NOES:	**COUNCIL MEMBERS:**	**None**
ABSTAIN:	**COUNCIL MEMBERS:**	**None**
ABSENT:	**COUNCIL MEMBERS:**	**None**

CERTIFICATION

I, IRMA TORREZ, CITY CLERK OF THE CITY OF MORGAN HILL, CALIFORNIA, do hereby certify that the foregoing is a true and correct copy of Resolution No. 5954, adopted by the City Council at a Special Meeting held on October 26, 2005.

WITNESS MY HAND AND THE SEAL OF THE CITY OF MORGAN HILL.

DATE: 10/28/05

IRMA TORREZ, City Clerk

RESOLUTION NO. 6525

A RESOLUTION TO ADOPT BY ANNEX THE 2010 ASSOCIATION OF BAY AREA GOVERNMENT LOCAL HAZARD MITIGTATION PLAN, "*TAMING NATURAL DISASTERS*".

WHEREAS, the Bay Area is subject to various earthquake-related hazards such as ground shaking, liquefaction, land sliding, fault surface rupture, and tsunamis; and

WHEREAS, the Bay Area is subject to various weather-related hazards including wildfires, floods, and landslides; and

WHEREAS, the City of Morgan Hill recognizes that disasters do not recognize city, county, or special district boundaries; and

WHEREAS, the City of Morgan Hill seeks to maintain and enhance both a disaster-resistant City and region by reducing the potential loss of life, property damage, and environmental degradation from natural disasters, while accelerating economic recovery from those disasters; and

WHEREAS, the City of Morgan Hill is committed to increasing the disaster resistance of the infrastructure, health, housing, economy, government services, education, environment, and land use systems in the City, as well as in the Bay Area as a whole; and

WHEREAS, the federal Disaster Mitigation Act of 2000 requires all cities, counties, and special districts to have adopted a Local Hazard Mitigation Plan to receive disaster mitigation funding from FEMA; and

WHEREAS, ABAG has approved and adopted the ABAG report "***Taming Natural Disasters***" as the multi-jurisdictional Local Hazard Mitigation Plan for the San Francisco Bay Area;

NOW, THEREFORE, BE IT RESOLVED that the City of Morgan Hill adopts, and adapts with its local annex, this multi-jurisdictional plan as its Local Hazard Mitigation Plan.

NOW, THEREFORE, BE IT FURTHER RESOLVED that the City of Morgan Hill commits to continuing to take those actions and initiating further actions, as appropriate, as identified in the City of Morgan Hill Annex of that multi-jurisdictional Local Hazard Mitigation Plan by adopting this list of mitigation strategies as the Implementation Appendix of the Safety Element of Its General Plan.

PASSED AND ADOPTED by the City Council of Morgan Hill at the meeting held on this March 21, 2012 by the following vote:

AYES:	**COUNCIL MEMBERS:**	**Larry Carr, Rich Constantine, Marilyn Librers Gordon Siebert, Steve Tate**
NOES:	**COUNCIL MEMBERS:**	**None**
ABSTAIN:	**COUNCIL MEMBERS:**	**None**
ABSENT:	**COUNCIL MEMBERS:**	**None**

Steve Tate, Mayor

ATTEST:

Irma Torrez, City Clerk

CERTIFICATION

I, Irma Torrez, City Clerk of the City of Morgan Hill, California, do hereby certify that the foregoing is a true and correct copy of Resolution No. 6525, adopted by the City Council at the meeting held on March 21, 2012.

WITNESS MY HAND AND THE SEAL OF THE CITY OF MORGAN HILL.

DATE: April 20, 2012

Irma Torrez, CITY CLERK

16.2 INTERNAL PLANNING PROCESS

The City of Morgan Hill participated in the regional planning process coordinated by ABAG and the local planning process coordinated by Santa Clara County OES as noted in Section 3 of this plan. Jennifer Ponce, Emergency Services Coordinator, served as the City's representative and lead for completing this annex. Joe Sampson, Captain of the Morgan Hill Police, represented the City in Local Planning Team meeting and #2. Jennifer performed internal reviews and collaboration in order to provide all of the required information for development of this annex.

Contact information: jennifer.ponce@morganhill.ca.gov, 408.776.7310

The City of Morgan Hill's internal planning team included the following individuals:

Jennifer Ponce, Emergency Services Coordinator
Joe Sampson, Captain, Special Operations, Morgan Hill Police
Karl Bjarke, Acting Public Works Director
Steve Rymer, Recreation and Community Services Director
Ken DeLuna, Inspector, Facilities Manager
Jim Rowe, Planning Manager
Charles Ha, Engineer

Public Outreach

In August, the City provided two public opportunities to comment on the hazard mitigation plan in conjunction with the process for ranking regional strategies via a website posting and at a City Council meeting. In addition, residents of Morgan Hill responded to the online survey discussed in Section 3.2.6. A copy of the survey is included in County Attachment 7: Survey Outreach Materials, found in Section 9.7.

Survey Results

On November 1, 2010, the Local Planning Team released an online survey to solicit public input regarding concerns for hazard risk. The Local Planning Team also used this survey to gauge the level of public preparedness for emergencies.

The survey respondents in Morgan Hill identified dam failure as the hazard of highest concern followed closely by the top hazards ranked by the Local Planning Team (ground shaking caused by earthquakes, infrastructure failure, and wildfire).

The survey allowed the City an opportunity to expand the list of stakeholders, however, only one respondent provided contact information and requested an opportunity to review/comment on the complete draft prior to adoption. Additionally, only one organization was recommended to be

included in future mitigation planning discussions, the South County Airport Pilots Association (item 19 below).

The results of the survey provide valuable information for the City of Morgan Hill as they continue in their preparedness efforts. These responses may be used as a bench mark for future measurements of improvement. For example, the City may choose to focus on educational outreach about the benefits of insurance or emergency preparedness kits. After this type of implementation, a similar survey may be administered to validate the progress and confirm that more residents have improved their preparedness capabilities.

The City of Morgan Hill will consider the recommendations provided by survey respondents (items 6 and 18 below) throughout the life of this plan and prioritize those that can be implemented efficiently and effectively.

The survey responses received from the City of Morgan Hill residents are summarized below:

1. 13 out of 541 survey respondents were from the City of Morgan Hill.

2. Respondents were asked which five hazards, out of the 31 hazards the LPT identified, are of most concern to their neighborhood or home. Below are responses from the City of Morgan Hill (in order of most responses):

Table 16-1: Hazards of Most Concern

Hazard	**Number of Responses**
Dam Failure	10
Earthquake: Ground Shaking	8
Infrastructure: Water System Disruption (no potable water)	7
Wildfire	6
Infrastructure: Electrical System Disruption (no power)	5
Infrastructure: Wastewater System Disruption (sewer backup)	5
Drought	4
Flood	4
Infrastructure: Telecommunication System Disruption (no phone / cell service)	4
Infrastructure: Transportation Disruption (blocked roads / failed bridges)	3
Disease and Outbreak	2
Earthquake: Landslides	2
Agricultural Pests and Diseases	1
Earthquake: Surface Rupture	1
Infrastructure: Energy System Disruption (no gas)	1

Hazard	Number of Responses
Thunder/Lightning Storms	1
Additional Hazard *	1
Bay Area Silting	0
Delta Levee Failure	0
Earthquake: Liquefaction	0
Expansive Soils	0
Freeze	0
Hailstorm	0
Hazardous Materials Spills (chemical/biological)	0
Heat (extreme heat)	0
Land Subsidence (soil compaction due to subsurface water removal)	0
Landslide and Debris flow	0
Solar Storm	0
Tornado	0
Tsunami	0
Volcano	0
Wind (high winds)	0

* One respondent noted the following additional hazard: terrorist threat in Santa Clara County- most likely in San Jose or Sunnyvale.

3. Respondents were asked if a severe hazard event occurred today, such that all services were cut off from their home and they were unable to leave or access a store for 72 hours, which items they would have readily available. Below is a summary of responses from the City of Campbell respondents:

Table 16-2: Items Readily Available to Respondents

Item that is Readily Available	Responses
Blanket(s)	13
Flashlight (with batteries)	11
Canned / Non-perishable Foods (ready to eat)	11
Extra Medications	10
First Aid Kit	8
Portable AM/FM Radio (solar powered, hand crank,or batteries)	6
Portable Water (3 gallons per person)	6
Cash	5
What else is in your emergency kit? *	2
Handheld “Walkie-Talkie” Radios (with batteries)	2
Important Family Photos/Documentation in a water and fire proof container	2

***** Respondents noted the following additional items in their emergency kits: portable toilet, rain poncho, HAM radio, tools, and clothing

4. Respondents were asked if they were familiar with the special needs of their neighbors in the event of a disaster situation.

- 12, or **92.3%** of respondents, answered that they **are not** familiar with the special needs of their neighbors.
- 1, or **7.7%** of respondents, answered that they **are** familiar with the special needs of their neighbors.

5. Respondents were asked if they are trained members of their Community Emergency Response Team (CERT).

- 3, or **23.1%** of respondents indicated that they **are part of CERT**.
- 4, or **30.8%** of respondents, indicated that they are not part of CERT, but **would like to learn more about CERT.**
- 6, or **46.2%** of respondents, indicated that they are not part of CERT and **are not interested** in being a trained CERT member.

Respondents were asked to share why they are a trained CERT member, or why they are not part of CERT. The received responses are listed below:

- They teach basic information everyone should know and I want to help others
- Never been asked to become a part and I don't know the process for becoming involved.

6. Respondents were asked what the most important thing local government can do to help communities be more prepared for a disaster. The following summarizes the 3 responses received:

- **Create easy access to information on all topics (via paper or electronic phones messages)**
- **An emergency preparedness contact who can answer questions**

7. Respondents were asked if they live in an apartment building or home with a living space above a garage or parking area.

- 10 or **76.9%** of respondents indicated that they **do not** live in an apartment or home with living space above a garage or parking area.
- 3, or **23.1%** of respondents, indicated that they **do** live in an apartment building or home with living space above a garage or parking area.
- One respondent skipped this question.

Those respondents who indicated that they do live in an apartment building or home with living space above the garage or parking area were asked to describe their level of concern for the building to collapse in a large earthquake event. 1 respondent indicated that they are "Moderately Concerned", while one respondent indicated that they have "No Concern" because their home had been seismically upgraded. Another respondent indicated that they had never thought about their concern.

8. Respondents who are homeowners were asked if they have adequate homeowners insurance to cover the hazards that could impact their home. Below is a summary of responses:

Table 16-3: Adequate Homeowners Insurance

Answer	Responses
Yes, my insurance coverage should be adequate	5
No, I don't believe my insurance coverage would be adequate for a major disaster	4
Unsure	3
I do not have an insurance policy	0
Not applicable, I rent my current residence	1

9. Respondents were asked if they have earthquake insurance. Below is a summary of responses:

Table 16-4: Earthquake Insurance

Answer	Responses
Yes, I own my home and have earthquake insurance.	4
Yes, I rent my home and have earthquake insurance.	0
No, but I am interested in reviewing earthquake insurance options.	0
No, earthquake insurance is too expensive.	7
No, I do not need earthquake insurance.	0

10. Respondents were asked if they have flood insurance. Below is a summary of responses:

Table 16-5: Flood Insurance

Answer	Responses
Yes, I own my home and have flood insurance.	4
Yes, I rent my home and have flood insurance.	0
No, but I am interested in reviewing flood insurance options.	1
No, I do not need flood insurance	6

11. Respondents indicated the following as additional insurance listed for their home or property:

- **Fire**
- **HOA**

12. Respondents were asked what they are doing to their property or within their home to reduce future damage from the hazards identified above. Below is a summary of responses:

Table 16-6: Property Changes to Reduce Future Damage from Hazards

Property Mitigation	Responses
Defensible space landscaping (clear vegetation around house to reduce wildfire risk)	4
Roof retrofit using fire resistant material	2
Strengthened Openings to reduce high hazard wind risk	2
House elevation or first floor modification to prevent flood damage	2
Seismic retrofit of the structure and/or foundation	1
Other *	1
Installed backflow prevention devices	0

*The response to "Other" was: "new construction concrete tile roof and stucco walls"

13. Respondents were asked if they work in Santa Clara County.
- 13, or **100%** of respondents, indicated that they **do** work in Santa Clara County.
- **None** of the respondents indicated that they **do not** work in Santa Clara County.

14. Respondents were asked if their place of work is in an area susceptible to natural hazards. Below is a list of natural hazards and responses from survey respondents:

Table 16-7: Place of Work in Hazard Areas

Natural Hazard	Response
Earthquake fault zone	5
I don't know	5
High-risk flood zone	4
Other*	1
Liquefaction zone	0
Wildland Urban Interface (wildfire risk area)	0
Landslide Risk Area	0

***** The response to "Other" was: "near Anderson Dam"

15. Respondents were asked if their employer has a plan for disaster recovery in place.
- 9, or **69.2%** of respondents, **indicated that their employer does have a disaster recovery plan in place.**
- 1, or **7.7%** of respondents, **indicated that their employer does not have a disaster recovery plan in place.**
- 3 respondents were unsure if their employer has a disaster recovery plan in place.

16. Respondents were asked if their employer has a workforce communications plan to implement following a disaster so they may contact their employees.

- 10, or **76.9%** of respondents indicated that their **employer does** have a workforce communications plan.
- **None** of the respondents indicated that their **employer does not** have a workforce communications plan.
- 3, or **23.1%** of respondents indicated that they are **unsure** if their employer has a workforce communications plan.

17. Respondents were asked to list any studies that they are aware of being conducted within their community or the county regarding the risk to future hazard events. 3 respondents replied to this question. These answers are summarized below. 10 respondents skipped this question.

- **Dam inundation**
- **100-year flood zone analysis**

18. Respondents were asked what recommendations they have for Santa Clara County and the incorporated cities to improve identification, prioritization, and implementation of actions intended to reduce future damage and increase resiliency. The following recommendations were received:

- Require basic participation in City emergency planning for any business (10 or more employees) applying for a business license
- Countywide debris removal plan
- Countywide soft story building plan
- Upgrade existing and install new drainage systems
- Integrate airports and pilots into the disaster recovery plan
- Create an emergency runway for planes

19. Respondents were asked to recommend any companies or local associations that should be involved in the Santa Clara County hazard mitigation planning process. The recommended organization is listed below and was given the opportunity to review the draft plan as noted in the following section.

- South County Airport Pilots Association

20. Respondents were asked if they would like to review and comment on a draft of their jurisdictions annex to the Multi-Jurisdictional Multi-Hazard Mitigation Plan.

- 2, or **16.7%** of respondents **said they would** like to review and comment on the draft plan.
- 10, or **83.3%** of respondents said **they would not** like to review and comment on the plan draft.
- 1 respondent skipped this question.

One respondent who said they would like to review and comment on the draft plan included their contact information and was given the opportunity to review the draft plan as noted in the following section.

21. Respondents were asked to provide any additional comments/suggestions/questions. All respondents skipped this question.

Review Opportunities

A review draft of this plan was submitted to Cal EMA on June 7, 2011 and subsequently forwarded to FEMA for review and comment regarding compliance with the Disaster Mitigation Act of 2000. During this time the review draft was available for public review on the websites of the Santa Clara County Office of Emergency Services and the Association of Bay Area Governments.

In September 2011 the City of Morgan Hill posted a notification on the City's website encouraging public review via the website's NewsFlash feature. No comments were received on the review draft.

16.3 CAPABILITY ASSESSMENT

16.3.1 Mitigation Progress

16.3.1.1 Strategy Ranking

The City of Morgan Hill participated in ABAG's revision of the regional strategies for development of this annex. Appendix G of Taming Natural Hazards presents a summary list of mitigation strategies with regional priorities and the hazards mitigated.

The City ranked those strategies in a spreadsheet provided by ABAG using the following scale:

Existing Program
Existing Program, Underfunded
Very High – Unofficial Program – Becomes Official on Plan Adoption, No Funding Needed
High – Actively Looking for Funding
Moderate
Under Study
Not Applicable, Not Appropriate, or Not Cost Effective
Not Yet Considered

Results of this ranking may be viewed online at http://www.abag.ca.gov/bayarea/eqmaps/mitigation/strategy.html. A summary of these rankings is presented in Morgan Hill Attachment 1: Morgan Hill Strategies 2010, in Section 16.7.

The countywide Local Planning Team reviewed the priorities as ranked by the participating Santa Clara County jurisdictions to determine the operational area goals and objectives. The City of Morgan Hill's primary objective is to reduce future flood events and flood damage. New mitigation actions the City of Morgan Hill has identified are discussed in Section 16.5.

16.3.1.2 Completed and Current Projects

Flooding has been a primary concern in Morgan Hill for many years. The May 2010 edition of the City's Water Connection publication, which is mailed to all residential water customers, highlights the following recent and ongoing projects designed to reduce flood risk. The Water Connection publication keeps residents advised of flooding risk and ways they can reduce risk to their property.

Recent And Planned Improvements

The City of Morgan Hill and the Santa Clara Valley Water District (SCVWD) are working to reduce the risk of flooding. Substantial improvements to storm drain facilities that have already been completed in the last ten years:

- Nordstrom Park Detention Basin
- Church Street Storm Drain System Improvements
- Depot Storm Drain
- Sections of Butterfield Channel
- Farallon Drive Storm Drain
- Hill Road Storm Drain at E. Dunne Avenue

Projects scheduled within the next five years include:

- Upper Llagas Creek Improvements - PL566 (SCVWD & US Army Corps of Engineers)*
- Butterfield Detention Basin
- Dunne Avenue Storm Drain west of Hill Road

Llagas Creek Flood Protection Project: The Santa Clara Valley Water District has been working on channel modifications and replacing road crossings along Llagas Creek to protect 1,100 homes, 500 businesses, and over 1,300 acres of agricultural land in southern Santa Clara County. More information regarding this project and the outstanding funding requests is presented in Section 16.7, Morgan Hill Attachment 2: Water Connection Newsletter and Llagas Creek Flood Protection Project.

16.3.2 Staff and Organizational Capabilities

16.3.2.1 Departmental Responsibilities

The City of Morgan Hill operates several departments with capabilities for implementing hazard mitigation strategies. These departments and their roles and responsibilities are summarized in the following table.

Table 16-8: Key Departments in the City of Morgan Hill

Key Departments in the City of Morgan Hill
Departments
• City Manager The City Manager is appointed by the City Council to serve as the administrative head of the City government. The City Manager is responsible for preparing the annual budget, for managing the personnel system, and for implementing Council policy. The City Manager's office staff includes an Assistant City Manager, and the Secretary to the City Manager. In addition, the City Manager serves as Executive Director of the Redevelopment Agency (RDA), Personnel Officer, Purchasing Agent, and Director of Emergency Services. • Community Development Community Development is comprised of the Building and Planning Divisions. o Building Division The Building Division, with ICC-certified building inspectors ensures that all residential and commercial construction in the City meets or exceeds the minimum requirements of adopted codes, and checks for compliance with State mandates, building practices, manufacturer equipment, and specific design. o Planning Division The Planning Division performs a variety of services intended to protect, maintain, and develop an attractive, safe, and healthy environment. Primary functions address property development and land use activities occurring in the City. The Planning Division provides direction and leadership in implementing the goals, objectives, and policies of the General Plan as adopted by the City Council. The Division is also responsible for the orderly development of the City and the administration of various land use regulations, including the zoning code, design review ordinances, sign code, and the cultural resources preservation ordinance. • Emergency Services The Office of Emergency Services (OES) operates under Police Administration, but serves the entire City of Morgan Hill. OES provides educational services for city employees, residents, businesses, and schools to prevent, prepare, respond, and recover from emergencies and disasters, both natural and manmade. OES is staffed with one full-time OES Coordinator, who coordinates with volunteer groups such as the Morgan Hill Amateur Radio Emergency Services (ARES) group and the Community Emergency Response Team (CERT). OES staff also represents the City as a member of the Santa Clara County Emergency Manager's Association and currently holds the position of EMA

Secretary.

OES staff maintains the City's Emergency Operations Plan in accordance with the State of California's Standardized Emergency Management System (SEMS).

- **Fire Department**

The City of Morgan Hill contracts with the Santa Clara County Fire Department to provide the following services:

  - Emergency Medical Services
  - Fire Prevention
  - Fire Suppression

- **Police Department**

The Police Department is currently approved for thirty-six sworn officer positions, six paid reserve police officer positions, and twenty non-sworn support positions. Staff are assigned to one of three divisions: Field Operations, Special Operations, or Support Services. The Department also boasts an award-winning Police Explorer Program for the youth of Morgan Hill and is implementing a Volunteer in Policing (VIPs) program in the Spring of 2011.

- **Public Works**

The Public Works Department is responsible for:

  - Land Development Engineering
  - Traffic
  - 5-Year Capital Improvements Program (CIP)
  - Inspections for Public Improvements
  - Flood Elevation Certificates
  - Storm Water Management
  - Municipal Water Service
  - Municipal Wastewater Collection
  - Permits
  - Right of way maintenance including streets, sidewalks, street trees, median, traffic signals and street lights
  - Maintenance of parks, open space and trails

With a clear hazard mitigation strategy, as outlined in this Local Hazard Mitigation Plan, the City's departments are able to implement their ongoing policies and programs with consideration of the identified hazard risks. In addition, these departments become aware of priority mitigation actions and can offer resources (financial or staffing) to assist with the implementation of those actions.

16.3.2.2 Technical Capability

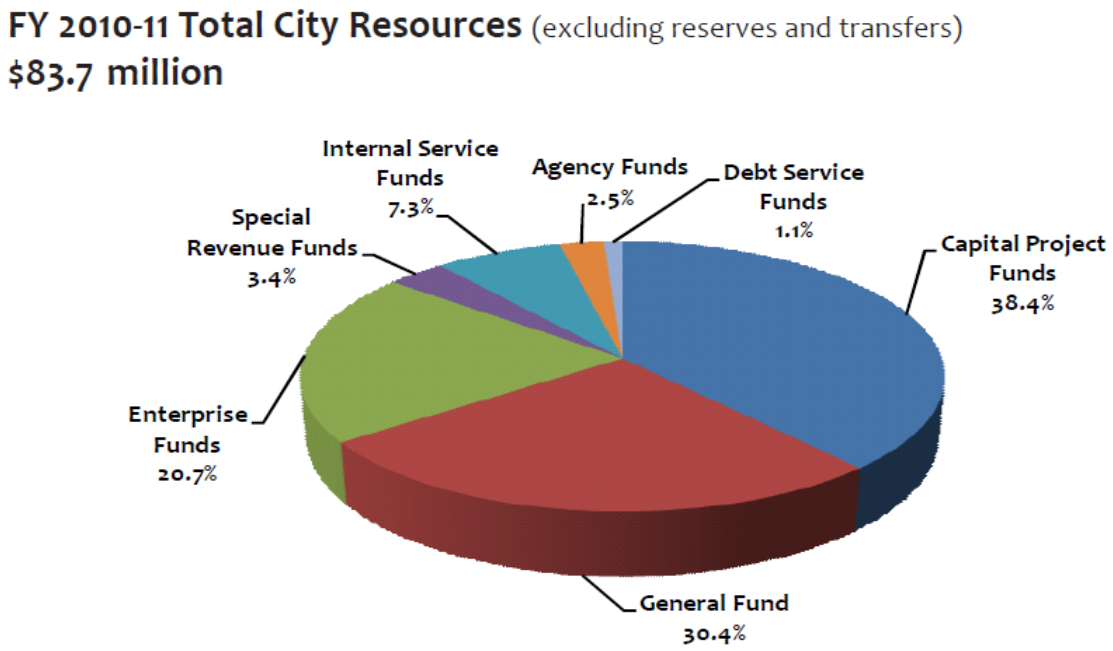
For a successful mitigation program, it is necessary to have a diverse breadth of staff and technical capabilities. Planners, engineers, building inspectors, emergency managers, floodplain managers, people familiar with Geographic Information Systems (GIS), and grant writers are all essential to implementing mitigation actions. The following table summarizes the staffing capabilities available within the City of Morgan Hill.

Table 16-9: Technical Capability Matrix

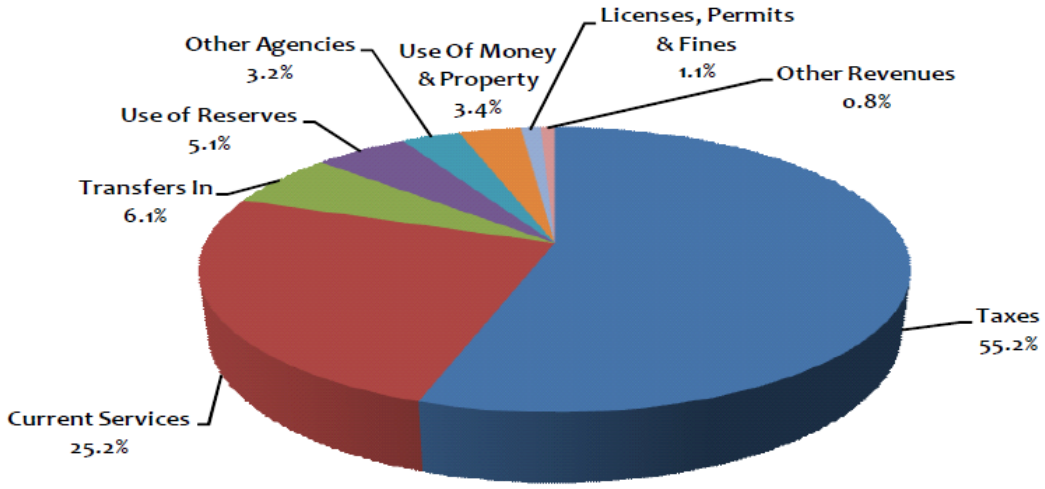
Technical Capability Matrix	
Land Use Planners	Community Development
Emergency manager	Police Department
Civil or Building Engineers	Public Works, Building Division
Floodplain manager	Community Development
Staff knowledgeable about hazards	Community Development
GIS staff	Community Development
Grant writers	Community Development

16.3.2.3 Fiscal Capability

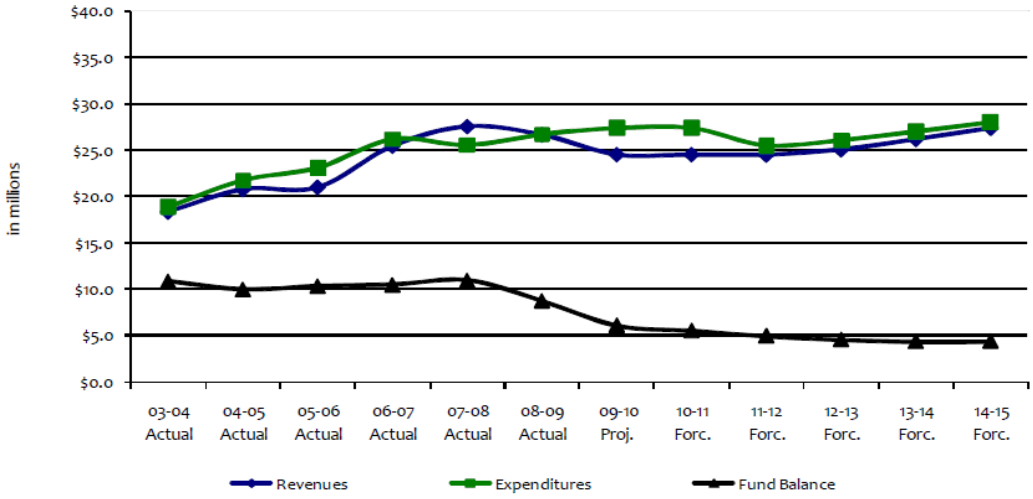
The following summarizes Morgan Hill's fiscal capabilities in terms of the City's financial resources and allocated spending. Taxes and Current Services are the primary sources of Morgan Hill's financial resources.



FY 2010-11 General Fund Resources
$25.9 million



General Fund Balance Growth



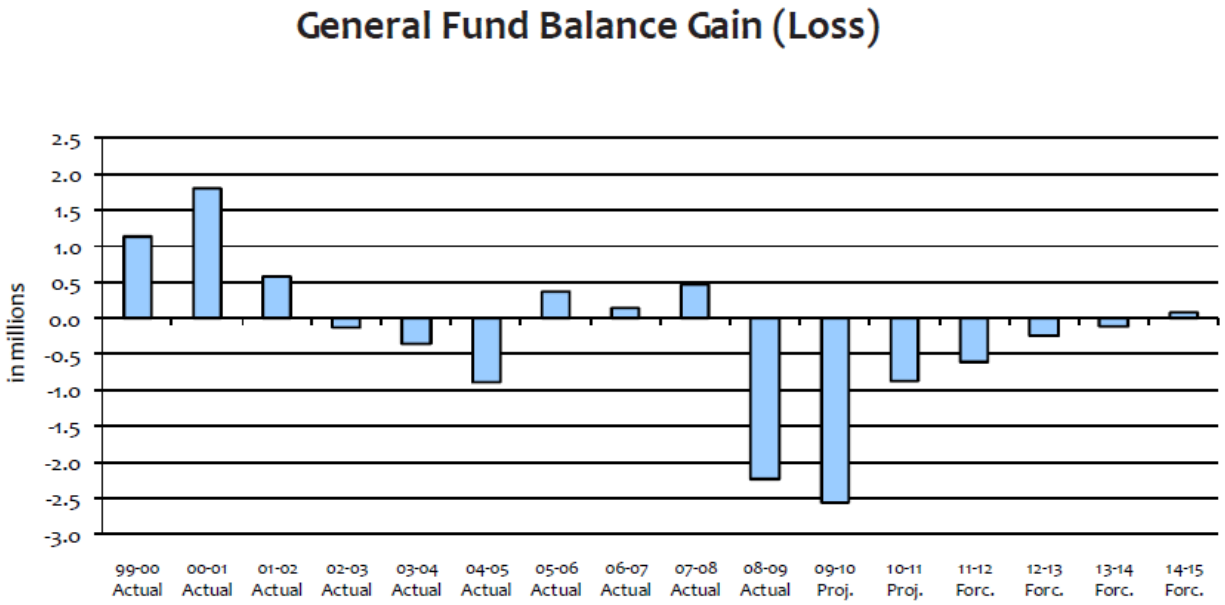


Table 16-10: Financing Mechanisms

Financing Mechanisms										
	Property Tax	*Other Taxes*	*Licenses & Permits*	*Fines & Penalties*	*Use of Money & Property*	*Other Agencies*	*Charges for Current Services*	*Other Revenues*	*Transfers In*	*Total*
	31,210,502	7,613,617	167,622	112,000	3,026,813	3,128,476	30,479,588	7,919,089	8,246,049	91,903,758

16.3.2.4 Policy or Program Capability

The City of Morgan Hill has several plans and ordinances in place which provide ample opportunities for implementing the hazard mitigation strategy outlined in this plan.

16.3.2.4.1 Summary of Plans that Support Hazard Mitigation

Emergency Operations Plan

The City of Morgan Hill established a Disaster Council/Citizen Corps Council in the City Code in 1984. This organization has the duty and power to develop and recommend emergency plans and mutual aid agreements for adoption by the City. They also provide guidance to develop disaster exercises and community action plans, support citizen participation, engage in emergency planning and response, and promote community preparedness and family safety. Five Citizen Corps programs are overseen by the Disaster Council/Citizen Corps Council. These programs include: Community Emergency Response Team (CERT), Neighborhood Watch Program, Medical Reserve Corps

(MRC), Volunteers in Police Service (VIPS), and Operation TIPS (Terrorist Information and Prevention System).

The City has also established an Office of Emergency Services (OES). This office is responsible for the development of emergency plans and the day-to-day administration of the City's emergency preparedness program. The City Manager also acts as the Director of Emergency Services and is the head of the OES.

The City's Emergency Operations Plan (EOP) was created because Morgan Hill is susceptible to both man-made and natural disasters, such as earthquakes, wildland fires, floods, landslides, and terrorism. Although there are four phases of emergency management, Mitigation, Preparedness, Response, and Recovery, this EOP focuses primarily on the Response phase. This plan delineates the City emergency management organization. The EOP also establishes the framework for implementation of the California Standardized Emergency Management System (SEMS), within the City of Morgan Hill. Further, the plan identifies policies, priorities, responsibilities and procedures for the Emergency Operations Center. The plan is designed to guide the EOC Staff through the Response and some of the Recovery phases.

The EOP is divided into two parts: the Basic Plan and Annexes. The Basic Plan section focuses on the preparedness and recovery phases and describes the structure and responsibilities of Morgan Hill's emergency management organization, including City officials, the EOC, volunteer organizations and private agencies. This section also includes information on the types of emergencies that can be declared, the factors that constitute an emergency, and who is responsible for proclaiming emergencies. In the event that a disaster befalls Morgan Hill, the Basic Plan provides detail on the order of succession for government leadership. This section also describes coordination between various agencies in the event of a disaster and California's mutual aid system.

The Basic Plan is also comprised of a Hazard Analysis section. This section identifies both the natural and man-made hazards that could occur in Morgan Hill and ranks them based on frequency of occurrence and severity. Mitigation actions to help remediate these hazards are also discussed in this section. Zoning, purchasing land, and improving building standards are a few types of mitigation actions that are described in this section. In addition to the Hazard Analysis section, the Basic Plan has a section devoted to terrorism and weapons of mass destruction, which details specific infrastructure and places that may be targeted and how the EOC would respond to such attacks.

The Annexes section describes each response function in detail and includes a series of checklists designed to provide EOC level responders with the basic considerations and actions necessary for immediate emergency response. The Annexes are organized into checklists for the EOC, Management, Operations, Planning and Intelligence, Logistics, and Finance and Administration. The Annexes also provide City EOC level responders with the Incident Command System (ICS) framework to implement SEMS.

General Plan

In the General Plan, Morgan Hill identifies its vision of keeping a small-town character while offering new opportunities for businesses and amenities for residents. Agriculture will continue at the outskirts, and new housing for a range of incomes will be accommodated in a variety of locations. Urban land uses will be encouraged around the downtown, and incentives would foster infill development instead of sprawl. Morgan Hill's General Plan facilitates hazard mitigation in several ways. Following is a brief summary of three General Plan Elements highlighting the capabilities for implementing and supporting hazard mitigation.

Public Health and Safety Element

Located within the General Plan, the City of Morgan Hill has a variety of pre-active and reactive measures pertaining to emergency (or hazard event) management and planning. Public safety is emphasized throughout the plan, by ensuring adequate staffing and timely responses and the adoption of master plans for these services (police, fire, and medical responders). The Public Health and Safety element aims to protect persons from any detrimental impacts associated with development by requiring new construction to avoid hazardous areas and materials and/or provide adequate mitigation. This element also intends to safeguard public health by ensuring adequate water quality and by minimizing noise impacts.

Although the General Plan does not directly acknowledge the Local Hazard Mitigation Plan, it does include similar goals attributed to such preparations: for example, it promotes the need for more stringent building codes (for seismic events), increased resource allocation for high Risk Fire Hazard Zones and Flood-Prone areas, and enforcement of water quality by the Regional Water Quality Control Boards. Other measures include slope stability/strengthening projects, the requirement of hazardous waste generators to develop on-site pretreatment prior to discharging treated waste effluent into the sewer system, and continued existing development regulations and policies regarding management of hazardous areas, with monitoring to determine their effectiveness. With respect to extreme flood events, the City recognizes potential failure of Anderson Dam, and has a preparation plan. In summary, through additional regulation on building codes, land-use development, and water quality/noise-level standards, along with the inclusion of hazard-specific emergency plans, the City of Morgan Hill is highly cognizant of providing safety to its constituents under hazardous events.

Land Use Element

The City of Morgan Hill intends to preserve its rural atmosphere while accommodating sensible, orderly growth that will promote the local economy while simultaneously recognizing the inherent risks –underlying certain areas– to natural hazards. All industrial structures are required to meet certain standards for handling of any hazardous material. Under Goal 6 of the General Plan (titled Land-Use Decisions), development will be avoided in areas of natural hazards such as

landslide and flood prone areas; in adjacent areas, it endorses limited development along the shores of reservoirs, floodways, natural streams, and riparian areas. The General Plan also encourages the use of natural and man-made barriers such as streams, parkland, and drainage ways to separate incompatible uses (such as industrial areas adjacent to residential areas) and mitigate flooding levels. It also places highest priority for construction of flood protection facilities to areas of existing development, planned areas of development, underdeveloped areas, and agricultural lands. These measures work in conjunction with a comprehensive assessment of the storm water drainage system, to increase discharge during a flooding event.

Housing Element

The Housing Element of the General Plan is Morgan Hill's comprehensive statement of its housing needs and goals. It identifies actions to meet the housing needs of the full spectrum of city residents at all income levels. The policies contained in this Element are a local expression of the statewide housing goal of "attaining decent housing and a suitable living environment for every California family." The Housing Element reflects the concerns of the community such as protecting the unique character of the city, discouraging developments outside the city's urban service area, and preserving a greenbelt legacy for future generations, key objectives of the City's Residential Growth Control Ordinance (RDCS). The purpose of the Housing Element is to establish specific goals, policies, and objectives relative to the provision of housing for all income levels, and to adopt an action plan toward this end. In addition, the Element identifies and analyzes housing needs, and resources and constraints related to meeting those needs.

The Housing Services Division is responsible for creating and preserving affordable housing in the community. This division administers the following City's housing programs:

- Home Ownership Program for First Time Home Buyers
- Affordable Rental Program
- Housing Rehabilitation Program
- Senior/ Mobile Home Minor Home Repair Grant Program

Morgan Hill's commitment to affordable housing is a cornerstone of the community and City. The city's award-winning affordable housing programs provide creative and innovative ways for residents to purchase homes. In addition to ownership, attractive, high quality and affordable rental opportunities are a vital part of the mix. Many of the Morgan Hill Redevelopment Agency (RDA) assisted rental developments now stand instead of blighted and dilapidated rental units. The RDA has assisted the City to bring the community's vision to life, with a comprehensive approach that touches everyone.

Floodplain Management Ordinance

In an effort to reduce the risk of loss of life, health, and property due to periodic flood inundation, the City of Morgan Hill has developed a Flood Damage Prevention Ordinance. The purpose of this ordinance is to minimize the expenditure of public money for flood control projects, the need for rescue and relief efforts, business interruptions, and damage to public facilities and utilities. The ordinance also ensures that potential buyers are notified that property is in an area of special flood hazard and that those who occupy property in those areas are held responsible for their actions. The Public Works director is responsible for the enforcement of this ordinance.

To reduce flood losses, the plan includes methods and provisions to control the alteration of natural floodplains, stream channels, and protective barriers; to control filling, grading, dredging and other development that can increase flood damage; to regulate the construction of flood barriers which can divert flood waters or increase flood hazards in other areas; and to require that uses vulnerable to floods be protected against flood damage at the time of their construction. One of the provisions of this ordinance is that a development permit must be obtained before any construction or development begins and that certain construction standards such as; anchoring, building with flood resistant materials, and elevating and floodproofing, are required within an area of special flood hazard. The ordinance also enforces that new and replacement water and sanitary sewage systems should be designed to minimize flood water infiltration and discharge into flood waters. Standards are also included for subdivisions, manufactured homes, and recreational vehicles. Since floodways are extremely hazardous, no new development is permitted to be constructed in these areas unless certification by a professional engineer or architect is provided demonstrating that the development will not increase base flood elevations. Standards for mudslide prone areas, such as geologic and soil site investigation, and for flood erosion prone areas, such as setbacks from a water body, are also listed in this ordinance.

Capital Improvement Plan

Morgan Hill's Capital Improvement Plan includes projects designed to mitigate potential hazards. Sanitary sewer projects that include evaluation, cleaning, and repairs to existing infrastructure and construction of new infrastructure improve the reliability of the systems and prevent a utility mishap from occurring in the future. Similarly, water main projects that include evaluation, cleaning, rehabilitation, and repairs to existing infrastructure ensure a clean drinking supply to the Morgan Hill population. The construction of new water mains accommodates for future population demands on water and also increases fire flows, or water required for firefighting purposes. Storm drain and detention basin construction are projects undertaken by the City of Morgan Hill to resolve drainage problems and relieve areas that are prone to flooding. The City believes that these projects will improve public safety by minimizing local flooding. Traffic signal improvement projects and pedestrian safety projects around schools are being undertaken in Morgan Hill to provide safety to pedestrians. In addition, street widening to increase widths of bicycle lanes is also being done to

reduce accidents between vehicles and bicyclists. The City has begun undergrounding overhead utilities in an effort to eliminate safety hazards resulting from fallen power lines.

16.3.2.4.2 Summary of Ordinances that Support Hazard Mitigation

Table 16-11: Availability of Ordinances that Support Hazard Mitigation

Availability of Ordinances that Support Hazard Mitigation								
Jurisdiction	*Flood Plain Management Ordinance*	*Zoning Ordinance*	*Subdivision Ordinance*	*Post-disaster Red/Rec. Ordinance*	*Building Code*	*Fire Code*	*National Flood Insurance Program*	*NFIP Community Rating System*
City of Morgan Hill	Yes	Yes	Yes		Yes	Yes	Yes	Yes

16.3.3 National Flood Insurance Program

For decades, the national response to flood disasters was simply to provide disaster relief to flood victims. Funded by citizen tax dollars, this approach failed to reduce losses and didn't provide a way to cover the damage costs of all flood victims. To compound the problem, the public generally couldn't buy flood coverage from insurance companies, because private insurance companies consider floods too costly to insure. In the face of mounting flood losses and escalating costs of disaster relief to U.S. taxpayers, Congress established the National Flood Insurance Program (NFIP). The goals of the program are to reduce future flood damage through floodplain management, and to provide people with flood insurance. Community participation in the NFIP is voluntary.

The City of Morgan Hill has participated in the National Flood Insurance Program since 1974. All residents of the City are eligible to purchase federal flood insurance. The City continues to maintain full compliance with the NFIP.

To assist homeowners and commercial businesses of existing structures in Special Flood Hazard Areas (SFHA), the city provides historical FEMA Elevation Certificates or Letter of Map Revisions (if available), which can help reduce flood insurance premiums if the documents indicate that the structure is above the Base Flood Elevation of the SFHA.

To manage floodplain issues and meet the NFIP goals, the Morgan Hill Municipal Code requires developments encumbered by FEMA SFHA or the 100-year floodplain to be constructed one foot above the SFHA Base Flood Elevation (BFE). However, construction within the SFHA will only be allowed provided developments do not affect the SFHA area by displacing the BFE by no more than

0.10 feet, as allowed by the Santa Clara Valley Water District. This is determined through a flood study analyzing the projects overall effect on the existing SFHA, which the project encroaches on.

Projects which show they can meet the requirements above must file a FEMA Letter of Map Amendment based on Fill (LOMA-F). At a minimum, this public document pulls the structure(s) out of the SFHA and, therefore, effectively eliminates the requirement for flood insurance for those structures under their respective LOMA-F(s).

The flood studies of approved projects are kept on file and used as floodplain data for new/future projects within the same SFHA in order to address the cumulative effects of developments in the SFHA.

New developments can address floodplain management through proper engineering designs. Re-developments of existing property (constructed prior to 1980) encumbered by the SFHA often find it difficult to meet the requirements of the Municipal Code. Since existing structures are often below the BFE, elevating the existing structures to be one foot above the BFE may not be feasible and can halt re-development.

However, regardless of the above efforts to manage floodplain issues, infill of developments (and re-development) within the SFHA will eventually displace the limit of 0.10 feet above the BFE. The long term solution is the completion of the Upper LLagas Flood Control Project. This Flood Control project is being handled by the Army Corp of Engineers. The current schedule is to begin construction in 2015-2017 if funding is appropriated. However, the City cannot predict when Congress will fund the project.

If flood control is addressed through the Upper Llagas Flood Control Project, many current residents within the SFHA will no longer be required to pay flood insurance.

16.3.3.1 Community Rating System (CRS)

The CRS is a voluntary part of the National Flood Insurance Program 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 floodplain management requirements. The incentives are in the form of insurance premium 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 (SFHA) receiving a 5% reduction in flood insurance rates for every Class improvement in the community's CRS rating.

The City of Morgan Hill joined the Community Rating System in May 2003 and has a current class rating of 7. Properties within FEMA's Special Flood Hazard Areas in Morgan Hill receive a 15% reduction in flood insurance rates. Properties outside the SFHA within Morgan Hill receive a 5% discount in flood insurance rates

16.3.3.2 Repetitive Loss Properties

The Federal Emergency Management Agency (FEMA) insures properties against flooding losses in the Bay Area through the National Flood Insurance Program.

As part of the process to reduce or eliminate repetitive flooding to structures across the United States, FEMA has developed an official Repetitive Loss Strategy. The purpose behind the national strategy is to identify, catalog, and propose mitigation measures to reduce flood losses to the relatively few number of structures that absorb the majority of the premium dollars from the national flood insurance fund.

A *repetitive loss property* is defined by FEMA as "a property for which two or more National Flood Insurance Program losses of at least $1,000 each have been paid within any 10-year period since 1978."

The City of Morgan Hill has four repetitive flood loss properties. The following is a table summarizing repetitive losses in the City. The City of Morgan Hill sends a letter to the owners of properties in repetitive loss areas, detailing options on how to mitigate future flood damage. The letter also describes the Upper Llaga Flood Control Project, a joint effort between the City of Morgan Hill and the Santa Clara Valley Water District to encourage the Federal Government to appropriate the necessary funding for construction to increase the floodwater carrying capacity of the creek through the City. This project has been planned for over 40 years and is being handled by the Army Corps of Engineers. Construction is currently scheduled to begin in 2015 if funding is appropriated. This letter can be found in Morgan Hill Attachment 3: Repetitive Loss Property Letter.

City and County	Total Payments ($)	Average Payment ($)	Losses	Properties	Properties (as of 2004)
Morgan Hill	106,064.04	11,784.89	9	4	3

Source: http://quake.abag.ca.gov/mitigation/floodloss/

16.3.4 Resource List:

Documents used in the assembly of this Capability Assessment include: City website, City FY10/11 Budget Summary, General Plan, Floodplain Management Ordinance, Capital Improvements Plan.

16.4 VULNERABILITY ASSESSMENT

16.4.1 Critical Facilities

The City of Morgan Hill did not specifically identify critical facilities in the 2005 annex. During the development of this 2011 annex, the City identified 78 critical facilities and provided this list to ABAG in participation with the regional planning process. A summary listing of these facilities is shown in Table 16-12.

Table 16-12: City of Morgan Hill Critical Facilities

Facility Name	Address	Critical Function
CITY HALL	17555 PEAK AVENUE	
GENERATOR	17555 PEAK AVENUE	
GENERATOR BLDG	17555 PEAK AVENUE	
MODULAR #2-W OF CH	17555 PEAK AVENUE	
STORAGE BLDG	17555 PEAK AVENUE	
EL TORO YOUTH CTR	17620 CREST AVENUE	
FRIENDLY INN NON PROFIT	17666 CREST AVENUE	
MUSEUM	MONTEREY ROAD	
PEAK & MAIN Bstr Stn	500 W. MAIN AV.	utility
MAIN AVENUE WELL #1	470 E. MAIN	utility
LIFT STATION H	320 LLAGAS RD.	utility
NOB HILL Reservoir	102 W. THIRD ST.	utility
GLEN AYRE Reservoir	18835 GLEN AYRE DR.	utility
GLEN AYRE Bstr Stn	1565 LLAGAS RD.	utility
BOYS RANCH #2 Reservoir	19040 MALAGUERRA AV.	utility
BOYS RANCH #3 Reservoir	19040 MALAGUERRA AV.	utility
BOYS RANCH WELL #1	1004 BURNETT AV.	utility
BOYS RANCH WELL #2	1000 BURNETT AV.	utility
BOYS RANCH WELL #3	1002 BURNETT AV	utility
TENNANT AVENUE WELL	390 TENNANT AV.	utility
WELL HOUSE	BUTTERFIELD WELL	
WELL HOUSE	SAN PEDRO WELL	
WOODLAND ACRES Reservoir	2275 ROLLING HILLS DR.	utility
WOODLAND Bstr Stn	2075 ROLLING HILLS DR.	utility
EDMUNSON Reservoir	16490 DEWITT AV.	utility
LIFT STATION O	952 E. MIDDLE AV.	utility
LIFT STATION M	1162 LLAGAS RD.	utility
SPORTS FIELD/CONCESS BLDG	16500 CONDIT RD-OUTDOOR CTR	
COMM CULTURAL CNTR	17000 MONTEREY ROAD	
LIFT STATION F	17109 HOLIDAY DR.	utility
LIFT STATION D	17110-B SHADY LANE DR.	utility

Facility Name	Address	Critical Function
JACKSON OAKS HYDRO PNEUMATIC Reservoir	JACKSON OAKS HYDRO PNEUMATIC	utility
JACKSON OAKS HYDROMATIC	16360 OAK CANYON DR.	utility
LIFT STATION K	3300 E. DUNNE AV.	utility
JACKSON OAKS Bstr Stn	3482 WHITE OAK CT.	utility
JACKSON OAKS WELL	JACKSON OAKS	utility
LIFT STATION J	16035 JACKSON OAKS DR.	utility
LIFT STATION C	3272 QUAIL LN.	utility
DUNNE AVENUE WELL #1	1000 E. DUNNE AV.	utility
DUNNE AVENUE WELL #2	1000 E. DUNNE AV.	utility
LIFT STATION A	17670 RACOON CT.	utility
LIFT STATION B	17558 HOLIDAY DR.	utility
ENCINO Reservoir	15595 VIA EDUARDO CT.	utility
ENCINO Bstr Stn	15805 CASINO REAL	utility
LLAGAS Reservoir	1606 LLAGAS RD.	utility
LLAGAS Bstr Stn	490 LLAGAS RD.	utility
EL TORO Reservoir	1305 W. DUNNE AVE.	utility
EL TORO Bstr Stn	1083 W. DUNNE AV.	utility
TRANSIT CENTER	DEPOT STREET	
GENERATOR BLDG.	MONTEREY & PEEBLES	
LIFT STATION I	19160 SAFFRON DR	utility
PAVILLION	COMMUNITY PARK	
RESTROOM	COMMUNITY PARK	
CENTINNEAL REC CENTER	171 W. EDMUNDSON	
LIFT STATION P	320 WOODVIEW AV.	utility
LIFT STATION G	18615 MONTEREY RD.	
BUTTERFIELD WELL	17935 CALLE HERMOSA	
EASY STREET Bstr Stn	14090 WATER AV.	utility
HOLIDAY LAKE #2	3100 LAKEVIEW CT.	utility
HOLIDAY LAKE #1	3100 LAKEVIEW CT.	utility
JACKSON OAKS Reservoir	2150 E. DUNNE AV.	utility
CONDIT WELL	16315 CONDIT RD.	utility
EOC/POLICE STATION	16200 VINEYARD BLVD	
CHEMICAL STORAGE	100 EDES COURT	
CORP YARD	100 EDES COURT	
SF Public Works	100 EDES COURT	
STORAGE	100 EDES COURT	
LIFT STATION W	15505 WATSONVILLE RD.	utility
EAST DUNNE Bstr Stn	2375 E. DUNNE AV.	utility
COCHRAN WELL	COCHRAN	utility
DIANA AVENUE WELL #3	1000 DIANA AV.	utility
STRUCTURES/NORDSTM	E DUNNE AVE & MURPHY AVE	
DIANA AVENUE WELL #1	200 DIANA AV.	utility
DIANA AVENUE WELL #2	1420 DIANA AV.	utility
AQUATICS CENTER	16200 CONDIT	
SAN PEDRO WELL	1240 SAN PEDRO AV.	utility

Facility Name	Address	Critical Function
NORSTROM WELL	17002 MURPHY AVE.	utility

This list of critical facilities and available information for them is available digitally in an excel spreadsheet from the City. A complete printing of the critical facilities data is included in Morgan Hill Attachment 4: Exposure Analysis.

16.4.2 Exposure Analysis

Exposure analyses are used to quantify assets which are "exposed" to risk. This is the first step towards understanding the complete value of assets at risk to identified hazards. This section includes an exposure analysis (discussion of assets at risk) for the profiled hazards in Section 4.

Overlay analyses (using GIS) were conducted for the mappable hazards such as wildfire, flood, and the earthquake related hazards. These analyses compare the location of the critical facilities with the mapped hazard area (i.e. floodplains, wildfire threat zones, shaking potential areas, etc.) and result in a listing of which facilities are at most risk to which hazard. Not all hazards are mappable and some hazards, such as drought, are equally likely throughout the entire County. For these hazards, a general exposure summary is presented in Section 16.4.2.1.

16.4.2.1 General Exposure

ABAG's website (http://quake.abag.ca.gov/mitigation/landuse/) presents the results of the regional exposure analysis through a searchable online database. Users can view the summaries of land use and infrastructure exposed to the mappable hazards. This section presents the general summary of landuse and infrastructure in the City of Morgan Hill. These should be considered at risk to the hazards of equal likelihood throughout the entire County geography (i.e. drought, extreme heat, thunderstorm, etc).

JURISDICTION: Morgan Hill
COUNTY: Santa Clara
HAZARD: Land Use
BASIS: Existing Land Use, 2005 using 2009 hazard mapping

	Total Acres
TOTAL RESIDENTIAL LAND [excluding mixed use]:	**3,014**
1 unit/1-5 acre lot (Rural Residential)	480
1-3 units/acre	591
3-8 units/acre	1,698
>8 units/acre	232
Mobile Home Parks	13
TOTAL MIXED RESIDENTIAL/COMMERCIAL:	**8**

Within a Land Area	0
Within a Building	0
Mixture of Above or Unknown	8
TOTAL MIXED COMMERCIAL/INDUSTRIAL:	**0**
TOTAL INDUSTRIAL [excluding mixed]:	**241**
Light Industrial	6
Heavy Industrial	26
Salvage/Recyling, Mixture or Unknown	191
Food Processing, Warehousing	18
TOTAL MAJOR INFRASTRUCTURE:	**1,108**
Roads, Highway and Related Facilities	1,099
Rail Stations, Yards and Related Facilities	9
Airports	0
Ports	0
Power Facilities	0
Municipal Wastewater Facilities	0
Municipal Water Supply Facilities	0
Communication Facilities	0
Infrastructure--Other, Unknown	0
TOTAL MILITARY:	**0**
Military Residential	0
Military Hospital	0
Military Communications	0
Military Airport or Port	0
General Military	0
Open Military Lands	0
Closed Military Facilities	0
TOTAL COMMERCIAL/SERVICES [excluding mixed]:	**655**
Subtotal-Commercial:	402
Retail/Wholesale	163
Research/Office	104
Comm. Outdoor Recreation	7
Other, Mixture or Unknown	129
Subtotal-Education:	170
Educational Offices and Day Care	0
Elementary/Secondary	169
Colleges/Universities	0
Stadium Facilities	0

University Housing	0
Day Care Facilities	2
Subtotal-Hospitals and Health Care	18
Trauma Center Hospitals	0
Community or Local Hospitals	14
Surgery Centers	0
State Prisons	0
State Mental Health Facilities	0
Clinics and Long-Term Care	4
Subtotal-Public Institutions:	65
Convention Centers	0
Sports Stadiums	0
Churches/Synagogues/Other	18
City Halls/County Administration	10
Local Jails	20
Local Police/Fire/Emergency	14
Other-Comm. Centers/Libraries	3
TOTAL URBAN OPEN:	**561**
Golf Courses	0
Racetracks	0
Campgrounds and Other	8
Cemeteries	5
Parks	106
Vacant--Cleared for Redevelopment	0
Vacant--Undeveloped	364
Mixed Urban Open, Including Parks	76
TOTAL AGRICULTURE:	**1,101**
Cropland and Pasture	588
Orchards/Groves/Vineyards	503
Greenhouses	10
Confined Feeding	0
Farmsteads and Inactive	0
TOTAL RANGELAND:	**603**
Herbaceous Range	507
Shrub and Brush	96
Mixed Range	0
TOTAL WETLANDS [Based on USGS Mapping]:	**0**
Forested	0
Non-Forested	0

Salt Evaporators	0
Wetlands--Unknown	0
TOTAL FOREST LAND:	**189**
Deciduous	34
Evergreen	31
Mixed Forest	125
TOTAL SPARSELY VEGETATED:	**5**
Beaches	0
Other Sand	0
Bare Rock	5
Mines/Quarries	0
Transitional--Landfills	0
Transitional--Other	0
Transitional--Mixture	0
Mixed Sparsely Vegetated	0
	=========
	Total Acres
TOTAL URBAN LAND:	**5,588**
TOTAL NON-URBAN LAND:	**1,898**
GRAND TOTAL:	**7,487**

Source: Association of Bay Area Governments, 2009.

Note: Because of independent rounding, subcategories may not add to totals.

JURISDICTION: Morgan Hill
COUNTY: Santa Clara
HAZARD: Land Use
BASIS: Existing Infrastructure, 2009

	Total Miles
ROADS:	**178**
Interstate Highway	4
Primary US/State Highway	0
Secondary State/Co Highway	26
Local Road	136
Misc Ramp/Road	11
TRANSIT:	**4**
Altamont Commuter Express (ACE)	0
Amtrak	0
Bay Area Rapid Transit (BART)	0
Caltrain	4
San Francisco Muni Metro	0
Santa Clara VTA	0
RAIL:	**4**
All Railroads	4
PIPELINES:	**142**
Pipelines Under Roads	142
	=========

Source: Association of Bay Area Governments, 2009.
Miles of pipeline is an approximation based on miles of road within water service area boundaries and does not include major auqeducts.
Miles of pipeline is miles of water pipelines. Miles of sewer pipelines should be approximately the same.

Note: Because of independent rounding, subcategories may not add to totals.

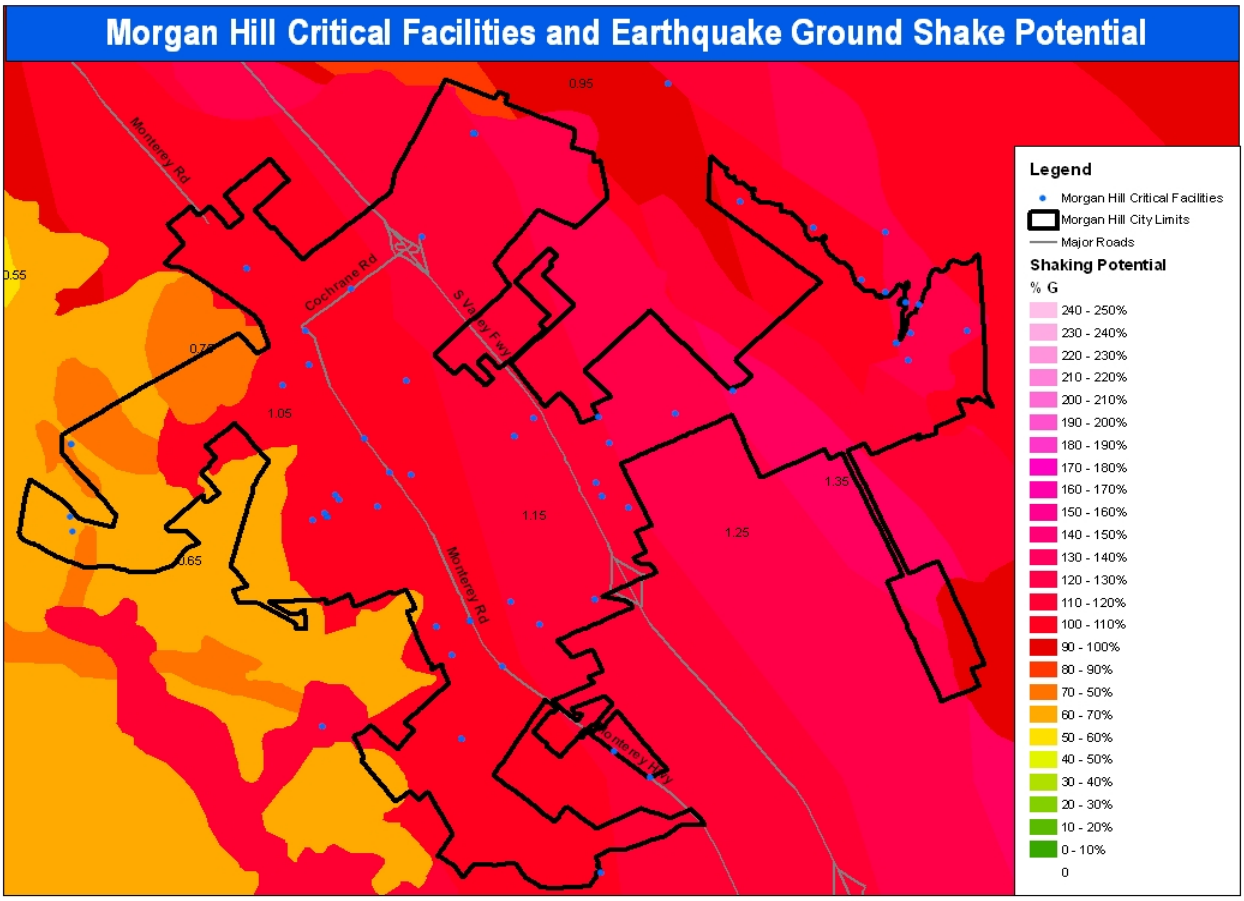
16.4.2.2 Critical Facilities Exposure by Hazard

ABAG's website (http://quake.abag.ca.gov/mitigation/cf2010/) presents the results of the regional facilities exposure analysis through a searchable online database. Users can view the summaries of how many facilities are exposed to the mappable hazards by category: health care facilities, schools, critical facilities, and bridges/interchanges. For the purposes of developing a City specific mitigation strategy, this section identifies which of the City's critical facilities are located in the mapped hazard areas.

The complete results from ABAG's exposure analysis are available digitally in an excel spreadsheet from the City. A complete printing of these results is included in Morgan Hill Attachment 4: Morgan Hill Exposure Analysis.

16.4.2.2.1 Earthquake Related Hazards

Ground Shaking



Source: CA Department of Conservation

Critical Facility	Peak Acceleration (%G)	Perceived Shaking	Potential Damage	Instrumental Intensity	Bldg Insured Value	Contents Insured Value
JACKSON OAKS Reservoir	135	Extreme	Very Heavy	X+	$0	$0
LIFT STATION D	125	Extreme	Very Heavy	X+	$500,000	$0
JACKSON OAKS Bstr Stn	125	Extreme	Very Heavy	X+	$0	$0
JACKSON OAKS WELL	125	Extreme	Very Heavy	X+	$500,000	$0
LIFT STATION J	125	Extreme	Very Heavy	X+	$500,000	$0
DUNNE AVENUE	125	Extreme	Very	X+	$70,200	$2,756

Critical Facility	Peak Acceleration (%G)	Perceived Shaking	Potential Damage	Instrumental Intensity	Bldg Insured Value	Contents Insured Value
WELL #1			Heavy			
DUNNE AVENUE WELL #2	125	Extreme	Very Heavy	X+	$500,000	$20,673
HOLIDAY LAKE #1	125	Extreme	Very Heavy	X+	$150,000	$0
EAST DUNNE Bstr Stn	125	Extreme	Very Heavy	X+	$500,000	$165,375
BOYS RANCH #2 Reservoir	115	Violent	Heavy	IX	$0	$0
BOYS RANCH #3 Reservoir	115	Violent	Heavy	IX	$0	$0
BOYS RANCH WELL #1	115	Violent	Heavy	IX	$500,000	$17,916
BOYS RANCH WELL #2	115	Violent	Heavy	IX	$500,000	$68,906
BOYS RANCH WELL #3	115	Violent	Heavy	IX	$500,000	$68,906
TENNANT AVENUE WELL	115	Violent	Heavy	IX	$0	$0
WELL HOUSE	115	Violent	Heavy	IX		
WELL HOUSE	115	Violent	Heavy	IX		
EDMUNSON Reservoir	115	Violent	Heavy	IX	$0	$0
LIFT STATION O	115	Violent	Heavy	IX	$0	$0
LIFT STATION M	115	Violent	Heavy	IX	$150,000	$0
SPORTS FIELD/CONCESS BLDG	115	Violent	Heavy	IX	$0	$0
CONDIT WELL	115	Violent	Heavy	IX	$500,000	$5,513
EOC/POLICE STATION	115	Violent	Heavy	IX		
COCHRAN WELL	115	Violent	Heavy	IX	$500,000	$55,125
DIANA AVENUE WELL #3	115	Violent	Heavy	IX	$0	$0
STRUCTURES/NORDSTM	115	Violent	Heavy	IX	$200,000	$0
DIANA AVENUE WELL #1	115	Violent	Heavy	IX	$500,000	$8,269
DIANA AVENUE WELL #2	115	Violent	Heavy	IX	$150,000	$0
AQUATICS CENTER	115	Violent	Heavy	IX	$0	$0
SAN PEDRO WELL	115	Violent	Heavy	IX		

Critical Facility	Peak Acceleration (%G)	Perceived Shaking	Potential Damage	Instrumental Intensity	Bldg Insured Value	Contents Insured Value
NORSTROM WELL	115	Violent	Heavy	IX	$0	$0
CITY HALL	105	Violent	Heavy	IX	$4,397,000	$704,125
GENERATOR	105	Violent	Heavy	IX	$413,438	$0
GENERATOR BLDG	105	Violent	Heavy	IX	$38,538	$0
MODULAR #2-W OF CH	105	Violent	Heavy	IX	$249,913	$0
STORAGE BLDG	105	Violent	Heavy	IX	$124,500	$25,563
EL TORO YOUTH CTR	105	Violent	Heavy	IX		
FRIENDLY INN NON_PROFIT SERVICE CTR	105	Violent	Heavy	IX	$1,299,900	$177,451
MUSEUM	105	Violent	Heavy	IX	$533,000	$93,188
PEAK & MAIN Bstr Stn	105	Violent	Heavy	IX	$215,000	$360,000
MAIN AVENUE WELL #1	105	Violent	Heavy	IX	$150,000	$15,160
LIFT STATION H	105	Violent	Heavy	IX	$150,000	$0
NOB HILL Reservoir	105	Violent	Heavy	IX	$500,000	$220,500
COMM CULTURAL CNTR	105	Violent	Heavy	IX	$0	$281,439
LIFT STATION F	105	Violent	Heavy	IX	$150,000	$0
JACKSON OAKS HYDRO PNEUMATIC Reservoir	105	Violent	Heavy	IX	$161,000	$260,000
JACKSON OAKS HYDROMATIC	105	Violent	Heavy	IX	$0	$0
LIFT STATION K	105	Violent	Heavy	IX	$34,454	$0
LIFT STATION C	105	Violent	Heavy	IX	$150,000	$0
LIFT STATION A	105	Violent	Heavy	IX	$500,000	$0
LIFT STATION B	105	Violent	Heavy	IX	$500,000	$0
ENCINO Reservoir	105	Violent	Heavy	IX	$220,000	$510,000
ENCINO Bstr Stn	105	Violent	Heavy	IX	$246,000	$390,000
LLAGAS Reservoir	105	Violent	Heavy	IX	$253,500	$764,900
LLAGAS Bstr Stn	105	Violent	Heavy	IX	$1,150,000	$537,469
EL TORO Reservoir	105	Violent	Heavy	IX	$206,719	$0
EL TORO Bstr Stn	105	Violent	Heavy	IX	$130,000	$0
TRANSIT CENTER	105	Violent	Heavy	IX	$41,000	$120,000
GENERATOR BLDG.	105	Violent	Heavy	IX	$21,589	$0

Critical Facility	Peak Acceleration (%G)	Perceived Shaking	Potential Damage	Instrumental Intensity	Bldg Insured Value	Contents Insured Value
LIFT STATION I	105	Violent	Heavy	IX	$150,000	$0
PAVILLION	105	Violent	Heavy	IX	$150,000	$0
RESTROOM	105	Violent	Heavy	IX	$0	$0
CENTINNEAL REC CENTER	105	Violent	Heavy	IX	$0	$0
LIFT STATION P	105	Violent	Heavy	IX	$150,000	$0
LIFT STATION G	105	Violent	Heavy	IX	$0	$0
BUTTERFIELD WELL	105	Violent	Heavy	IX	$0	$0
EASY STREET Bstr Stn	105	Violent	Heavy	IX	$0	$0
CHEMICAL STORAGE	105	Violent	Heavy	IX	$0	$0
CORP YARD	105	Violent	Heavy	IX	$777,348	$1,253,519
SF Public Works	105	Violent	Heavy	IX	$1,130,000	$247,000
STORAGE	105	Violent	Heavy	IX	$0	$0
LIFT STATION W	105	Violent	Heavy	IX	$500,000	$0
HOLIDAY LAKE #2	95	Violent	Heavy	IX	$363,750	$190,000
GLEN AYRE Reservoir	65	Violent	Heavy	IX	$542,250	$1,754,000
GLEN AYRE Bstr Stn	65	Violent	Heavy	IX	$200,000	$0
WOODLAND ACRES Reservoir	65	Violent	Heavy	IX	$90,000	$217,500
WOODLAND Bstr Stn	65	Violent	Heavy	IX	$0	$0

Soft Story Multi-Family Dwellings

In 2003, the Collaborative for Disaster Mitigation at San Jose State University completed an "*Inventory of Soft-First Story Multi-Family Dwellings in Santa Clara County*". At that time, the city of Morgan Hill had 37 soft-first story multi-family buildings including 371 residential units housing 928 occupants. Figure 16-1 below identifies the locations of these buildings.

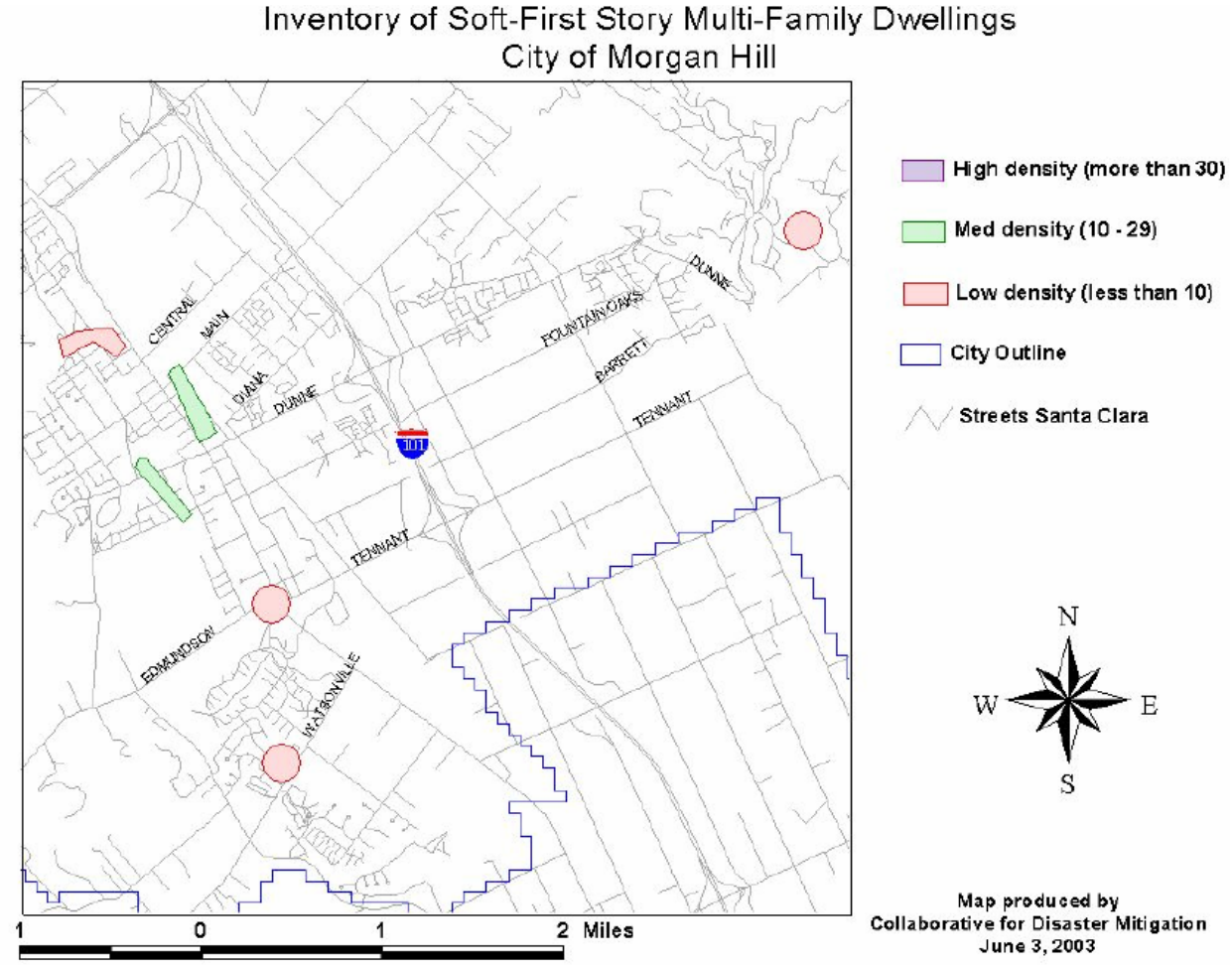
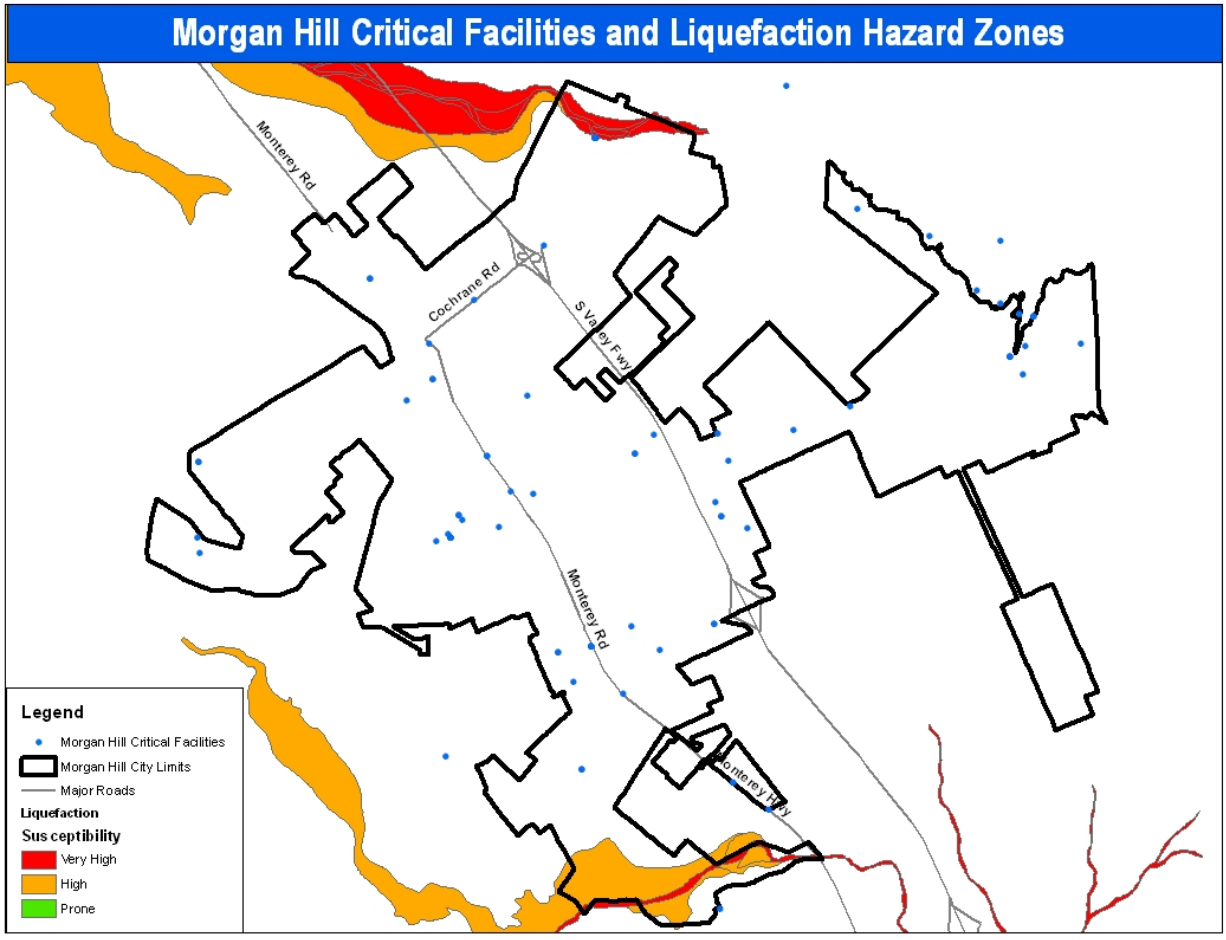


Figure 16-1: Inventory of Soft-First Story Multi-Family Dwellings-City of Morgan Hill

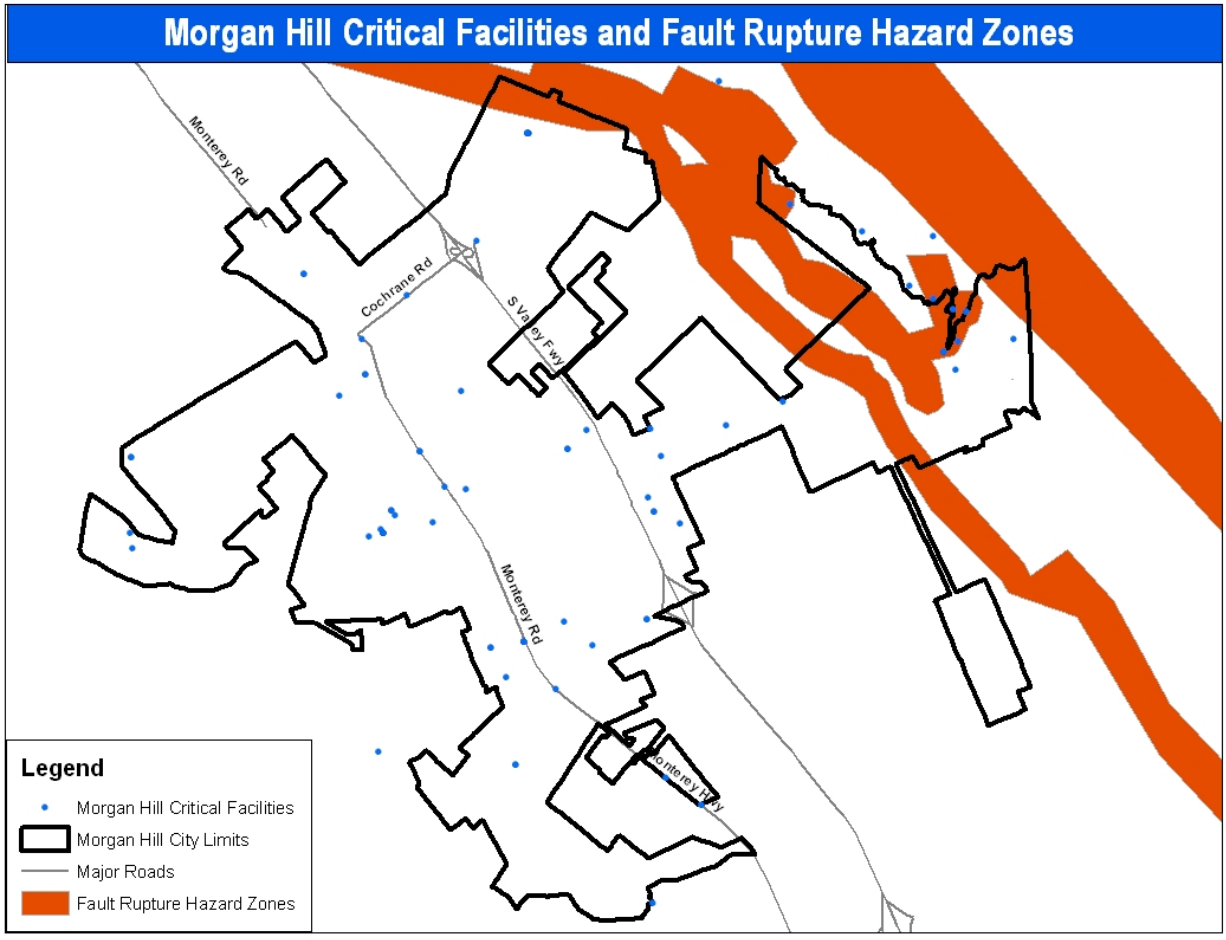
Earthquake Induced Liquefaction



Source: Santa Clara Planning Office

There are no critical facilities located in a liquefaction hazard zone in Morgan Hill, CA.

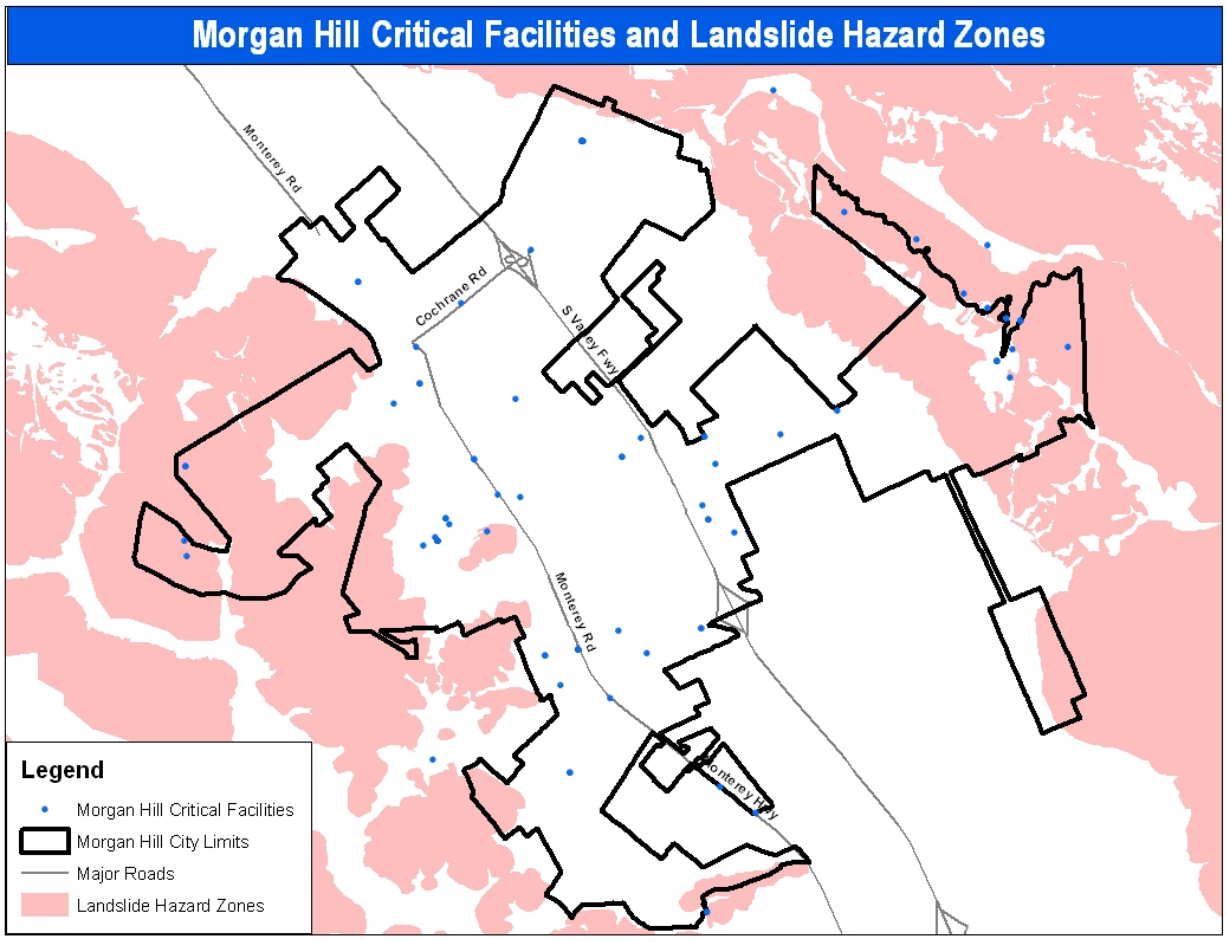
Surface Rupture



Source: CA Geological Survey, State of CA Department of Conservation

Critical Facility	Within Fault Rupture Hazard Zone	Bldg Insured Value	Contents Insured Value
Lift Station A	Yes	$500,000	$0
Lift Station F	Yes	$150,000	$0
Lift Station D	Yes	$500,000	$0
Dunne Ave Well 1	Yes	$70,200	$2,756
Dunne Ave Well 2	Yes	$500,000	$20,673
Jackson Oaks Bstr Stn	Yes	$0	$0
Jackson Oaks Hydro Pneumatic Reservoir	Yes	$161,000	$260,000
Jackson Oaks Hydromatic	Yes	$0	$0
Lift Station K	Yes	$34,454	$0

Earthquake Induced Landslides



Source: Santa Clara Planning Office, CA State Department of Conservation

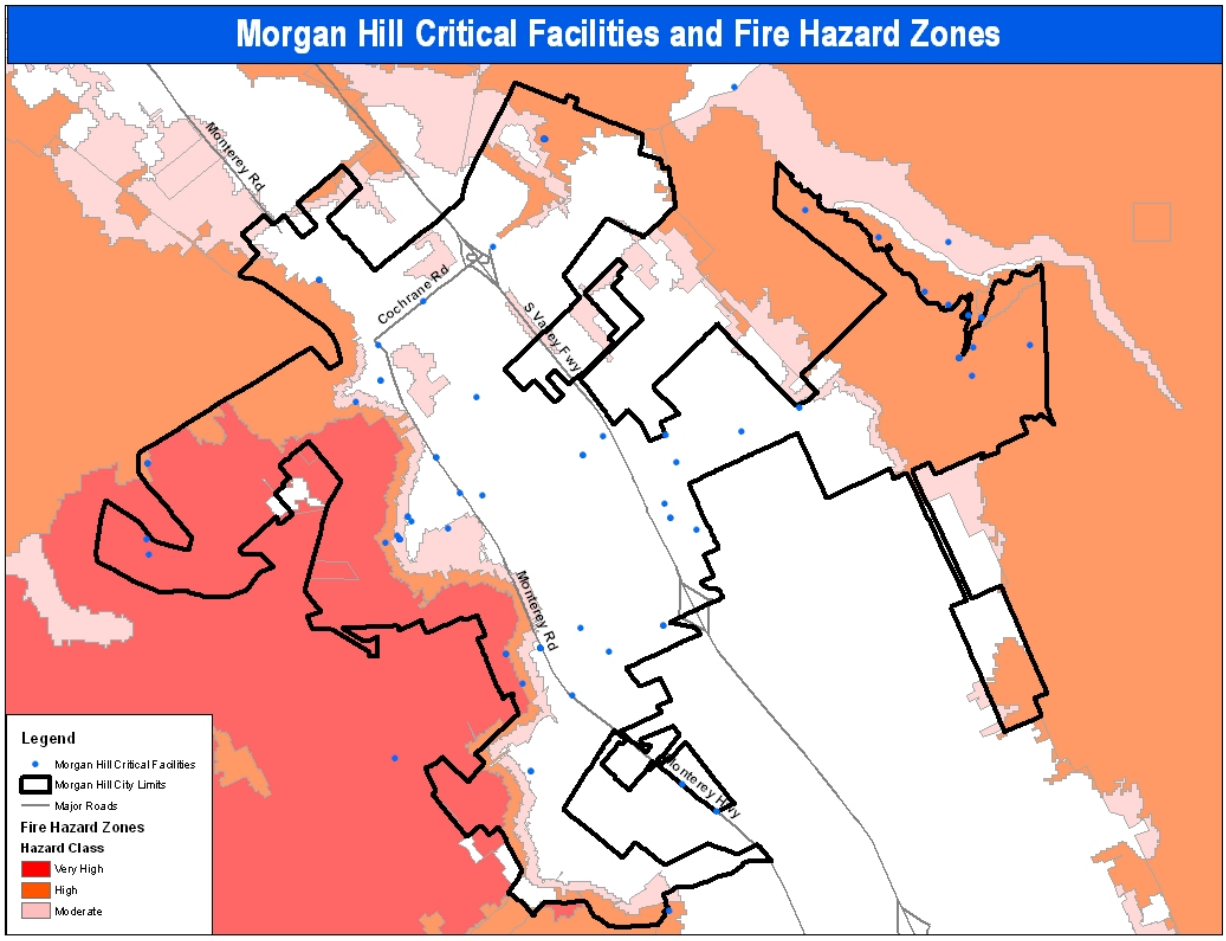
Critical Facility	Within Landslide Hazard Zone	Bldg Insured Value	Contents Insured Value
NOB HILL Reservoir	Yes	$500,000	$220,500
GLEN AYRE Reservoir	Yes	$542,250	$1,754,000
GLEN AYRE Bstr Stn	Yes	$200,000	$0
WOODLAND ACRES Reservoir	Yes	$90,000	$217,500
WOODLAND Bstr Stn	Yes	$0	$0
LIFT STATION D	Yes	$500,000	$0
LIFT STATION J	Yes	$500,000	$0

Critical Facility	Within Landslide Hazard Zone	Bldg Insured Value	Contents Insured Value
JACKSON OAKS WELL	Yes	$500,000	$0
LIFT STATION C	Yes	$150,000	$0
DUNNE AVENUE WELL #1	Yes	$70,200	$2,756
DUNNE AVENUE WELL #2	Yes	$500,000	$20,673
LIFT STATION A	Yes	$500,000	$0
LIFT STATION B	Yes	$500,000	$0

16.4.2.2.2 Infrastructure Failure

The City of Morgan Hill is particularly concerned with the storm drainage system. Several potential projects to improve drainage have been identified in section 15.5. Morgan Hill does not have any additional unique concerns or vulnerabilities regarding the hazard of infrastructure failure as presented in Section 4.

16.4.2.2.3 Wildfire

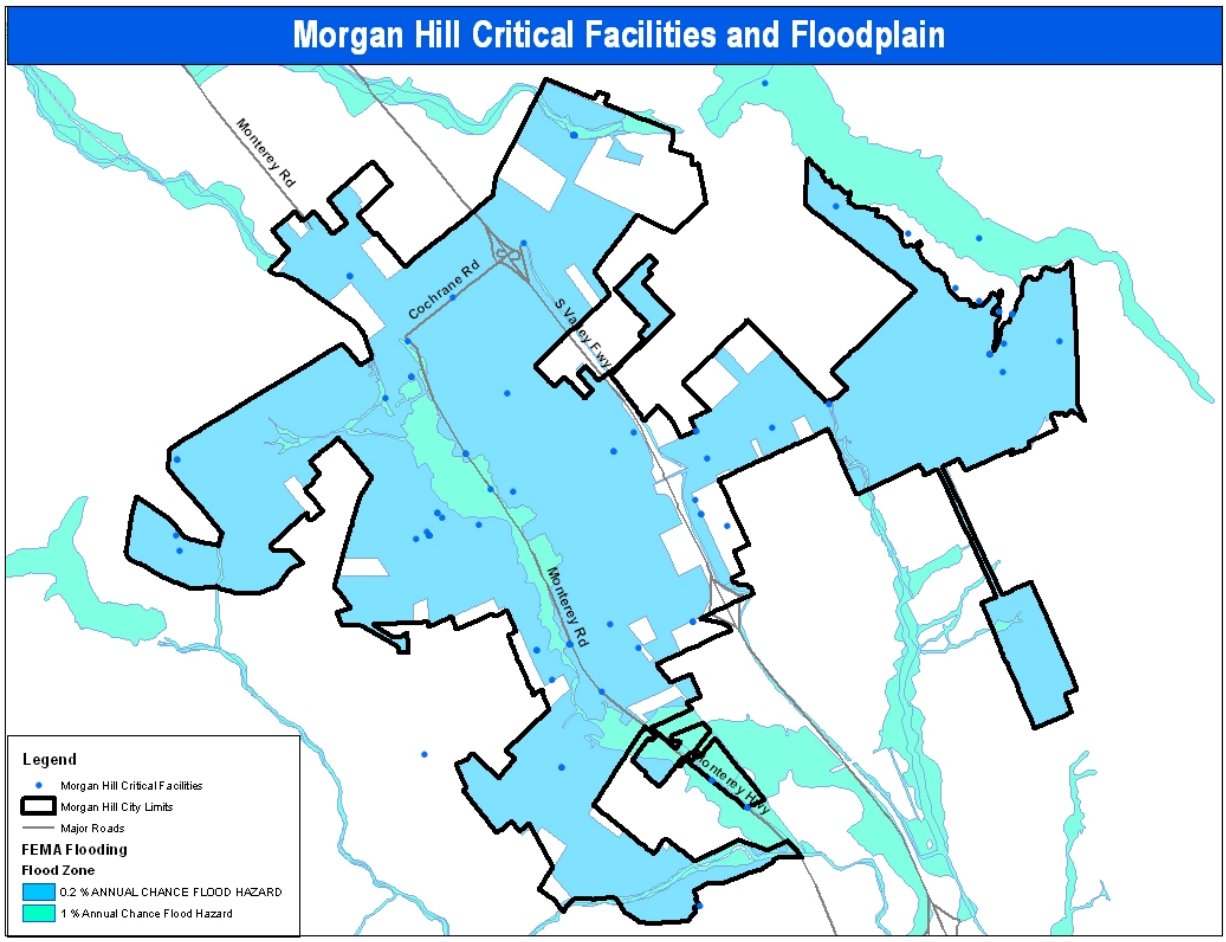


Source: CA Department of Forestry and Fire Protection

Critical Facility	Fire Hazard Zone	Bldg Insured Value	Contents Insured Value
Woodland Acres Reservoir	Very High	$90,000	$217,500
Woodland Bstr Stn	Very High	$0	$0
Edmunson Reservoir	Very High	$0	$0
Pavillion	Very High	$150,000	$0
Restroom	Very High	$0	$0
Glen Ayre Reservoir	High	$542,250	$1,754,000
Glen Ayre Bstr Stn	High	$200,000	$0
CENTINNEAL REC CENTER	High	$0	$0
Museum	High	$533,000	$93,188
Easy Street Bstr Stn	High	$0	$0

Critical Facility	Fire Hazard Zone	Bldg Insured Value	Contents Insured Value
Boys Ranch Well 1	High	$500,000	$17,916
Boys Ranch Well 2	High	$500,000	$68,906
Boys Ranch Well 3	High	$500,000	$68,906
Boys Ranch 2 Reservoir	High	$0	$0
Boys Ranch 3 Reservoir	High	$0	$0
Lift Station A	High	$500,000	$0
Lift Station B	High	$500,000	$0
Lift Station C	High	$150,000	$0
Lift Station F	High	$150,000	$0
Lift Station D	High	$500,000	$0
Dunne Ave Well 1	High	$70,200	$2,756
Dunne Ave Well 2	High	$500,000	$20,673
Jackson Oaks Bstr Stn	High	$0	$0
Jackson Oaks Hyro Pneumatic Reservoir	High	$161,000	$260,000
Jackson Oaks Hydromatic	High	$0	$0
Lift Station K	High	$34,454	$0
Jackson Oaks Well	High	$500,000	$0
Lift Station J	High	$500,000	$0
Lift Station H	High	$150,000	$0
Holiday Lake 1	Moderate	$150,000	$0
Friendly Inn Non Profit Center	Moderate	$1,299,900	$177,451
Peak and Main Bstr Stn	Moderate	$215,000	$360,000
City Hall	Moderate	$4,397,000	$704,125
Generator	Moderate	$413,438	$0
Generator Bldg	Moderate	$38,538	$0
Modular 2- W of C	Moderate	$249,913	$0
Storage Bldg	Moderate	$124,500	$25,563
Nob Hill Reservoir	Moderate	$500,000	$220,500

16.4.2.2.4 Flooding



Source: FEMA- Santa Clara County DFIRM, 2009

Critical Facility	Flood Zone (% annual chance)	Bldg Insured Value	Contents Insured Value
LIFT STATION H	1%	$150,000	$0
LIFT STATION O	1%	$0	$0
MAIN AVENUE WELL #1	1%	$150,000	$15,160
BOYS RANCH #2 Reservoir	1%	$0	$0
BOYS RANCH #3 Reservoir	1%	$0	$0
BOYS RANCH WELL #1	1%	$500,000	$17,916
BOYS RANCH WELL #2	1%	$500,000	$68,906
BOYS RANCH WELL #3	1%	$500,000	$68,906
LIFT STATION M	1%	$150,000	$0
HOLIDAY LAKE #2	1%	$363,750	$190,000

Critical Facility	**Flood Zone** (% annual chance)	**Bldg Insured Value**	**Contents Insured Value**
HOLIDAY LAKE #1	1%	$150,000	$0
CITY HALL	.2%	$4,397,000	$704,125
GENERATOR	.2%	$413,438	$0
GENERATOR BLDG	.2%	$38,538	$0
MODULAR #2-W OF CH	.2%	$249,913	$0
STORAGE BLDG	.2%	$124,500	$25,563
EL TORO YOUTH CTR	.2%		
FRIENDLY INN NON-PROFIT CENTER	.2%	$1,299,900	$177,451
MUSEUM	.2%	$533,000	$93,188
PEAK & MAIN Bstr Stn	.2%	$215,000	$360,000
NOB HILL Reservoir	.2%	$500,000	$220,500
GLEN AYRE Reservoir	.2%	$542,250	$1,754,000
GLEN AYRE Bstr Stn	.2%	$200,000	$0
WOODLAND ACRES Reservoir	.2%	$90,000	$217,500
WOODLAND Bstr Stn	.2%	$0	$0
JACKSON OAKS HYDRO PNEUMATIC Reservoir	.2%	$161,000	$260,000
JACKSON OAKS HYDROMATIC	.2%	$0	$0
LIFT STATION K	.2%	$34,454	$0
JACKSON OAKS Bstr Stn	.2%	$0	$0
JACKSON OAKS WELL	.2%	$500,000	$0
LIFT STATION J	.2%	$500,000	$0
LIFT STATION A	.2%	$500,000	$0
ENCINO Reservoir	.2%	$220,000	$510,000
ENCINO Bstr Stn	.2%	$246,000	$390,000
LLAGAS Reservoir	.2%	$253,500	$764,900
LLAGAS Bstr Stn	.2%	$1,150,000	$537,469
EL TORO Reservoir	.2%	$206,719	$0
EL TORO Bstr Stn	.2%	$130,000	$0
TRANSIT CENTER	.2%	$41,000	$120,000
GENERATOR BLDG.	.2%	$21,589	$0
LIFT STATION I	.2%	$150,000	$0
PAVILLION	.2%	$150,000	$0
RESTROOM	.2%	$0	$0
CENTINNEAL REC CENTER	.2%	$0	$0
LIFT STATION P	.2%	$150,000	$0
LIFT STATION G	.2%	$0	$0

Critical Facility	**Flood Zone** (% annual chance)	**Bldg Insured Value**	**Contents Insured Value**
BUTTERFIELD WELL	.2%	$0	$0
EASY STREET Bstr Stn	.2%	$0	$0
JACKSON OAKS Reservoir	.2%	$0	$0
EOC/POLICE STATION	.2%		
CHEMICAL STORAGE	.2%	$0	$0
CORP YARD	.2%	$777,348	$1,253,519
SF Public Works	.2%	$1,130,000	$247,000
STORAGE	.2%	$0	$0
LIFT STATION W	.2%	$500,000	$0
EAST DUNNE Bstr Stn	.2%	$500,000	$165,375
COCHRAN WELL	.2%	$500,000	$55,125
DIANA AVENUE WELL #3	.2%	$0	$0
STRUCTURES/NORDSTM	.2%	$200,000	$0
DIANA AVENUE WELL #1	.2%	$500,000	$8,269
DIANA AVENUE WELL #2	.2%	$150,000	$0
AQUATICS CENTER	.2%	$0	$0
SAN PEDRO WELL	.2%		
NORSTROM WELL	.2%	$0	$0

Sea Level Rise

There are no facilities in the City of Morgan Hill at risk to sea level rise.

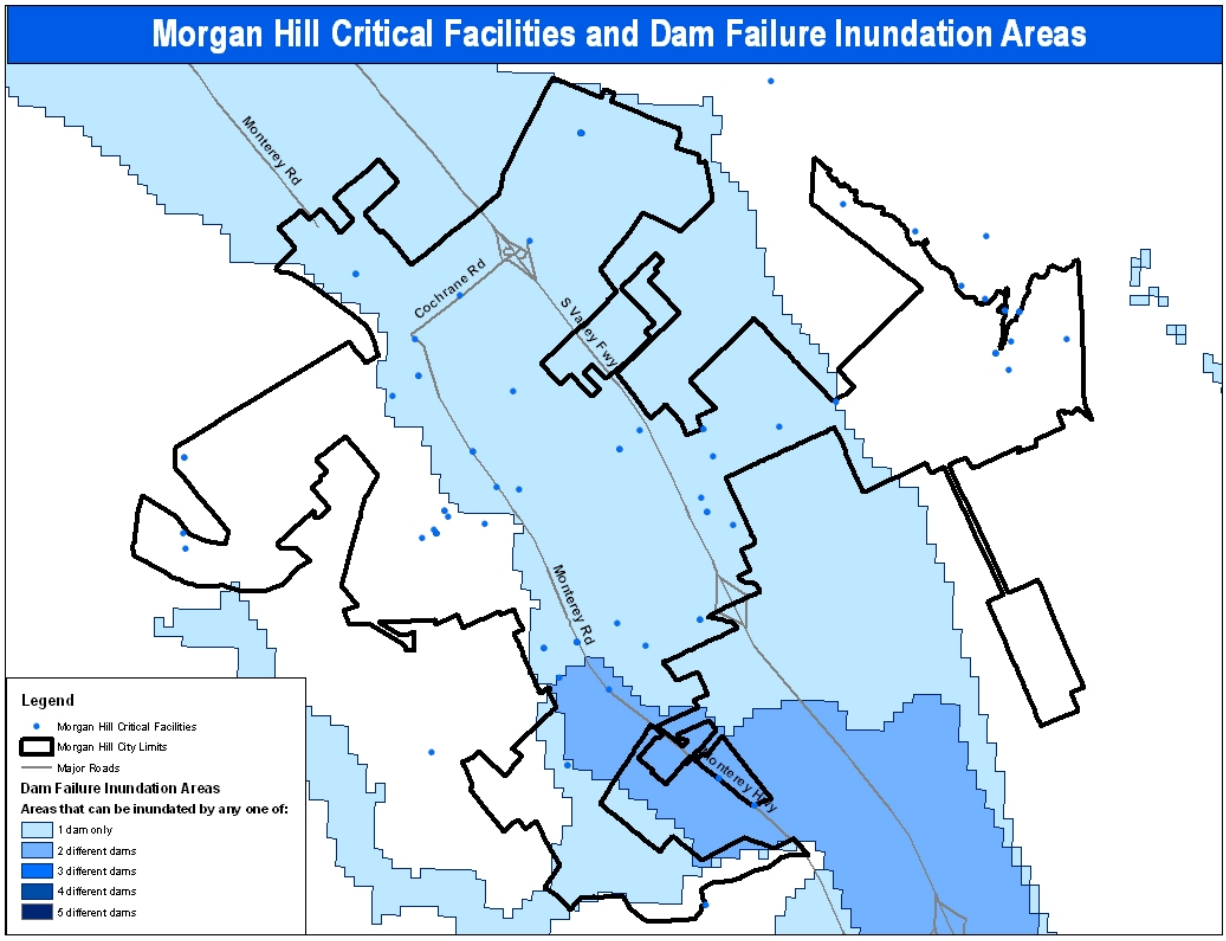
16.4.2.2.5 Drought

All populations, facilities, and assets are equally at risk to impact from drought. The City of Morgan Hill does not have any unique concerns regarding the hazard of drought as presented in Section 4.

16.4.2.2.6 Solar Storm

All populations, facilities, and assets are equally at risk to impact from solar storm events. The City of Morgan Hill does not have any unique concerns regarding the hazard of solar storm as presented in Section 4.

16.4.2.2.7 Dam Failure



Source: ABAG, 1995. Dam data from State of California Office of Emergency Services

Critical Facility	Dam Failure Inundation Area	Bldg Insured Value	Contents Insured Value
LIFT STATION O	2	$0	$0
LIFT STATION M	2	$150,000	$0
CENTINNEAL REC CENTER	2	$0	$0
LIFT STATION W	2	$500,000	$0
MAIN AVENUE WELL #1	1	$150,000	$15,160
LIFT STATION H	1	$150,000	$0
BOYS RANCH #2 Reservoir	1	$0	$0
BOYS RANCH #3 Reservoir	1	$0	$0

Critical Facility	Dam Failure Inundation Area	Bldg Insured Value	Contents Insured Value
BOYS RANCH WELL #1	1	$500,000	$17,916
BOYS RANCH WELL #2	1	$500,000	$68,906
BOYS RANCH WELL #3	1	$500,000	$68,906
TENNANT AVENUE WELL	1	$0	$0
WELL HOUSE	1		
WELL HOUSE	1		
SPORTS FIELD/CONCESS BLDG	1	$0	$0
COMM CULTURAL CNTR	1	$0	$281,439
ENCINO Reservoir	1	$220,000	$510,000
ENCINO Bstr Stn	1	$246,000	$390,000
LLAGAS Reservoir	1	$253,500	$764,900
LLAGAS Bstr Stn	1	$1,150,000	$537,469
EL TORO Reservoir	1	$206,719	$0
EL TORO Bstr Stn	1	$130,000	$0
TRANSIT CENTER	1	$41,000	$120,000
GENERATOR BLDG.	1	$21,589	$0
LIFT STATION I	1	$150,000	$0
PAVILLION	1	$150,000	$0
RESTROOM	1	$0	$0
LIFT STATION P	1	$150,000	$0
LIFT STATION G	1	$0	$0
BUTTERFIELD WELL	1	$0	$0
CONDIT WELL	1	$500,000	$5,513
EOC/POLICE STATION	1		
CHEMICAL STORAGE	1	$0	$0
CORP YARD	1	$777,348	$1,253,519
SF Public Works	1	$1,130,000	$247,000
STORAGE	1	$0	$0
EAST DUNNE Bstr Stn	1	$500,000	$165,375
COCHRAN WELL	1	$500,000	$55,125
DIANA AVENUE WELL #3	1	$0	$0
STRUCTURES/NORDSTM	1	$200,000	$0
DIANA AVENUE WELL #1	1	$500,000	$8,269
DIANA AVENUE WELL	1	$150,000	$0

Critical Facility	Dam Failure Inundation Area	Bldg Insured Value	Contents Insured Value
#2			
AQUATICS CENTER	1	$0	$0
SAN PEDRO WELL	1		
NORSTROM WELL	1	$0	$0

16.4.2.2.8 Disease Outbreak

All populations, facilities, and assets are equally at risk to impact from disease outbreak. The City of Morgan Hill does not have any unique concerns regarding the hazard of disease outbreak as presented in Section 4.

16.4.2.2.9 Freeze

All populations, facilities, and assets are equally at risk to impact from freeze occurrences. The City of Morgan Hill does not have any unique concerns regarding the hazard of freeze as presented in Section 4.

16.4.2.2.10 Wind

All populations, facilities, and assets are equally at risk to impact from high winds. The City of Morgan Hill does not have any unique concerns regarding the hazard of wind as presented in Section 4.

16.4.2.2.11 Heat

All populations, facilities, and assets are equally at risk to impact from extreme heat events. The City of Morgan Hill does not have any unique concerns regarding the hazard of heat as presented in Section 4.

16.4.2.2.12 Agricultural Pest

The City of Morgan Hill does not have any unique concerns regarding the hazard of agricultural pest as presented in Section 4.

16.4.2.2.13 Thunder and Lightning

All populations, facilities, and assets are equally at risk to impact from thunder and lightning events. The City of Morgan Hill does not have any unique concerns regarding the hazard of thunder and lightning as presented in Section 4.

16.4.2.2.14 Siltation – Bay Area

Siltation is not of particular concern to the City of Morgan Hill.

16.4.2.2.15 Tornado

All populations, facilities, and assets are equally at risk to impact from tornado occurrences. The City of Morgan Hill does not have any unique concerns regarding the hazard of tornado as presented in Section 4.

16.4.2.2.16 Hazardous Materials

Hazardous Materials spills are not of particular concern to the City of Morgan Hill.

16.4.2.2.17 Landslide and Debris Flow

Landslide and Debris Flow is not of particular concern to the City of Morgan Hill.

16.4.2.2.18 Other Hazards

Land Subsidence is not of particular concern to the City of Morgan Hill.
Expansive Soils are not of particular concern to the City of Morgan Hill.
Hailstorms are not of particular concern to the City of Morgan Hill.
Tsunami is not a hazard of concern for the City of Morgan Hill.
Volcano eruptions are not a hazard of concern for the City of Morgan Hill.

16.5 MITIGATION ACTIONS

16.5.1 Primary Concerns

Based on the exposure analysis, the many critical facilities are exposed to potential ground shaking, various flood hazards and located in wildfire hazard zones.

16.5.2 Mitigation Actions

In addition to participating in the Local Planning Team and supporting the implementation of the prioritized county-wide mitigation actions, the City of Morgan Hill identified the following potential mitigation actions for implementation within the City.

Flooding

Action Number	Location	Problem Statement	Project Description	Potential Funding Source	Responsible Department	Target Completion Date
1	Butterfield Channel	Inlets/outlets at road crossings become overgrown with volunteer reeds and willows. Annual task of clearing vegetation requires extensive hand labor in a difficult to access location.	Construct concrete aprons at culvert openings and drain outlets to keep areas clear of vegetation growth to allow water flow and visibility for inspection.	tbd	tbd	tbd
2	E. Dunne at Flaming Oaks valley gutter at top of slope	Slope above this location on E. Dunne has had slides each winter for the past few years. Concrete valley gutter above slope is in poor condition.	Concrete v-ditch needs reconstruction	tbd	tbd	tbd

Action Number	Location	Problem Statement	Project Description	Potential Funding Source	Responsible Department	Target Completion Date
3	Spring St. & Bisceglia	Frequent flooding due to slow drainage to creek	While it would not resolve the problem completely, installing a new outlet in the creek channel on the south side of Spring, at a lower elevation than existing, would delay flooding and speed drainage.	tbd	tbd	tbd
4	Burnett at Monterey	Flooding at intersection due to slow drainage. Nowhere for water to go once ditch on the west side of Monterey is full.	Need facilities to direct stormwater out of this area or increase retention capacity	tbd	tbd	tbd
6	Main at Casa	High School parking lot floods when ditch on Main fills up	Need facilities to direct stormwater out of this area or increase retention capacity	tbd	tbd	tbd
7	Mission View & Half Road	Flooding	Raise pavement level at intersection or install storm drains	tbd	tbd	tbd
8	1390 Llagas below Castle Hill	Flooding over roadway and onto residential property three inlets become clogged	Improve inlets, ditch across street from house	tbd	tbd	tbd
9	Trail Dr. drainage channels (4)	Channels erode and silt up downstream catch basins	Construct series of step pools to slow flow and reduce silting in each channel (includes channel above Jackson School)	tbd	tbd	tbd
10	Circle Lane & Oak View	Inlet silts up	install concrete and/or riprap	tbd	tbd	tbd
11	Cochrane Circle	Area floods frequently - storm drains are full of roots and likely damaged	Need to use root cutter throughout then video inspection to assess condition	tbd	tbd	tbd

Action Number	Location	Problem Statement	Project Description	Potential Funding Source	Responsible Department	Target Completion Date
12	Llagas Rd between Castle Ridge & Glen Ayre	Inlets on uphill side of road fill with dirt every year	need to build up retaining structure at each inlet	tbd	tbd	tbd
13	Sabini Ct.	Resident filled in ditch on his own property so street floods during heavy storms	Need drain to nearby channel	tbd	tbd	tbd
14	16355 Oak Canyon Dr.	Inlet fills with dirt	Needs concrete apron	tbd	tbd	tbd
15	Hill Rd. & E. Dunne Ave.	Inlet in dirt field is too low and fills with dirt. Streets crew has to place straw wattles around inlet every year	Raise inlet level and install surrounding concrete apron	tbd	tbd	tbd
16	16817 Gallop Dr.	Inlet above Gallop needs re-work, some cobbles are loose	Re-design to reduce sediment build up, provide access from street (currently have to use resident's driveway)	tbd	tbd	tbd
17	17661 Peak Ave.	Alley drain can't receive water volume so back yard floods	Increase inlet capacity	tbd	tbd	tbd
18	Fisher Creek retention basin	During big storm of 10/13/09 Fisher Creek flooded but large retention pond had little water in it	Lower elevation of large pond inlet so it retains more water during major storms	tbd	tbd	tbd
19	17910 Woodland Ave	Erosian near booster station, undermining edge of road	repair erosian damage	tbd	tbd	tbd
20	Teresa Ditch (behind homes on Teresa Lane)	Sediment from dirt ditch regularly clogs downstream storm drain.	Improve ditch to reduce silting	tbd	tbd	tbd

Action Number	Location	Problem Statement	Project Description	Potential Funding Source	Responsible Department	Target Completion Date
21	Downtown storm drains	Some storm catch basins in the old part of town are made of brick. Would need to do a survey to identify locations.	Replace brick catch basins	tbd	tbd	tbd
22	2776 Hayloft Ct	Water collects at bottom of driveway, has nowhere to go and asphalt curb is deteriorating	Investigate installing a catch basin & replacing curb/gutter area	tbd	tbd	tbd
23	16115 Condit, at Ramada Inn	Catch basin in street in front of the Ramada collects water from the parking lot but is not connected to any storm drain	Extend storm drain so water from parking lot and street drain. This location floods during major storms.	tbd	tbd	tbd
24	Butterfield Channel between Diana & Main	sediment has raised bottom of channel to level higher than storm drain invert in two locations.	Remove sediment from channel to designed level	tbd	tbd	tbd
25	6" pump to pump out flooded areas	Areas subject to flooding that could require use of a large pump: Monterey underpass, Bisceglia, Tennant & Railroad, California Ave. (sewer).	Public Works has one 6" pump but needs another to be able to pump more than one location at a time as would be likely during a major storm	tbd	tbd	tbd
26		A 1% flood on Llagas Creek will affect more than 1,100 homes, 500 commercial and industrial buildings, and 1,300 agricultural acres.	Llagas Creek Flood Protection Project	tbd	tbd	tbd

16.6 PLAN MAINTENANCE

16.6.1 Monitoring, evaluating, updating the plan

The City of Morgan Hill Office of Emergency Services will be responsible for ensuring that this annex is monitored on an on-going basis. However, the major disasters affecting Morgan Hill's community, legal changes, notices from ABAG (as the lead agency in this process), notices from Santa Clara County (lead agency for the County-wide Annex), and other triggers will be used as well. Finally, the Annex will be a discussion/work item on the City's Emergency Operations Center agenda each year, and department heads and other emergency preparedness staff, who serve in the City's Emergency Operations Center, will focus on evaluating the Annex in light of technological and political changes that may occur during the year or other significant events. This group, in collaboration with Santa Clara County, will be responsible for determining if the plan should be updated.

The City of Morgan Hill is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The City's Emergency Services Coordinator will contact ABAG four years after this plan is approved to ensure that ABAG plans to undertake the plan update process. If so, the City plans to participate in the multi-jurisdictional plan. If ABAG is unwilling or unable to act as the lead agency in the multi-jurisdictional effort, other agencies will be contacted, including the Santa Clara County Office of Emergency Services. The jurisdictions within Santa Clara County should continue to work together on updating this multi-jurisdictional plan.

The public will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the City will provide the opportunity for the public to comment on the updates. A public notice will be published prior to the meeting to announce the comment period and meeting logistics. Moreover, the City will engage stakeholders in community emergency planning.

16.6.2 Point of Contact

Comments or suggestions regarding this plan may be submitted at any time to Jennifer Ponce, Emergency Services Coordinator.

Contact information: jennifer.ponce@morganhill.ca.gov, 408.776.7310

16.7 CITY OF MORGAN HILL APPENDIX

16.7.1 Morgan Hill Attachment 1: Morgan Hill Strategies 2010

The City of Morgan Hill participated in ABAG's revision of the regional strategies for development of this annex. Appendix G of Taming Natural Hazards presents a summary list of mitigation strategies with regional priorities and the hazards mitigated. The City ranked those strategies in a spreadsheet provided by ABAG. This is a summary of those rankings.

ENVI-a-11	Existing	Ongoing
ENVI-a-12	Existing Underfunded	
ENVI-a-13	Existing Underfunded	
ENVI-b-1	Existing	
ENVI-b-2	Existing	Ongoing
ENVI-b-3	Existing	Ongoing
ENVI-b-4	Existing	Ongoing
ENVI-b-5	Existing	Ongoing
ENVI-b-6	Existing	Ongoing
ENVI-b-7	Existing	Ongoing
ENVI-b-8	Existing	Ongoing
ENVI-b-9	Existing	Ongoing
ENVI-b-10	Existing	Ongoing
ENVI-b-11	Existing	Ongoing
ENVI-b-12	Existing	Ongoing
ENVI-b-13	Moderate	Ongoing
ENVI-c-1	NYC	Not done
ENVI-c-2	n/a	No agriculture
ENVI-c-3	n/a	No agriculture
GOVT-a-1	Existing	Done
GOVT-a-2	Existing	Ongoing
GOVT-a-3	Existing	
GOVT-a-4	Existing	Ongoing
GOVT-a-5	Existing	
GOVT-a-6	NYC	Not done
GOVT-a-7	NYC	Not done
GOVT-a-8	NYC	Anderson Dam-SCVWD owned
GOVT-a-9	Existing	Ongoing
GOVT-a-10	Existing	
GOVT-a-11	Existing	
GOVT-a-12	Existing	
GOVT-a-13	Existing	
GOVT-b-1	Existing	
GOVT-b-2	Existing Underfunded	
GOVT-b-3	Existing	
GOVT-b-4	Existing Underfunded	City's EOP, no COOP
GOVT-b-5	Existing Underfunded	
GOVT-c-1	Existing	
GOVT-c-2	Existing	
GOVT-c-3	Existing	N/A
GOVT-c-4	Existing	
GOVT-c-5	Existing	
GOVT-c-6	Existing Underfunded	
GOVT-c-7	Existing Underfunded	
GOVT-c-8	Existing Underfunded	
GOVT-c-9	Existing Underfunded	
GOVT-c-10	Existing Underfunded	
GOVT-c-11	Existing Underfunded	

GOVT-c-12	Existing		
GOVT-c-13	Existing		
GOVT-c-14	Existing		Alert SCC
GOVT-c-15	Existing		Ongoing
GOVT-c-16	Existing		
GOVT-c-17	Existing		
GOVT-c-18	Existing		
GOVT-c-19	Existing		Ongoing
GOVT-c-20	NYC		Not done
GOVT-c-21	NYC		Not done
GOVT-c-22	Moderate		Ongoing
GOVT-c-23	Moderate		Ongoing
GOVT-c-24	Moderate		Ongoing
GOVT-c-25	Existing Underfunded		
GOVT-d-1	Existing		
GOVT-d-2	Existing		
GOVT-d-3	Existing		Ongoing
GOVT-d-4	Existing		
GOVT-d-5	Existing		
GOVT-d-6	Existing		Ongoing
GOVT-d-7	Existing		
GOVT-d-8	Existing		
GOVT-d-9	Existing Underfunded		
GOVT-d-10	Existing		
GOVT-e-1	n/a	ABAG	N/A
GOVT-e-2	n/a	ABAG	N/A
HEAL-a-1	NYC		Rely on Public Health
HEAL-a-2	NYC		Not done
HEAL-a-3	NYC		Not done
HEAL-a-4	NYC		Not done
HEAL-a-5	NYC		Not done
HEAL-a-6	NYC		Not done
HEAL-a-7	n/a		Minimal education efforts ongoing
HEAL-b-1	NYC		Not done
HEAL-b-2	NYC		Not done
HEAL-b-3	n/a		Minimal education efforts ongoing
HEAL-c-1	Moderate		Planning along with Public Health
HEAL-c-2	NYC		San Jose close in proximity but have not become familiar with MMRS.
HEAL-c-3	NYC		Not aware
HEAL-c-4	NYC		Not aware
HEAL-c-5	Moderate		Ongoing
HEAL-c-6	NYC		Planning along with Public Health
HSNG-a-1	Existing		
HSNG-a-2	Existing		Ongoing
HSNG-a-3	Existing		
HSNG-a-4	Existing		In place
HSNG-b-1	Existing		Done

HSNG-b-2	Existing			
HSNG-b-3	Existing			
HSNG-b-4	Existing			
HSNG-b-5	Existing			
HSNG-b-6	NYC			Not done
HSNG-b-7	NYC			Not done
HSNG-b-8	NYC			Not done
HSNG-b-9	NYC			Not done
HSNG-c-1	Existing			
HSNG-c-2	Existing			
HSNG-c-3	Moderate			Ongoing
HSNG-c-4	NYC			Not done
HSNG-c-5	NYC			Not done
HSNG-c-6	NYC			Not done
HSNG-c-7	NYC			Not done
HSNG-c-8	Existing			Not done
HSNG-c-9	Existing			Ongoing
HSNG-d-1	Existing			
HSNG-d-2	Existing			Ongoing
HSNG-d-3	Existing	Underfunded	Building and Housing	
HSNG-d-4	Existing		Building and Housing	
HSNG-e-1	Existing	Underfunded	Building and Housing	
HSNG-e-2	Existing			Ongoing
HSNG-e-3	Existing			
HSNG-e-4	Existing			Ongoing
HSNG-f-1	Existing			
HSNG-f-2	Existing			
HSNG-g-1	Existing			
HSNG-g-2	Existing			
HSNG-g-3	Existing			
HSNG-g-4	Existing			Ongoing
HSNG-g-5	Existing			
HSNG-g-6	Existing			
HSNG-g-7	Existing			
HSNG-g-8	Existing			Ongoing
HSNG-g-9	Existing			Ongoing
HSNG-g-10	NYC			Not done
HSNG-g-11	Existing			Ongoing
HSNG-g-12	Existing			
HSNG-g-13	Existing			
HSNG-g-14	Existing			
HSNG-g-15	Existing			
HSNG-g-16	Existing			
HSNG-g-17	Existing	Underfunded	Building and Housing	
HSNG-g-18	Existing			
HSNG-g-19	Existing			Ongoing
HSNG-g-20	NYC			Not done
HSNG-h-1	Existing			

HSNG-h-2	Existing		
HSNG-h-3	Existing		
HSNG-h-4	Existing		
HSNG-h-5	Existing		
HSNG-h-6	Existing		
HSNG-h-7	Existing		
HSNG-h-8	Existing		
HSNG-h-9	NYC		Not done
HSNG-h-10	NYC		Not done
HSNG-i-1	Existing		
HSNG-i-2	Existing		
HSNG-j-1	Existing		
HSNG-j-2	Existing		Done
HSNG-k-1	NYC		Not done
HSNG-k-2	Existing		Ongoing public education
HSNG-k-3	Existing		Ongoing public education
HSNG-k-4	Existing		Ongoing public education
HSNG-k-5	Under Study		Discussing implementation
HSNG-k-6	Existing		Effective CERT program in place
HSNG-k-7	NYC		Not done
HSNG-k-8	Under Study		Began program this spring (09)
HSNG-k-9	Existing		Ongoing public education
HSNG-k-10	Existing		
HSNG-k-11	NYC		Not done
HSNG-k-12	Existing		
HSNG-k-13	NYC		Not done
HSNG-k-14	NYC		Not done
HSNG-k-15	n/a	City does not border shoreline	N/A
HSNG-k-16	Under Study		Future implementation; cost/time contraints
INFR-a-1	Existing Underfunded	Public Works	
INFR-a-2	Existing		
INFR-a-3	Existing		
INFR-a-4	Existing Underfunded		
INFR-a-5	Existing Underfunded		No funding
INFR-a-6	Existing		
INFR-a-7	Existing		
INFR-a-8	Existing Underfunded		
INFR-a-9	Existing Underfunded		
INFR-a-10	NYC		Not done
INFR-a-11	Existing		In place
INFR-a-12	Existing Underfunded		
INFR-a-13	n/a		Donâ€™t own a dam.
INFR-a-14	Existing		
INFR-a-15	Existing		
INFR-a-16	Existing		In place
INFR-a-17	n/a	MTC	
INFR-a-18	Existing		In place

INFR-a-19	Existing		
INFR-a-20	Existing		In place
INFR-a-21	Existing		Back up identified with redundant comm systems
INFR-a-22	NYC		Not currently monitoring.
INFR-b-1	Existing		In place
INFR-b-2	n/a		not applicable for a city that doesn't own transportation infrastructure
INFR-b-3	Existing		
INFR-b-4	n/a		City does not own pipelines
INFR-b-5	Existing Underfunded		
INFR-b-6	Existing		Done and ongoing as needed
INFR-b-7	n/a		City does not own bridges
INFR-b-8	Existing		
INFR-b-9	Existing		
INFR-b-10	n/a		N/A
INFR-c-1	Existing		In place
INFR-c-2	Existing	Fire and City	Collaborate between County fire and city
INFR-c-3	Existing		Ongoing. Public education offered
INFR-c-4	Existing		
INFR-c-5	Existing		
INFR-c-6	Existing		
INFR-c-7	Existing		
INFR-c-8	Existing		Ongoing
INFR-d-1	Existing		Ongoing
INFR-d-2	Existing		In place
INFR-d-3	Existing		Ongoing
INFR-d-4	High		Need funding
INFR-d-5	High		Need funding
INFR-d-6	Existing		Ongoing
INFR-d-7	Existing		Ongoing
INFR-d-8	Existing		Ongoing
INFR-d-9	Existing		Ongoing
INFR-d-10	Existing		Ongoing
INFR-d-11	n/a		City does not own bridges
INFR-d-12	n/a		City doesn't own levees
INFR-d-13	Existing		
INFR-d-14	Existing		In place
INFR-d-15	Existing		Ongoing
INFR-d-16	Existing		
INFR-d-17	Existing		Ongoing
INFR-d-18	Existing Underfunded	Planning	
INFR-e-1	Existing		
INFR-e-2	Existing		
INFR-f-1	Existing		
INFR-g-1	NYC		Not done
INFR-g-2	NYC		Not done
INFR-g-3	NYC		Not done
INFR-g-4	NYC		Not done

INFR-g-5	NYC	Not done
INFR-g-6	Existing	
INFR-g-7	NYC	Not done
LAND-a-1	Existing	
LAND-a-2	Existing	
LAND-a-3	Existing	
LAND-a-4	Existing	Ongoing
LAND-a-5	Existing	Ongoing
LAND-a-6	Existing	
LAND-a-7	Existing	
LAND-a-8	Existing	
LAND-b-1	Existing	
LAND-b-2	Existing	
LAND-c-1	Existing	
LAND-c-2	Existing	
LAND-c-3	Existing	
LAND-c-4	Existing	
LAND-c-5	Existing	Ongoing
LAND-c-6	Existing	Ongoing
LAND-d-1	Existing	
LAND-d-2	Existing	
LAND-d-3	Existing	
LAND-d-4	Existing	
LAND-d-5	Existing	
LAND-e-1	Existing	
LAND-e-2	Existing	
LAND-f-1	Existing	
LAND-f-2	Existing	Ongoing
LAND-f-3	Existing	Ongoing
LAND-f-4	Existing	Ongoing
LAND-f-5	Existing	
LAND-g-1	NYC	Not done

Source: Association of Bay Area Governments, 2009.

JURISDICTION: MorganHill

Strategy	Priority	Responsible Agency or Department	Comments
ECON-a-1	Existing		
ECON-a-2	Existing		Ongoing
ECON-b-1	Existing		
ECON-b-2	Existing		
ECON-b-3	Existing		Ongoing
ECON-b-4	Existing		Ongoing
ECON-b-5	Existing		Ongoing
ECON-b-6	Existing		Ongoing
ECON-b-7	Existing		Ongoing
ECON-b-8	Existing		Ongoing
ECON-b-9	Existing		Ongoing
ECON-c-1	Existing		
ECON-c-2	Existing		Ongoing
ECON-c-3	NYC		Not done
ECON-c-4	Existing		
ECON-d-1	Existing		Ongoing
ECON-d-2	Existing		
ECON-d-3	Existing		Done
ECON-e-1	Existing		
ECON-e-2	Existing		
ECON-e-3	Existing		
ECON-e-4	Existing		
ECON-e-5	Existing		
ECON-e-6	Existing		Ongoing
ECON-e-7	Existing		Ongoing
ECON-e-8	Existing		Ongoing
ECON-e-9	NYC		Not done
ECON-e-10	NYC		Not done
ECON-e-11	NYC		Not done
ECON-e-12	Existing		
ECON-e-13	Existing		Ongoing
ECON-f-1	Existing		
ECON-f-2	Existing		
ECON-f-3	Existing		
ECON-f-4	Existing		
ECON-f-5	Existing		
ECON-f-6	Existing		
ECON-f-7	Existing		
ECON-f-8	Existing		Ongoing
ECON-f-9	Existing		
ECON-g-1	Existing		
ECON-g-2	Existing		Ongoing
ECON-h-1	Existing		
ECON-h-2	Existing		
ECON-h-3	NYC		Not done

ECON-i-1	Existing	Ongoing
ECON-i-2	Existing	Ongoing
ECON-i-3	Existing	Ongoing
ECON-i-4	Existing	Ongoing
ECON-i-5	NYC	Not done
ECON-i-6	Existing	Ongoing
ECON-j-1	Moderate	Ongoing
ECON-j-2	Moderate	Ongoing
ECON-j-3	NYC	Not done
ECON-j-4	NYC	Not done
ECON-j-5	Existing	Active CERT program in place.
ECON-j-6	Existing	Ongoing
ECON-j-7	NYC	Not done
ECON-j-8	NYC	Not done
ECON-j-9	NYC	Not done
ECON-j-10	NYC	Not done
ECON-j-11	NYC	Not done
ECON-j-12	n/a	City does not border shoreline
ECON-j-13	NYC	Not done
EDUC-a-1	Existing Underfunded	
EDUC-a-2	NYC	Lies with schools
EDUC-a-3	NYC	Lies with schools
EDUC-a-4	Moderate	
EDUC-a-5	Moderate	
EDUC-a-6	NYC	Lies with schools
EDUC-b-1	Existing	
EDUC-b-2	Existing	
EDUC-b-3	Moderate	Ongoing
EDUC-c-1	NYC	Through County designated schools rep.
EDUC-c-2	NYC	Lies with schools
EDUC-c-3	NYC	Not done
EDUC-c-4	NYC	Not done
EDUC-c-5	NYC	Not done
EDUC-c-6	NYC	Lies with schools
EDUC-c-7	NYC	Lies with schools
EDUC-d-1	Moderate	Have used schools in an EOC activation to disseminate info.
EDUC-d-2	NYC	County schools rep-ongoing
ENVI-a-1	Existing	
ENVI-a-2	Existing	
ENVI-a-3	Existing	
ENVI-a-4	Existing	Done
ENVI-a-5	Existing	
ENVI-a-6	Existing	
ENVI-a-7	Existing	
ENVI-a-8	Existing	
ENVI-a-9	Existing	
ENVI-a-10	Existing	

16.7.2 Morgan Hill Attachment 2: Water Connection Newsletter and Llagas Creek Flood Protection Project

This Attachment includes information on the Llagas Creek Flood Protection Project and a newsletter that is disseminated to residents to provide flood education to the public.

HIGHLIGHTS

Llagas Creek Flood Protection Project

Project Goal

To provide flood protection for 1,100 homes, 500 businesses, and over 1,300 acres of agricultural land in southern Santa Clara County, to protect and improve water quality in the watershed, and to preserve and enhance the river's habitat, fish, and wildlife.

Fiscal Year 2011 Appropriation Request: Request appropriation add-on of $2 million

Description

- Llagas Creek flows through San Martin, Morgan Hill, and Gilroy.
- Measures include channel modifications and replacement of 35 road crossings.
- A 1-percent flood on Llagas Creek will affect more than 1,100 homes, 500 commercial and industrial buildings, and 1,300 agricultural acres. This results in more than $8 million in flood damages and average annual damages of $900,000 according to a 1982 Natural Resources Conservation Service (Service) study. Current value of damages would be far greater.

Demographics

- 104-square-mile watershed includes residential, commercial, and agricultural developments.
- Residential areas have experienced rapid growth.

Flooding History

- Flood damage sustained in 1937, 1955, 1958, 1962, 1963, 1969, 1982, 1986, 1996,1997, 1998, 2002, 2008, and 2009.
- No damage to Gilroy in 1997, 1998, 2008, or 2009 due to flood protection provided by completed sections of this project.
- Downtown Morgan Hill was again flooded on October 13, 2009. Storm waters entered Homes and Businesses, families were displaced, and roads closed. The same area had also been inundated in January 2008.

Status

- This project was initiated by the Service in 1954 and is approximately 60-percent complete, providing flood protection only to the Gilroy area.
- Environmentally compatible alternatives have been developed in response to community concerns in Morgan Hill. The project design is also being updated to protect and improve creek water quality and to preserve and enhance the creek's habitat, fish, and wildlife.
- The U.S. Army Corps of Engineers (Corps) was authorized under the Water Resources Development Act of 1999 to construct the final reaches of the Service project.
- In November 2000, Santa Clara County voters approved the Clean, Safe Creeks and Natural Flood Protection Program Parcel Tax that provides the local share for the federal project
- In November 2007, Congress passed the Water Resources Development Act of 2007 revising the estimated total project cost for the remaining reaches of the project to $105 million and directing the Corps to complete the construction of the project.
- On May 16, 2008, a press conference was held in downtown Morgan Hill to highlight the need for the project and for it to continue onto construction in the near future.
- On December 8, 2009, a community meeting was held in Morgan Hill to discuss the flooding that occurred in October 2009.
- As of June 30, 2009 (Santa Clara Valley Water District (District) fiscal year end), District has filed $33.54 million in reimbursement claims under the State of California Flood Control Subventions Program. $32.96 million has been received, leaving $577,000 in outstanding claims.
- Progress on project has been impacted by lack of federal funding in recent years.
- $242,000 was appropriated to the project by Congress in Fiscal Year 2010. District requested $2 million.

Funding Request

- An appropriation add-on of $2 million is requested in Fiscal Year 2011 for continued planning, design, and environmental updates.

OVERVIEW

Llagas Creek Flood Protection Project

The Natural Resources Conservation Service (Service) and the Santa Clara Valley Water District (District) completed a comprehensive restudy of the Llagas Creek floodplain in 1982. At that time, a environmental impact statement and report were completed and construction began. The project was sponsored locally by the District and the Loma Prieta Resource Conservation District. The Service provided assistance under the authority of the Watershed Protection and Flood Prevention Act, Public Law 83-566 (PL-566).

Encompassing a watershed of 104 square miles in southern Santa Clara County, when completed the Llagas Creek Flood Protection Project will protect residential, commercial, and agricultural areas in San Martin, and the cities of Morgan Hill and Gilroy.

Legal transfer of project authority from the Department of Agriculture to the Corps

Due to the steady decrease in annual appropriations for the PL-566 construction program since 1990, the Llagas Creek Project had not received adequate funding from U.S. Department of Agriculture to complete the PL-566 project.

In consideration of the lack of sufficient funds from the Department of Agriculture, the District worked with Congressional Representatives to transfer construction authority from the Department of Agriculture to the U.S. Army Corps of Engineers (Corps) under PL-566. The authorization for the Corps to assume construction of the PL-566 project was approved by Congress in the Water Resources Development Act of 1999 (Section 501).

Flooding History and Potential Damages

Floods in 1937, 1955, 1958, 1962, 1963, 1969, 1982, 1986, 1996, 1997, 1998, 2002, 2008, and 2009 damaged existing homes and businesses. The largest recorded flood, estimated to be a 33-year event, occurred in December 1955.

At the time of the 1982 report, an estimated 1,123 residential buildings, 64 mobile homes, 463 commercial establishments, and 24 industrial buildings were located in the flood-prone area. At that time, damages from a 1-percent or 100-year flood were estimated to be $8.5 million. Current value of damages would be far greater.

Flooding on Monterey Road in Morgan Hill on October 13, 2009.

Flood Fighting Efforts in Downtown Morgan Hill on October 13, 2009.

The floods of 1997 and 1998 affected many residences in the upper Llagas Creek area, with damages of $150,000 and $200,000 respectively (based on local estimates). Following the flood, a public meeting was held with over 100 community members in attendance. They expressed frustration with the project's incomplete status and the continuing slips in the project schedule.

On January 4, 2008, many residential and commercial areas of Morgan Hill experienced flooding depths ranging from a ½ foot up to 3 feet. In a 25-hour continuous period, Morgan Hill received 4.25 inches of rainfall. Local officials declared an emergency and opened their Emergency Operations Center to deal with the widespread flooding.

On October 13, 2009, the same area flooded again. Over a 15 hour period, six inches of rain fell causing Llagas Creek to flood out of its channel in downtown Morgan Hill. Homes, businesses, and an apartment complex were flooded resulting in the evacuation of 30 residents and the complete shutdown of several downtown businesses for days. The flood waters also infiltrated a sewer trunk line causing it to overflow resulting in a hazardous material response. Additionally, during the flood five roads were closed. Morgan Hill has estimated it incurred $200,000 in storm related costs.

Project Description

The flood protection project includes modifying and constructing a channel that provides 1-percent flood protection capacity for 7 miles and between 5-10 percent flood protection for the remaining 9.6 miles. An earth diversion channel is included, allowing a portion of the original channel to remain in its natural state. Completion of the project would protect 946 acres of urban land and 1,280 acres of agricultural land from flooding during a 1-percent event.

The project includes replacement of 35 road crossings (bridges and box culverts) and the planting of native trees and shrubs. Installation of fish ladders, plunge pools, and low-flow channels will allow for the upstream migration of steelhead trout.

In the fall of 1994, the Service, under PL-566, completed construction of the Lower Llagas Creek (Reaches 1 – 3, and 9 – 13) and mitigation planting was carried out between 1994 and 1996. These completed facilities are now providing flood protection to the City of Gilroy. The District is working with the Corps to update the 1982 environmental assessment work and

engineering design for upper Llagas Creek (Reaches 4 – 8 and 14) serving the San Martin and Morgan Hill areas. The engineering design is being updated to protect and improve creek water quality and to preserve and enhance the creek's habitat, fish, and wildlife while satisfying current environmental and regulatory requirements.

Significant issues here include: the presence of additional endangered species such as red-legged frog and steelhead, the listing of the area as probable critical habitat for steelhead, and more extensive riparian habitat than were considered in 1982.

The portion that has yet to be built, from Buena Vista Avenue to 1,100 feet upstream of Wright Avenue, will incorporate several environmental improvements beyond that provided by the original Service project. These improvements include: 1) no new drop structures, 2) removal of aggressive invasive plant species and restoration of the channel with native species, 3) restoring the original channel around Silveira Lake improving steelhead habitat, and 4) using setback levees to minimize impacts to intact riparian areas.

Project Achievements and Schedule

Listed below are completed and scheduled Llagas Creek construction projects:

Lower Llagas Creek

■ Flood protection construction completed	1994
■ Reach 3 revegetation planting and establishment completed	1994-99

Upper Llagas Creek

■ Planning, Design, and Environmental Update	2000-11
■ Reaches 4, 5, 7A, and 14 Construction	2013-15
■ Reaches 6, 7B, and 8 Construction (San Martin, Downtown Morgan Hill)	2013-16

Periodically, public workshops have been held to solicit input from the community and provide project status reports. The District, Corps, and officials from the City of Morgan Hill meet on a quarterly basis to review project status and progress.

Flooding on Tennant Avenue in Morgan Hill on October 13, 2009.

On May 16, 2008, a press conference was held in downtown Morgan Hill to highlight the need for the project and for it to continue onto construction in the near future. The press conference was attended by Congressman Jerry McNerney, local flood victims, and officials from the City of Morgan Hill, Corps, and the District.

On December 8, 2009, a community meeting was held in Morgan Hill to discuss the flooding that occurred in October 2009. The meeting was attended by local officials, residents, the District, Corps, and a representative of Congressman Jerry McNerney. The meeting presented the facts of the storm and its effects, and future strategies. Officials heard from residents and businesses who expressed their frustration that adequate flood protection has not been achieved.

Local Efforts to Keep Project on Schedule

In 2004, the City of Morgan Hill and the District entered into a cost-sharing agreement to fund essential investigations to keep the project on schedule. The agreement funded a geotechnical investigation, hazardous materials investigation and a tree and riparian corridor assessment. The $680,000 cost was equally shared by the City of Morgan Hill and the District. At a later date, the parties expect to recover the monies spent from the federal government.

In September 2009, the City of Morgan Hill and the District entered into another cost sharing agreement to fund the preparation of designs, construction drawings, bid documentation, and environmental documents for the project. The City will contribute $3 million and the District will contribute $7 million. At a later date, the parties expect to recover the monies spent from the federal government. This commitment of $10 million in local funds underscores the urgency of the project to the community.

Funding

Total Project costs are currently estimated at $158 million (including non-federal costs of $74 million) for the Upper and Lower Llagas Creek (2004 values). To date, the District has spent more than $34 million on the Llagas Creek Project, acquiring over 500 property parcels with an area of more than 600 acres, building 24 bridges and box culverts, and a wastewater evaporation pond for Gilroy in exchange for project land. Federal contributions for project construction total over $19 million to date.

In November 2000, Santa Clara County voters approved the Clean, Safe Creeks and Natural Flood Protection Parcel Tax that provides the local share for the federal project.

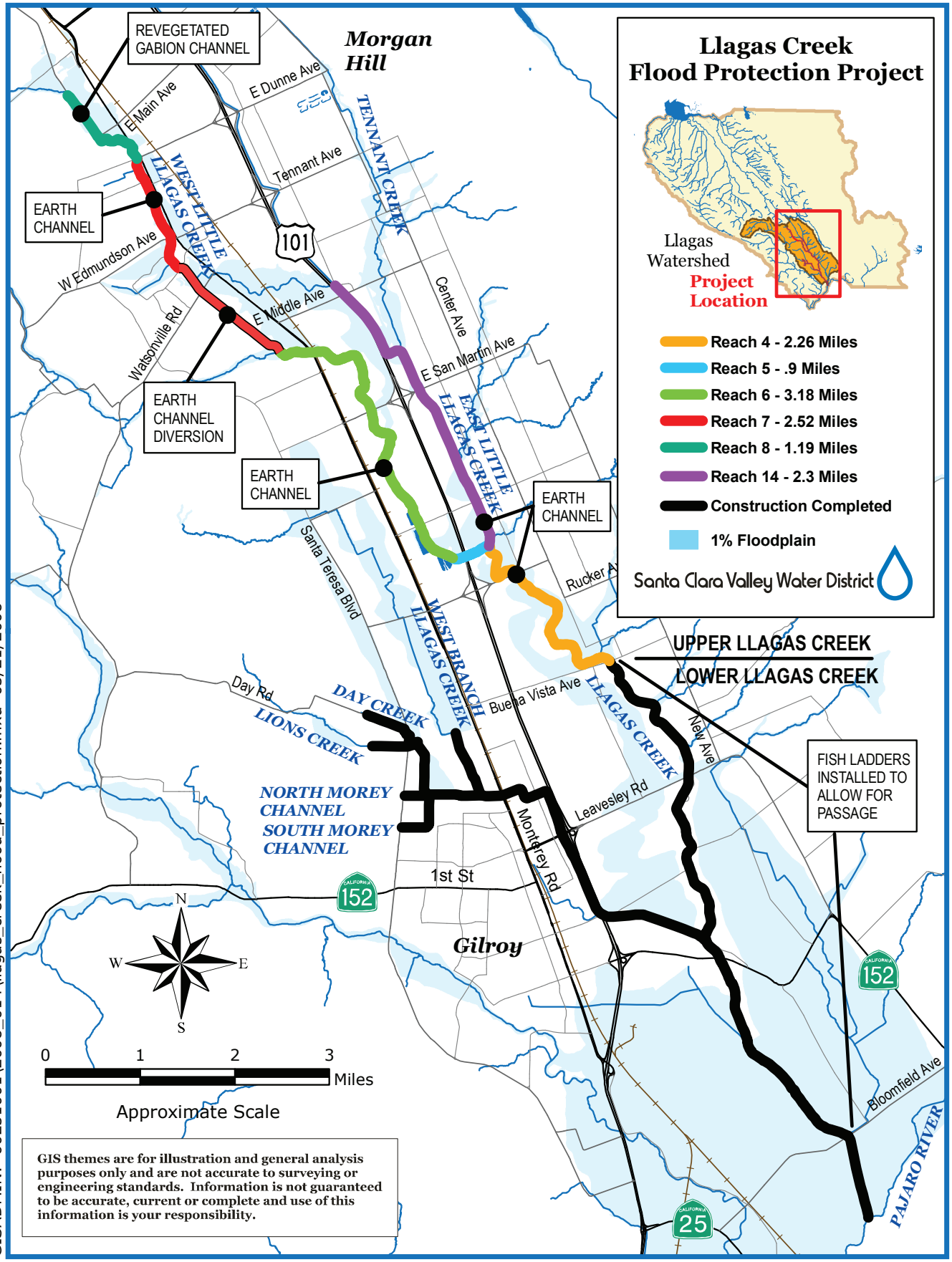
In November 2007, Congress passed the Water Resources Development Act of 2007 (WRDA) (Public Law 110-114, Section 3022) revising the estimated total project cost for the remaining reaches of the project to $105 million with a federal share of $65 million and a local share of $40 million. The WRDA language also directs the Corps to complete the construction of the project.

A request has been submitted to the Committee writing the next WRDA to delete some extraneous language from WRDA 2007 and to provide credit for local funds expended to keep the project moving forward.

As of June 30, 2009 (District fiscal year end), District has filed $33.54 million in reimbursement claims under the State of California Flood Control Subventions Program. $32.96 million has been received, leaving $577,000 in outstanding claims.

The State Subventions Program helps local sponsors of federal projects pay for their local shares.

The Fiscal Year 2011 appropriation request of $2 million for the Llagas Creek Flood Protection Project is necessary to ensure that the project schedule does not slip further. The District is working with the Corps to complete the design and construction of the remaining project reaches.


Llagas Creek
Flood Protection Project
Llagas
Watershed
Project
Location
Reach 4 - 2.26 Miles
Reach 5 - .9 Miles
Reach 6 - 3.18 Miles
Reach 7 - 2.52 Miles
Reach 8 - 1.19 Miles
Reach 14 - 2.3 Miles
Construction Completed
1% Floodplain
Santa Clara Valley Water District
Morgan Hill
Gilroy
REVEGETATED GABION CHANNEL
EARTH CHANNEL
EARTH CHANNEL DIVERSION
EARTH CHANNEL
EARTH CHANNEL
WEST LITTLE LLAGAS CREEK
EAST LITTLE LLAGAS CREEK
WEST BRANCH LLAGAS CREEK
TENNANT CREEK
DAY CREEK
LIONS CREEK
NORTH MOREY CHANNEL
SOUTH MOREY CHANNEL
LLAGAS CREEK
UPPER LLAGAS CREEK
LOWER LLAGAS CREEK
PAJARO RIVER
E Main Ave
E Dunne Ave
Tennant Ave
W Edmundson Ave
E Middle Ave
Watsonville Rd
Center Ave
E San Martin Ave
Santa Teresa Blvd
Rucker Ave
Day Rd
Buena Vista Ave
New Ave
Leavesley Rd
Monterey Rd
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Approximate Scale
GIS themes are for illustration and general analysis purposes only and are not accurate to surveying or engineering standards. Information is not guaranteed to be accurate, current or complete and use of this information is your responsibility.
GISADMIN: 60231001\2008_014\llagas_creek_flood_protection.mxd 03/21/2008

WATER CONNECTION

MAY 2010

No Dumping – Flows to Bay

When you take a shower or wash clothes in your home, the rinse water goes down the drain and into the sewer system to be treated. Outside your home, things are very different. Everything that flows into a storm drain goes untreated directly into our local creeks and ultimately into the ocean. Our nearby wildlife, plants, and of course humans are dependent upon these bodies of water for habitat, livelihood and recreation. Unfortunately, stormwater and runoff entering our watershed is often polluted by pesticides, fertilizers, litter, pet waste, motor oil, eroded soil, and household chemicals. To keep our local creeks healthy and clean, we can all follow these guidelines:

1. Never dump anything down a storm drain!

2. Minimize the impact of chemicals indoors and outdoors

   - Try nontoxic household cleaners and organic landscaping additives.
   - Use pesticides sparingly, according to directions, and not before it rains.
   - Regularly maintain your car to avoid leaks of auto fluids.
   - Use kitty litter or other absorbents to clean up spills and leaks on paved surfaces. Recycle your used oil.
   - Dispose of all other chemicals at a Household Hazardous Waste Collection Event or Disposal Site. Call 299-7300 for collection information.

3. Minimize water runoff from your property.

   - Make sure sprinklers don't water paved surfaces.
   - Adjust irrigation times to allow water to soak in. See www.valleywater.org for tips.
   - Wash your car on unpaved surfaces or at a commercial car wash.
   - Divert rain gutters away from paved surfaces.
   - Landscape areas next to sidewalks and driveways.

4. Prevent debris from getting into storm drains.

   - If you see trash, pick it up and put it in a trash can.
   - Sweep and dispose of debris in your garbage or yard waste container.
   - Pick up your pet droppings and dispose of them in the trash or in your toilet.
   - Plant or pave sloped areas of your property to control erosion.
   - Make sure storm drains are clear of debris, dirt, sand, silt, and wastes.

5. Report excessive runoff or direct pollution by calling 776-7333.

   - Dumping of chemicals, litter or sediment into storm drains is illegal.
   - The failure of sediment control mechanisms at construction sites is especially hazardous because large amounts of water-polluting soil can rapidly erode from construction sites. It is important to report evidence of soils washing away from construction sites.

WATER WASTE HOTLINE - 778-6480 MAIL BOX 481 FOR NON-EMERGENCY REPORTS ONLY

Saving 20 Gallons is Easy With These Water Conservation Tips

Just about everyone knows that water supplies are limited in California and Morgan Hill is no exception. Since we rely entirely on groundwater, there are limits on just how much we can pump out of the ground before the water table drops precipitously.

Thankfully, the Santa Clara Valley Water District offers a large number of programs that can help you save water….and save on your water bill at the same time. Check out these programs to see how you can save:

Water-Wise House Call Program

A free program where a surveyor will come to your home and offer suggestions on how to use water more efficiently both inside and outside your home.

Clothes Washer Rebate Program

Offers residents a rebate of $125-$200 for the purchase and installation of a qualifying new high- efficiency clothes washer.

High-Efficiency Toilet Rebate Program

Offers Santa Clara County residents a rebate of up to $125 for replacing toilets that use 3.5 gallons per flush or greater.

Free Low-Flow Shower-heads and More

Provides free low-flow shower-heads, faucet aerators, toilet flappers and dye tablets.

Water Softener Rebate Program

Offers a limited-time rebate of $150 on your purchase of a new water softener to replace your old water softener.

Replace High-Water Using Landscapes

Water-wise plants and/or permeable hard-scape can reduce irrigation water use up to 15-20% and can qualify for rebates of up to $2,000 through our Landscape Rebate Program.

Purchase and Install Efficient Irrigation Equipment

Landscape survey participants could receive rebates for implementation of survey recommendations through our Landscape Rebate Program.

Install Weather-Based Irrigation Controllers

These controllers use local weather conditions to calculate and adjust a site-specific irrigation schedule. They not only maximize water efficiency, they also qualify your business for rebates through our Landscape Rebate Program.

Small actions can add up to huge water savings. If everyone in your household saved 20 gallons a day, we'd save over 13 billion gallons a year in Santa Clara County alone.

Find more tips and tools at save20gallons.org or call 408.265.2607, ext 2554.

FLOOD REPORT

Flooding Within the City of Morgan Hill

This brochure is provided to acquaint you with the flood hazards in Morgan Hill and to give you some ideas of what you can do to protect yourself.

The October 13th 2009 storms reminded us how susceptible to flooding certain areas of the city remain.

Special Flood Hazard Areas (SFHAs): Certain areas have been designated by the Federal Emergency Management Agency (FEMA) as Special Flood Hazard Areas. Approximately one-twelfth of the City is within these flood zones (see flood map included herein). SFHAs are areas within the 100-year flood boundary as mapped by FEMA. A "100-year flood" refers to a flood level with a one percent or greater chance of being equaled or exceeded in any given year. There is a 26% chance that a structure located in a SFHA will be inundated by a 100-year flood during the life of a 30-year mortgage. In comparison, the risk of fire is approximately 5% in the same time period. Smaller floods have a greater chance of occurring in any given year and can still create a significant hazard to life and property.

In Morgan Hill, SFHAs are generally located near the following major creeks: Llagas, West Little Llagas, Edmundson, Foothill, Paradise, Tennant, Coyote, Maple and Corralitos. The Santa Clara Valley Water District (SCVWD) is responsible for improvements to and maintenance of these major creeks.

Local Flood Hazard: Flooding in our City is generally caused by the following: a creek overtopping its banks, clogged catch basin or storm drains, poor site drainage, and mud & debris laden flows from the hills above Morgan Hill. To find out the flood hazard of your property, or information on flood related questions, call the City Public Works Department - Engineering Division at 778-6480.

City Flood Service: If requested, the City staff will visit a property to review its flood problem(s) and explain ways to reduce flooding potential or help to prevent flood damage. Flood maps and flood protection references are also available at the Morgan Hill Public Library, located at 660 West Main Avenue, phone 779-3196.

For information on selecting a qualified architect, engineer, or contractor, including filing a complaint for unsatisfactory performance, call the City Community Development Department-Building Division at 778-6480.

Recent And Planned Improvements

The City of Morgan Hill and the Santa Clara Valley Water District (SCVWD) are working to reduce the risk of flooding. Substantial improvements to storm drain facilities that have already been completed in the last ten years:

- Nordstrom Park Detention Basin
- Church Street Storm Drain System Improvements
- Depot Storm Drain
- Sections of Butterfield Channel
- Farallon Drive Storm Drain
- Hill Road Storm Drain at E. Dunne Avenue

Projects scheduled within the next five years include:

- Upper Llagas Creek Improvements - PL566 (SCVWD & US Army Corps of Engineers)*
- Butterfield Detention Basin
- Dunne Avenue Storm Drain west of Hill Road

For more information on these projects, call the City Public Works Department-Engineering Division at 778-6480 or SCVWD at 265-2600.

*The City of Morgan Hill and SCVWD are jointly funding design of the Upper Llagas Creek Improvements - PL566 project. Additionally, the US Congress recently authorized this project; unfortunately, funding has not yet been appropriated.

Property Protection Measures

There are several ways to help protect property from flood hazards. The following examples may or may not be economically feasible or practical for every situation:

- Provide adequate drainage paths around structures on slopes.
- Elevate or relocate electrical panel boxes, furnaces, water heaters, and appliances to an area that is less likely to be flooded.
- Move essential items and valuables to the upper floors of your home if flooding is likely.
- Keep materials such as sandbags, plywood, and plastic sheeting handy for emergency waterproofing. Sandbags can be obtained at the City Corporation Yard, located at 100 Edes Court and at the El Toro Fire Station. located at 18300 Monterey Road. For other sandbag locations, call SCVWD at 265-2600, or visit their web site at www.heynoah.com.
- Anchor the structure to prevent flotation, collapse or lateral movement.
- Elevate homes so that the lowest floor is a minimum of one foot above the base flood (100 year) elevation.

For more information about how to help protect your property from floods or retrofitting techniques, call the City Public Works Department-Engineering Division at 778-6480 or visit the Morgan Hill Public Library, located at 660 West Main Avenue, phone 779-3196.

Flood Insurance

The National Flood Insurance Program (NFIP) makes flood insurance available to everyone in the City. Renters can also purchase flood insurance to cover their possessions. For information about flood insurance, call your insurance agent or the NFIP customer service line at (800) 638-6620.

Homes and businesses located within SFHAs are required to be covered under a flood insurance policy as a condition of federally funded loans or mortgages. The minimum standard flood insurance coverage required by the federal government for a SFHA property is the lesser of the following: 1) the outstanding mortgage balance on the structure, 2) the replacement cost of the structure, or 3) $250,000 for a residential structure, and $500,000 for industrial/commercial. This insurance coverage limit does not apply to property outside the SFHA.

Community Rating System (CRS): The NFIP created the Community Rating System (CRS) to promote flood awareness and reduce flood losses. The City of Morgan Hill has recently been accepted as a participant of this program. As a result, the residents of Morgan Hill who purchase flood insurance enjoy a 15% automatic reduction on their flood insurance premiums effective May 2003.

Elevation Certificate (EC): An Elevation Certificate (EC) provides elevation information necessary to determine the proper insurance premium rate. If your house is at or above the base flood elevation, you could receive a substantial discount on your flood insurance premium by providing an EC to your insurance agent.

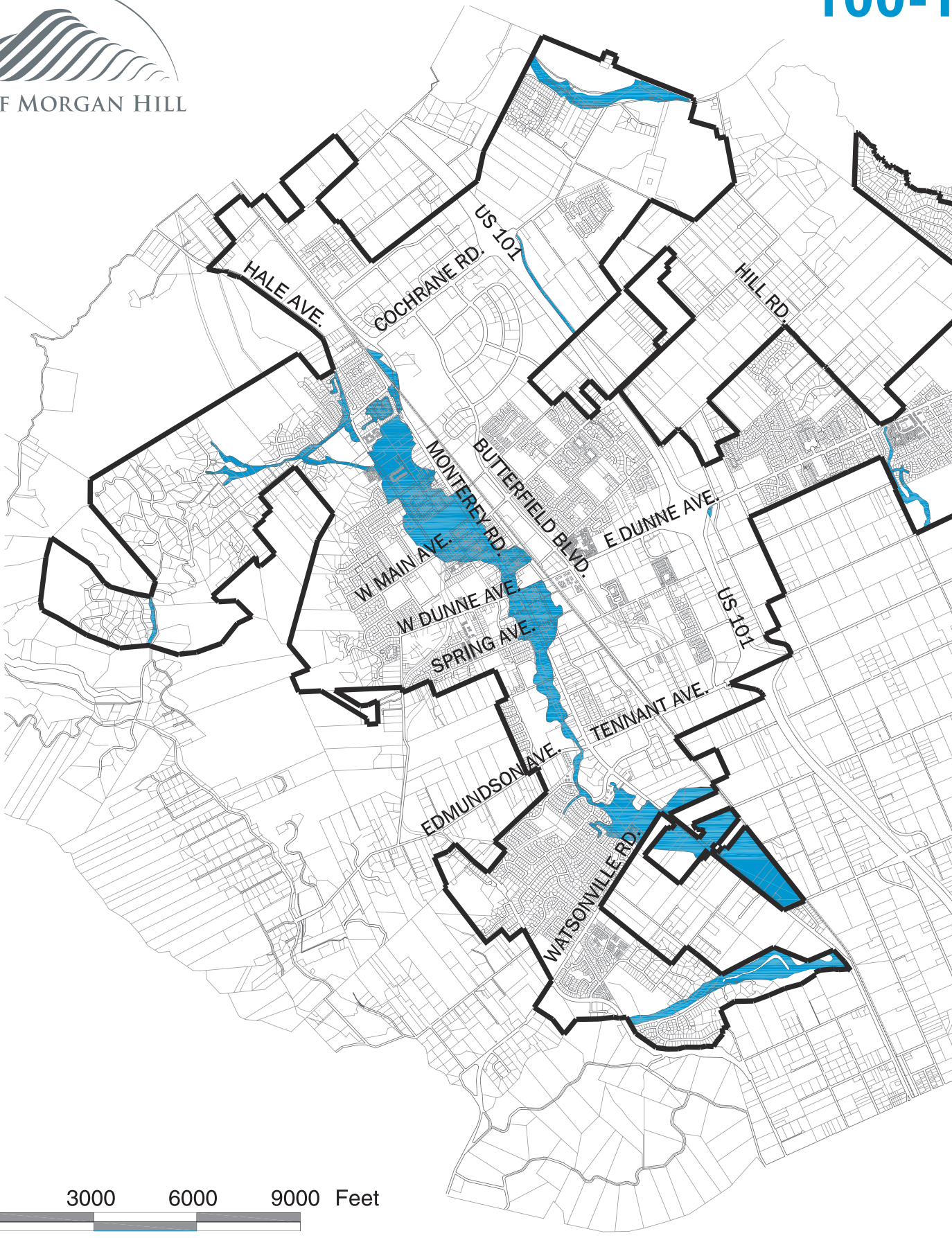
For properties in flood Zone AO, an EC can be filled out by the property owner or the owner's representative. For all other flood zones, the EC will have to be prepared by a licensed surveyor or engineer.

Copies of the form and instructions are available from the City Public Works Department-Engineering Division at 778-6480, the City Community Development Department-Building Division at 778-6480, or can be downloaded from FEMA's website at www.fema.gov/pdf/nfip/elvcert.pdf

The City of Morgan Hill maintains the Elevation Certificates of all new and substantially improved buildings in the SFHA. To obtain a copy of the certificates or for help in preparing one, call the City Public Works Department-Engineering Division at 778-6480, or the City Community Development Department-Building Division at 778-6480.

CITY OF MORGAN HILL

100-Y



Year Flood Zones

Drainage System Maintenance

Although the City and SCVWD regularly clean and maintain channels, dumping debris into storm drains creates problems for everyone. Such dumping not only results in an expense to taxpayers for cleanup, but also can restrict water flow and create flood hazards. The dumping of debris into the City's storm drainage channels is prohibited by Municipal Code. To report cases of illegal dumping in channels, dial 779-2101.

Flood Warnings

If flooding occurs, the City will warn citizens through radio, TV announcements, and emergency officials and vehicles.

- Know the flood warning procedures and plan escape routes to high ground
- Monitor the level of water in the street or flood control channel
- Stay tuned to your battery operated radio (AM 1610) or TV (Channel 17) for possible warnings
- Turn off water and electricity in your home during flood emergencies; turn off gas only if you smell gas
- Be especially cautious at night

For additional information on the City's flood warning and emergency response plan contact the City Office of Emergency Services, Police Department, 16200 Vineyard Boulevard 779-2101.

Floodplain Development Permit Requirements

Any development within the SFHA is subject to Federal and City floodplain management requirements. Always check with the Building Department before you build on, alter, regrade, or fill on your property. To report illegal floodplain development activity, call the City Community Development Department-Building Division at 778-6480.

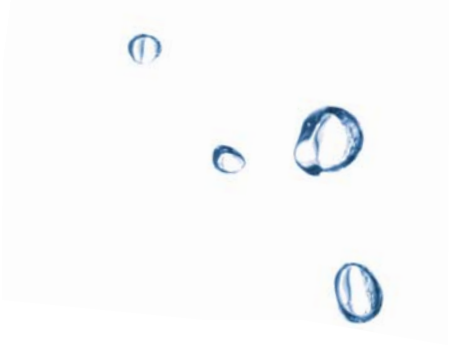
Floor Elevation: New buildings in the SFHA must have their lowest floor elevation (excluding garage) flood-proofed or raised a minimum of one foot above the base flood (100-year) elevation.

Substantial Improvement (SI): Substantially improved structures in the SFHA must meet the same floodplain construction requirements as new buildings. SI is defined as any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds forty-nine (49) percent of the fair market value of the structure before the start of the new construction. Improvements to any structure within the SFHA are cumulatively tracked for five years.

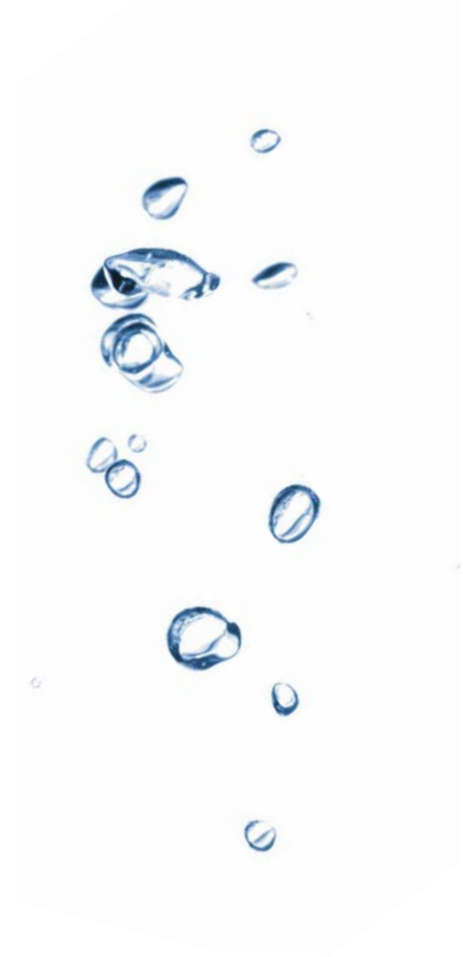
Substantial Damage (SD): Substantially damaged structures (a structure damaged so that the cost of repairs equals or exceeds 49% of the structure's value before it was damaged) in the SFHA must also meet the same floodplain construction requirements as new buildings. To find out more about these requirements, contact the City Public Works Department-Engineering Division at 778-6480, or the City Community Development Department-Building Division at 778-6480.

2009 Report to Consumers on

WATER QUALITY Consumer Confidence Report



Our Goal: Meet or Exceed Federal & State Regulations



The City of Morgan Hill is committed to providing the community a safe, reliable supply of excellent quality drinking water that meets or exceeds Federal and State regulations. Again in 2009 we met or exceeded every water quality standard without a single violation.

This report gives information about the quality of water provided in 2009. It describes where your water comes from, what it contains and how it compares to State standards.

This report contains information regarding testing for perchlorate levels in the City's water wells. Other perchlorate information can be found at www.valleywater.org on the Santa Clara Valley Water District's web site.

Share This Report

Landlords, businesses, schools, hospitals and other groups are encouraged to share this important water quality information with water users at their locations who are not billed customers of the City of Morgan Hill and therefore do not receive this report directly.

Este informe contiene informacion muy importante sobre su agua para beber. Traduzcalo, o hable con alguien que lo entienda bien.

This report contains important information about your community's water quality. If necessary, please have it translated, or speak with a friend who understands it well.

A Word About Chemicals and Organisms

Here is a brief description of chemicals and organisms, and how the City of Morgan Hill monitors, tests, and treats for them:

Methyl Tertiary-Butyl Ether (MTBE)

Added to gasoline either seasonally or year round in many parts of the United States to increase octane levels and reduce carbon monoxide and ozone levels in the air. In California, it has been added to gasoline since January 1996. The City of Morgan Hill has tested quarterly for MTBE in its 17 wells. No MTBE has been detected.

Lead and Copper Testing

In 1991, the EPA adopted the Lead and Copper Rule which requires all cities, including Morgan Hill, to perform lead and copper testing. The City's public water system does not have detectable levels of lead and copper; however these metals may leach into the water from home plumbing.

In June of 1997 the City completed Lead and Copper testing from inside homes under the guidance of the Department of Public Health. Results showed that the Copper levels were below the Federal Action Level of 1300 parts per billion (ppb), and the Lead levels were below the Federal Action Level of 15 parts per billion (ppb).

The City is on a three year cycle for testing of Lead and Copper determined by the primary testing performed at the first inception of the Lead and Copper Rule. The City has completed its 2009 tri-annual round of sampling and the sample results remain under Federal Action Levels for Lead and Copper. We will retest these levels again in 2012.

Nitrates

Nitrate in drinking water at levels above 45 mg/l is a health risk for infants below the age of six months. High nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in serious illness; symptoms include shortness of breath and blueness of the skin.

The City's Perchlorate Challenge

Perchlorate contamination of drinking water supplies in the South Valley, including water supplied by the City of Morgan Hill, has been an ongoing concern of City government and all local residents and businesses. Prior to the adoption of a maximum contaminant level "MCL" by the California Department of Public Health in October 2007, the City aggressively responded to the discovery of perchlorate in the South Valley aquifer by taking the following actions:

- Maintain a Perchlorate Removal systems on Tennant Well to provide residents with an adequate supply of quality drinking water;
- Testing City wells for the presence of perchlorate in excess of EPA or DPH requirements;
- Turning off or treating any City well that tests above six parts per billion (ppb) the adopted MCL;
- Cooperating with the Santa Clara Valley Water District, Regional Water Quality Control Board (SWRCB), and State Department of Public Health on approaches to addressing perchlorate; and,
- Pursuing recovery of the City's costs associated with perchlorate contamination.

Perchlorate Surcharge Imposed. On April 1, 2004, a 5% surcharge on water usage fees was applied to the water bills of every City water user to pay for perchlorate removal and the cost associated with resolving the perchlorate problem. The surcharge was increased to 10% in 2005, 15% in 2006, and reduced back to 10% in 2008 to meet the programs funding demand. On July 1, 2009, the perchlorate surcharge was reduced to 3%. Perchlorate surcharge revenues are accounted for separately and spent only on perchlorate-related costs.

The proposed 2010/11 operating budget requirements for perchlorate related costs are the same as in 2009/10. The draft 2010/11 Budget recommends the perchlorate surcharge of 3% remain in place to cover operating costs. The City continues its efforts to resolve the perchlorate issue and is making provision in the 2010/11 budget to respond to the upcoming year's challenges.

The need for future surcharges will be evaluated annually. In addition, any repayments the City receives from any source to compensate the City for perchlorate-related costs will be credited to the perchlorate account in the Water Fund and shall also be credited to customers if they are determined to be in excess of the City's perchlorate-related costs.

High nitrate levels may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. Nitrate levels may rise quickly in short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider, or choose to use bottled water for mixing formula and juice for your baby. If you are pregnant, you should drink bottled water.

The City's water supply is below the MCL for nitrates. In 2009, the City performed 306 nitrate analyses alone to ensure a safe water supply.

Unregulated Contaminants

The City proactively monitors for unregulated contaminants. This helps the EPA and the California Department of Public Health determine where certain contaminants occur, and whether the contaminants need to be regulated.

Perchlorate

On October 18, 2007, the California Department of Public Health (DPH) established the "maximum contaminant level" (MCL) for perchlorate at 6 parts-per-billion "ppb". DPH determined that at this level, there was minimal health risk to individuals drinking the water for a lifetime of use including at-risk populations such as pregnant women and infants. The City of Morgan Hill amended its perchlorate treatment rule to be consistent with the State DPH protocol in most instances. However, the City continues to take extra precautions that exceed EPA and DPH legal requirements with regards to monitoring perchlorate levels in certain wells. City wells that have detectable levels of perchlorate at the state detection limit range "DLR" are tested monthly for perchlorate contamination – well beyond the State testing requirement of quarterly in regulations. Also well beyond the State requirements, we test all city wells at least annually.

Radon

The City tested its source waters for radon on a quarterly basis in 2005. Radon is a radioactive gas found throughout the U.S. that you can't see, taste, or smell. It can move up through ground and into a home through cracks and holes in the foundation, and can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities.

Compared to Radon entering the home through the soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause an increased risk of stomach cancer.

If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is four picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that aren't too costly. For additional information, call your State radon program, or call EPA's Radon Hotline (800-SOS-RADON).

Radioactive Contamination

These contaminants can be naturally occurring or may be the result of oil and gas production and mining activities.

Water Sources

Morgan Hill is located in South Santa Clara County, situated between the Coyote and Llagas underground aquifers. These aquifers are the source of Morgan Hill's water supply.

The City currently operates 17 deep water wells throughout the city. In 2009, these wells supplied 2,488 million gallons of water to approximately 12,000 Morgan Hill homes and businesses. The water produced by these wells is disinfected with chlorine to protect against microbial contaminants.

An assessment of the drinking water sources for the City of Morgan Hill was completed in September of 2002. The groundwater source is considered to be most vulnerable to the following activities associated with contaminants detected in groundwater: animal feeding operations, low density septic systems, irrigated crops, grazing and animal operations, agricultural/irrigation wells and animal feeding operations (occurrence of nitrate in groundwater).

In addition, the groundwater source is considered most vulnerable to these activities for which no associated contaminant has been detected: gas stations, dry cleaners, animal feeding operations, repair shops, sewer collections systems and pesticide/fertilizer/petroleum storage.

A copy of the complete assessment is available at the Department of Public Health, Drinking Water Field Operations Branch at 850 Marina Bay Parkway, Bldg. P, 2nd Floor, Room 458, Richmond, California, and the City of Morgan Hill Public Works Department at 100 Edes Court.

Water Quality Data

The table in this report lists all the drinking water contaminants detected during the test cycle up to December 31, 2009.

To ensure that tap water is safe to drink, the California Department of Public Health (DPH) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Morgan Hill's water is treated in accordance with the Department's regulations.

The DHS Food and Drug Branch regulations establish limits for contaminants in bottled water; these limits provide the same protection for the public water supply. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk.

Unless otherwise noted, the data presented in this table is from testing done over the period January 1-December 31, 2009. The State allows the City to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Thus, some of the data – though representative of the water quality – is more than a year old.

Water Sampling and Testing

The annual water sampling required by the State Department of Public Health consists of Bacteria (758 samples), Nitrate (192 samples), Turbidity (52 samples), Trihalomethenes (64 samples), and (HAA5) Halocetic Acids (64 samples), for a total of 1,130 samples from the 40 separate sample stations and source facilities located throughout

TERMS & ABBREVIATIONS USED IN THE DATA TABLES

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U. S. Environmental Protection Agency

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to PHGs or MCLGs as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the U.S. Environmental Protection Agency.

Regulatory Action Level (AL): The concentration of a contaminant which, when exceeded, triggers treatment or other requirements that a water system must follow

- **n/a**: not applicable
- **ns**: no standard
- **nd**: not detectable at testing limit
- **cu**: Color Unit (a measure of color in water)
- **ppb**: parts per billion or micrograms per liter
- **ug/L**: micrograms per liter
- **ppm**: parts per million or milligrams per liter
- **mg/L**: milligrams per liter
- **pCi/l**: picocuries per liter (a measure of radiation)
- **MFL**: Million Fibers per Liter, with a fiber length greater than 10 micrometers
- **grains per gallon**: the measure of the concentration of a solution.
- **TON**: Threshold Odor Number (a measure of the odor associated with water)
- **umhos/cm**: the measure of the dissolved inorganic salt content
- **<**: less than

Contaminants that may be present in source water before we treat it.

- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- **Inorganic contaminants**, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- **Pesticides and herbicides**, which may come from a variety of sources such as agricultural and residential uses.
- **Radioactive contaminants**, which are naturally occurring.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroction, and can also come from gas stations, urban runoff & septic systems.

Water Quality Statement

For the calendar year 2008, your tap water met all U.S. Environmental Protection Agency (USEPA) and state drinking water health standards. The City of Morgan Hill vigilantly safeguards your water supply, and once again we are proud to report that the City's system has not violated any California Department of Health Standards.

PARAMETER	DATE TESTED	UNITS	MCL	PHG (MCLG) [MRDL(	GROUNDWATER RANGE OF DETECTION			TYPICAL SOURCE OF CONTAMINANT	EXCEEDED MCL?
					LOW	HIGH	AVG.		
PRIMARY STANDARDS - MANDATED HEALTH RELATED STANDARDS									
CLARITY									
TURBIDITY	2009	NTU	5	N/A	ND	.75	0.15	SOIL RUNOFF	NO
DISINFECTANTS/DISINFECTION BY-PRODUCTS RULE									
TOTAL TRIHALOMETHANES	QUARTERLY 2009	ppb	80	N/A	ND	2	1.8	BY-PRODUCT OF DRINKING WATER CHLORINATION	NO
HALOCETIC ACIDS (HAA5)	QUARTERLY 2009	ppb	60	N/A	ND	.4	0.1	BY-PRODUCT OF DRINKING WATER DISINFECTION	NO
CHLORINE RESIDUAL	QUARTERLY 2009	ppm	4.0	[4.0]	0.28	0.34	0.32	DRINKING WATER DISINFECTANT ADDED FOR TREATMENT	NO
INORGANIC CHEMICALS									
ASBESTOS	2004	MFL	7	(7)	ND	0.32	0.02	INTERNAL CORROSION OF ASBESTOS CEMENT WATER MAINS; EROSION OF NATURAL DEPOSITS	NO
BARIUM	2007	mg/l	1	(2)	0.05	0.14	0.08	DISCHARGES OF OIL DRILLING WASTES AND FROM METAL REFINERIES; EROSION OF NATURAL DEPOSITS	NO
FLUORIDE	2007	mg/l	2	1	ND	ND	ND	EROSION OF NATURAL DEPOSITS; WATER ADDITIVE THAT PROMOTES STRONG TEETH; DISCHARGE FROM FERTILIZER AND ALUMINUM FACTORIES	NO
NITRATE (as NO3)	2009	mg/L	45	45	8	34	22	RUNOFF AND LEACHING FROM FERTILIZER USE; LEACHING FROM SEPTIC TANKS AND SEWAGE; EROSION OF NATURAL DEPOSITS	NO
PERCHLORATE	MONTHLY 2009	ppb	6	6	ND	5.2	ND	MANUFACTURING USE OF LUBRICATING OILS, FABRICS, DYES, RUBBER, PAINTS, FIREWORKS, AND CERTAIN FERTILIZERS	NO
RADIOACTIVE CONTAMINANTS									
GROSS ALPHA ACTIVITY	QUARTERLY 2009	pCi/1	15	N/A	ND	2	1.2	EROSION OF NATURAL DEPOSITS	NO
RADIUM 228	QUARTERLY 9005	pCi/1	5	0.19	ND	0.13	0302	NATURALLY OCCURING - FORMED BY DECAY OF PRIMORDIAL RADIONUCLIEDES IN EARTH'S CRUST	NO
SECONDARY STANDARDS - AESTHETIC STANDARDS									
CHLORIDE	2007	mg/L	500	N/A	28	69	47	RUNOFF/LEACHING FROM NATURAL DEPOSITS; SEAWATER INFLUENCE	NO
SULFATE	2007	mg/L	500	N/A	28	47	38.4	RUNOFF/LEACHING FROM NATURAL DEPOSITS; INDUSTRIAL WASTES	NO
TOTAL DISSOLVED SOLIDS	2007	mg/L	1000	N/A	280	580	367	RUNOFF/LEACHING FROM NATURAL DEPOSITS	NO
IRON	2007	ug/L	300	N/A	ND	140	15.6	LEACHING FROM NATURAL DEPOSITS; INDUSTRIAL WASTES	NO
SPECIFIC CONDUCTANCE (E.C.)	2007	umho/cm	1,600	N/A	490	700	585	SUBSTANCES THAT FORM IONS WHEN IN WATER; SEA WATER INFLUENCES	NO
COLOR	2007	C	15	N/A	ND	12	3.5	NATURALLY-OCCURING ORGANIC MATERIALS	NO
ODOR-THRESHOLD	2007	TON	3	N/A	ND	ND	ND	NATURALLY-OCCURING ORGANIC MATERIALS	NO
SODIUM	2007	ppm	NS	N/A	18	36	27	"SODIUM" REFERS TO THE SALT PRESENT IN THE WATER AND IS GENERALLY NATURALLY-OCCURRING	NS
LIST OF ADDITIONAL CONSTITUENTS ANALYZED									
pH	2007	unit	NS		7.2	7.6	7.4	RUNOFF/LEACHING FROM NATURAL DEPOSITS	NS
HARDNESS	2007	ppm	NS		200	300	240	RUNOFF/LEACHING FROM NATURAL DEPOSITS	NS
HARDNESS	2007	GRAINS/GAL	NS		12	18	14	RUNOFF/LEACHING FROM NATURAL DEPOSITS	NS

PARAMETER								
LEAD AND COPPER	DATE TESTED	UNITS	ACTION LEVEL	PHG (MCLG)	NUMBER OF SITES SAMPLED	HOUSEHOLD RESULTS 90th PERCENTILE	TYPICAL SOURCE OF CONTAMINATION	ACTION LEVEL EXCEEDED?
LEAD	Sept 2009	ppb	15	2	30	2.4 ppb	CORROSION OF HOUSEHOLD PLUMBING SYSTEMS	NO
COPPER	Sept 2009	ppm	1.3	0.3	30	0.36 ppm	CORROSION OF HOUSEHOLD PLUMBING SYSTEMS	NO

PARAMETER									
UNREGULATED CHEMICALS	DATE TESTED	UNITS	NOTIFICATION LEVEL	PHG (MCLG)	GROUNDWATER RANGE OF DETECTION			TYPICAL SOURCE OF CONTAMINATION	NOTIFICA-TION LEVEL EXCEEDED?
					LOW	HIGH	AVG.		
RADON	2000	pCi/L	0	NS	459	828	597		NS
CHROMIUM VI	2002	ppb	NS	NS	ND	4.0	1.8		NS
VANADIUM	2003	ppb	50	NS	ND	6.0	1.0		NO
BORON	2003	ppb	1,000	NS	ND	100	32		NO

Additional information about the content of this report (and additional copies) can be obtained by calling the Public Works Department at 776-7333.

City of Morgan Hill
17555 Peak Avenue
Morgan Hill, CA 95037

RESIDENTIAL CUSTOMER
MORGAN HILL, CA

the City's water distribution system.

Other Information

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at-risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Water System Improvements

The City's water system consists of 17 production wells, 115 miles of water main, nine pumping stations, and 12 reservoirs. This complex, interrelated system requires 24-hour monitoring and an extensive program of ongoing maintenance. Additionally, a 5-year program of capital improvements must be constantly updated to plan and fund new capacity and the replacement of aging infrastructure. The past year was used to plan and design several projects that will be completed next fiscal year. These water system planned improvements include:

- Diana Well 1 Replacement project: Replace an old existing well to meet current specifications and reclaim lost production
- Glen Ayre Booster: Upgrade facility
- Water Main Replacement Project: Replace older water mains in the Downtown area to improve fire flow and water service reliability

Don't Be a Water Waster

- Adjust sprinklers so only your lawn is watered and not the house, sidewalk, or street.
- Run your clothes washer and dishwasher only when full. You can save up to 1,000 gallons a month.
- Monitor your water bill for unusually high use. Your bill and water meter are tools that can help you discover leaks.
- Water your lawn and garden in the morning or evening when temperatures are cooler.
- Use a broom instead of a hose to clean your driveway and sidewalk and save water every time.
- If water runs off your lawn easily, split your watering time into shorter periods for better absorption.
- Shorten your shower by a minute or two and you'll save up to 150 gallons per month.

These great ideas and more can be found on wateruseitwisely.com/100-ways-to-conserve/index.php

16.7.3 Morgan Hill Attachment 3: Repetitive Loss Property Letter

A letter sent to residents who live in repetitive loss areas that describes ways to mitigate flood and damages to their properties.

CITY OF MORGAN HILL

DEVELOPMENT SERVICES CENTER

17575 PEAK AVENUE MORGAN HILL, CA 95037-4128 (408) 778-6480 FAX (408) 779-7236
WEBSITE ADDRESS: WWW.MORGAN-HILL.CA.GOV

September 9, 2010

Resident
18550 Hale Avenue
Morgan Hill, CA 95037

Dear Resident:

You have received this letter because your property is in an area that has been flooded several times. As you may know, the West Little Llagas Creek begins in the hills northwest of our City. The creek meanders it's way south through the downtown. In many areas, the creek has constrictions which prevent stormwater runoff from flowing easily. As a result, during larger storm events the creek will overtop it's banks causing localized flooding every few years.

The City of Morgan Hill is concerned about repetitive flooding and has an active program to help you protect yourself and your property from future flooding. We are working with the Santa Clara Valley Water District (SCVWD) to encourage the Federal Government to appropriate the necessary funding for construction to increase the floodwater carrying capacity of the creek through our City. This project, known as the *Upper Llagas Flood Control Project*, has been planned for over 40 years and is being handled by the Army Corps of Engineers. The current schedule is to begin construction in 2015 if funding is appropriated. Unfortunately, the City cannot predict when Congress will finally fund the project.

Meanwhile, here are some things you can do:

1. Check with the Public Works Department (778-6480) on the extent of past flooding in your area. Department staff can tell you about the causes of repetitive flooding, what the City is doing about it, and what would be an appropriate flood protection level. City staff can visit your property to discuss flood protection alternatives.
2. Prepare for flooding by doing the following:
    a. Know the flood safety guidelines included in this letter.
    b. Know how to shut off the electricity and gas to your house when a flood comes.
    c. Make a list of emergency numbers and identify a safe place to go to.
    d. Make a household inventory, especially of basement contents.
    e. Put insurance policies, valuable papers, medicine, etc. in a safe place.
    f. Collect and put cleaning supplies, camera waterproof boots, etc. in a handy place.
    g. Develop a disaster response plan — See the Red Cross' website: www.redcross.org/services/disaster for a copy of the brochure "Your Family Disaster Plan."
    h. Get a copy of "Repairing Your Flooded Home." We have copies at the Public Works Department or it can be found on the 'Red Cross' website, too.
3. Consider some permanent flood protection measures as follows:
    a. Mark your fuse or breaker box to show the circuits to the floodable areas. Turning off the power to the basement can reduce property damage and save lives.

b. Consider elevating your house above flood levels. This was done when the City relocated the old church and reconstructed it to make the new Community Playhouse project at the corner of Monterey Road and 5th Street.
c. Check your building for water entry points. These can be basement windows, the basement stairwell, doors, and dryer vents. These can be protected with low walls or temporary shields.
d. Install a floor drain plug, standpipe, overhead sewer, or sewer backup valve to prevent sewer backup flooding.
e. More information can be found in *Homeowner's Guide to Retrofitting: Six Ways to Protect Your House from Flooding.* Copies are in the Morgan Hill Public Library or at www.fema.gov
    i. Note that some flood protection measures may need a building permit and others may not be safe for your type of building, so be sure to talk with the Public Works and Building Departments.

4. Talk to the Public Works Department for information on financial assistance.
    a. If you are interested in elevating your building above the flood level or selling it to the City, we can apply for a Federal grant to cover 75% of the cost.
    b. Get a flood insurance policy - it will help pay for repairs after a flood and, in some cases, it will help pay the costs of elevating a substantially damaged building.
5. Get a flood insurance policy
    a. Homeowner's insurance policies do not cover damage from floods. However, because Morgan Hill participates in the National Flood Insurance Program, you can purchase a separate flood insurance policy. This insurance is backed by the Federal government and is available to everyone, even properties that have been flooded. Because Morgan Hill participates in the Community Rating System, you will receive a reduction in the insurance premium.
    b. Some people have purchased flood insurance because it was required by the bank when they got a mortgage or home improvement loan. Usually these policies just cover the building's structure and not the contents. During the kind of flooding that happens in your area, there is usually more damage to the furniture and contents than there is to the structure. Be sure you have contents coverage.
    c. Don't wait for the next flood to buy insurance protection. In most cases, there is a 30-day waiting period before National Flood Insurance Program coverage takes effect.
    d. Contact your insurance agent for more information on rates and coverage.

Again, please do not hesitate to contact the Public Works Department at the above phone number if you should have any questions.

Sincerely,

Charlie Ha
Assistant Engineer

Cc: Karl Bjarke – Acting Director of Public Works, Floodplain Administrator
Dave Arkens – ISO

16.7.4 Morgan Hill Attachment 3: Morgan Hill Exposure Analysis

This list includes all information on Morgan Hill's critical facilities and identifies which of the City's critical facilities are located in the mapped hazard areas.

ID	Critical Facility	Address	Type	Occupancy	Own/Lease	Structure Type
1	CITY HALL	17555 PEAK AVENUE		N/A	own	Wood-frame building > 5,000 SQFT
2	GENERATOR	17555 PEAK AVENUE		N/A	own	N/A
3	GENERATOR BLDG	17555 PEAK AVENUE		N/A	own	Light wood-frame building <= 5,000 SQFT
4	MODULAR #2-W OF CH	17555 PEAK AVENUE		N/A	own	Manhole
5	STORAGE BLDG	17555 PEAK AVENUE		N/A	own	Light wood-frame building <= 5,000 SQFT
6	EL TORO YOUTH CTR	17620 CREST AVENUE		N/A	own	Light wood-frame building <= 5,000 SQFT
7	FRIENDLY INN CENT.	17666 CREST AVENUE		N/A	own	Light wood-frame building <= 5,000 SQFT
8	FRIENDLY INN YMCA	17666 CREST AVENUE		N/A	own	Wood-frame building > 5,000 SQFT
9	MUSEUM	MONTEREY ROAD		N/A	own	Light wood-frame building <= 5,000 SQFT
10	PEAK & MAIN Bstr Stn	500 W. MAIN AV.	utility	N/A	own	Water pumping plant/station
11	MAIN AVENUE WELL #1	470 E. MAIN	utility	N/A	own	Water well
12	LIFT STATION H	320 LLAGAS RD.	utility	N/A	own	Waste water lift station
13	NOB HILL Reservoir	102 W. THIRD ST.	utility	N/A	own	Water storage tank -on ground, steel unanchored
14	GLEN AYRE Reservoir	18835 GLEN AYRE DR.	utility	N/A	own	Water storage tank -on ground, steel unanchored
15	GLEN AYRE Bstr Stn	1565 LLAGAS RD.	utility	N/A	own	Water pumping plant/station
16	BOYS RANCH #2 Reservoir	19040 MALAGUERRA AV.	utility	N/A	N/A	N/A
17	BOYS RANCH #3 Reservoir	19040 MALAGUERRA AV.	utility	N/A	N/A	N/A
18	BOYS RANCH WELL #1	1004 BURNETT AV.	utility	N/A	own	Water well
19	BOYS RANCH WELL #2	1000 BURNETT AV.	utility	N/A	own	Water well
20	BOYS RANCH WELL #3	1002 BURNETT AV	utility	N/A	own	Water well
21	TENNANT AVENUE WELL	390 TENNANT AV.	utility	N/A	N/A	N/A
22	WELL HOUSE	BUTTERFIELD WELL		N/A	own	Reinforced masonry with rigid floor and roof
23	WELL HOUSE	SAN PEDRO WELL		N/A	own	Reinforced masonry with rigid floor and roof
24	WOODLAND ACRES Reservoir	2275 ROLLING HILLS DR.	utility	N/A	own	Water storage tank -on ground, steel unanchored
25	WOODLAND Bstr Stn	2075 ROLLING HILLS DR.	utility	N/A	N/A	N/A
26	EDMUNSON Reservoir	16490 DEWITT AV.	utility	N/A	own	Water storage tank -on ground, steel unanchored
27	LIFT STATION O	952 E. MIDDLE AV.	utility	N/A	own	Waste water lift station
28	LIFT STATION M	1162 LLAGAS RD.	utility	N/A	own	Waste water lift station
29	SPORTS FIELD/CONCESS BLDG	16500 CONDIT RD-OUTDOOR CTR		N/A	N/A	N/A
30	COMM CULTURAL CNTR	17000 MONTEREY ROAD		N/A	own	N/A
31	LIFT STATION F	17109 HOLIDAY DR.	utility	N/A	own	Waste water lift station
32	LIFT STATION D	17110-B SHADY LANE DR.	utility	N/A	own	Waste water lift station
33	JACKSON OAKS HYDRO PNEUMATIC Reservoir	JACKSON OAKS HYDRO PNEUMATIC	utility	N/A	own	Water storage tank -on ground, steel unanchored
34	JACKSON OAKS HYDROMATIC	16360 OAK CANYON DR.	utility	N/A	own	Water pumping plant/station
35	LIFT STATION K	3300 E. DUNNE AV.	utility	N/A	own	Waste water lift station
36	JACKSON OAKS Bstr Stn	3482 WHITE OAK CT.	utility	N/A	N/A	N/A
37	JACKSON OAKS WELL	JACKSON OAKS	utility	N/A	own	Water well
38	LIFT STATION J	16035 JACKSON OAKS DR.	utility	N/A	own	Waste water lift station
39	LIFT STATION C	3272 QUAIL LN.	utility	N/A	own	Waste water lift station
40	DUNNE AVENUE WELL #1	1000 E. DUNNE AV.	utility	N/A	own	Water well
41	DUNNE AVENUE WELL #2	1000 E. DUNNE AV.	utility	N/A	own	Water well
42	LIFT STATION A	17670 RACOON CT.	utility	N/A	own	Waste water lift station
43	LIFT STATION B	17558 HOLIDAY DR.	utility	N/A	own	Waste water lift station
44	ENCINO Reservoir	15595 VIA EDUARDO CT.	utility	N/A	own	Water storage tank -on ground, steel unanchored
45	ENCINO Bstr Stn	15805 CASINO REAL	utility	N/A	own	Water pumping plant/station
46	LLAGAS Reservoir	1606 LLAGAS RD.	utility	N/A	own	Water storage tank -on ground, steel unanchored
47	LLAGAS Bstr Stn	490 LLAGAS RD.	utility	N/A	own	Water pumping plant/station
48	EL TORO Reservoir	1305 W. DUNNE AVE.	utility	N/A	own	Water storage tank -on ground, steel unanchored
49	EL TORO Bstr Stn	1083 W. DUNNE AV.	utility	N/A	own	Water pumping plant/station
50	TRANSIT CENTER	DEPOT STREET		N/A	own	PST3
51	GENERATOR BLDG.	MONTEREY & PEEBLES		N/A	own	Reinforced masonry with flexible floor and roof
52	LIFT STATION I	19160 SAFFRON DR	utility	N/A	own	Waste water lift station
53	PAVILLION	COMMUNITY PARK		N/A	own	N/A
54	RESTROOM	COMMUNITY PARK		N/A	own	Light wood-frame building <= 5,000 SQFT
55	SR&YOUTH CTR/REC&FIT	171 W. EDMUNDSON		N/A	N/A	N/A
56	LIFT STATION P	320 WOODVIEW AV.	utility	N/A	own	Waste water lift station
57	LIFT STATION G	18615 MONTEREY RD.		N/A	N/A	N/A

ID	Critical Facility	Address	Type	Occupancy	Own/Lease	Structure Type
58	BUTTERFIELD WELL	17935 CALLE HERMOSA		N/A	N/A	N/A
59	EASY STREET Bstr Stn	14090 WATER AV.	utility	N/A	N/A	N/A
60	HOLIDAY LAKE #2	3100 LAKEVIEW CT.	utility	N/A	own	Water storage tank -buried concrete
61	HOLIDAY LAKE #1	3100 LAKEVIEW CT.	utility	N/A	own	Water storage tank -buried concrete
62	JACKSON OAKS Reservoir	2150 E. DUNNE AV.	utility	N/A	N/A	N/A
63	CONDIT WELL	16315 CONDIT RD.	utility	N/A	own	Water well
64	EOC/POLICE STATION	16200 VINEYARD BLVD		N/A	own	N/A
65	CHEMICAL STORAGE	100 EDES COURT		N/A	own	Reinforced masonry with flexible floor and roof
66	CORP YARD	100 EDES COURT		N/A	own	Light metal frame
67	SF Public Works	100 EDES COURT		N/A	own	Light wood-frame building <= 5,000 SQFT
68	STORAGE	100 EDES COURT		N/A	own	Light metal frame
69	LIFT STATION W	15505 WATSONVILLE RD.	utility	N/A	own	Waste water lift station
70	EAST DUNNE Bstr Stn	2375 E. DUNNE AV.	utility	N/A	own	Water pumping plant/station
71	COCHRAN WELL	COCHRAN	utility	N/A	own	Water well
72	DIANA AVENUE WELL #3	1000 DIANA AV.	utility	N/A	N/A	N/A
73	STRUCTURES/NORDSTM	E DUNNE AVE & MURPHY AVE		N/A	own	N/A
74	DIANA AVENUE WELL #1	200 DIANA AV.	utility	N/A	own	Water well
75	DIANA AVENUE WELL #2	1420 DIANA AV.	utility	N/A	own	Water well
76	AQUATICS CENTER	16200 CONDIT		N/A	own	N/A
77	SAN PEDRO WELL	1240 SAN PEDRO AV.	utility	N/A	own	Water well
78	NORSTROM WELL	17002 MURPHY AVE.	utility	N/A	N/A	N/A

ID	Critical Facility	Structure Information	Irregularities-Plan View	Irregularities-Vertical	Structural Assessment	Retrofit
1	CITY HALL	N/A	Regular	N/A	N/A	no
2	GENERATOR	EQUIP	N/A	N/A	N/A	no
3	GENERATOR BLDG	N/A	Regular	N/A	N/A	no
4	MODULAR #2-W OF CH	N/A	Regular	N/A	N/A	Seismic Tie Downs
5	STORAGE BLDG	N/A	Regular	N/A	N/A	no
6	EL TORO YOUTH CTR	Slight L	Irregular	N/A	N/A	no
7	FRIENDLY INN CENT.	N/A	Regular	N/A	N/A	no
8	FRIENDLY INN YMCA	Slight T	Irregular	Open	N/A	no
9	MUSEUM	CHIMNEY	Bolts and Plywd	N/A	N/A	no
10	PEAK & MAIN Bstr Stn	N/A	N/A	N/A	N/A	no
11	MAIN AVENUE WELL #1	N/A	N/A	N/A	N/A	no
12	LIFT STATION H	N/A	N/A	N/A	N/A	no
13	NOB HILL Reservoir	N/A	N/A	N/A	N/A	no
14	GLEN AYRE Reservoir	N/A	N/A	N/A	N/A	no
15	GLEN AYRE Bstr Stn	N/A	N/A	N/A	N/A	no
16	BOYS RANCH #2 Reservoir	N/A	N/A	N/A	N/A	N/A
17	BOYS RANCH #3 Reservoir	N/A	N/A	N/A	N/A	N/A
18	BOYS RANCH WELL #1	N/A	N/A	N/A	N/A	no
19	BOYS RANCH WELL #2	N/A	N/A	N/A	N/A	no
20	BOYS RANCH WELL #3	N/A	N/A	N/A	N/A	no
21	TENNANT AVENUE WELL	N/A	N/A	N/A	N/A	N/A
22	WELL HOUSE	N/A	Regular	N/A	N/A	no
23	WELL HOUSE	N/A	Regular	N/A	N/A	no
24	WOODLAND ACRES Reservoir	N/A	N/A	N/A	N/A	no
25	WOODLAND Bstr Stn	N/A	N/A	N/A	N/A	N/A
26	EDMUNSON Reservoir	N/A	N/A	N/A	N/A	no
27	LIFT STATION O	N/A	N/A	N/A	N/A	no
28	LIFT STATION M	N/A	N/A	N/A	N/A	no
29	SPORTS FIELD/CONCESS BLDG	N/A	N/A	N/A	N/A	N/A
30	COMM CULTURAL CNTR	N/A	N/A	N/A	N/A	no
31	LIFT STATION F	N/A	N/A	N/A	N/A	no
32	LIFT STATION D	N/A	N/A	N/A	N/A	no
33	JACKSON OAKS HYDRO PNEUMATIC Reservoir	N/A	N/A	N/A	N/A	no
34	JACKSON OAKS HYDROMATIC	N/A	N/A	N/A	N/A	no

ID	Critical Facility	Structure Information	Irregularities-Plan View	Irregularities-Vertical	Structural Assessment	Retrofit
35	LIFT STATION K	N/A	N/A	N/A	N/A	no
36	JACKSON OAKS Bstr Stn	N/A	N/A	N/A	N/A	N/A
37	JACKSON OAKS WELL	N/A	N/A	N/A	N/A	no
38	LIFT STATION J	N/A	N/A	N/A	N/A	no
39	LIFT STATION C	N/A	N/A	N/A	N/A	no
40	DUNNE AVENUE WELL #1	N/A	N/A	N/A	N/A	no
41	DUNNE AVENUE WELL #2	N/A	N/A	N/A	N/A	no
42	LIFT STATION A	N/A	N/A	N/A	N/A	no
43	LIFT STATION B	N/A	N/A	N/A	N/A	no
44	ENCINO Reservoir	N/A	N/A	N/A	N/A	no
45	ENCINO Bstr Stn	N/A	N/A	N/A	N/A	no
46	LLAGAS Reservoir	N/A	N/A	N/A	N/A	no
47	LLAGAS Bstr Stn	N/A	N/A	N/A	N/A	no
48	EL TORO Reservoir	N/A	N/A	N/A	N/A	no
49	EL TORO Bstr Stn	N/A	N/A	N/A	N/A	no
50	TRANSIT CENTER	Steel Tank on Ground	N/A	N/A	N/A	no
51	GENERATOR BLDG.	N/A	Regular	N/A	N/A	no
52	LIFT STATION I	N/A	N/A	N/A	N/A	no
53	PAVILLION	N/A	N/A	N/A	N/A	no
54	RESTROOM	6 sides, no walls	Irregular	Open	N/A	no
55	SR&YOUTH CTR/REC&FIT	N/A	N/A	N/A	N/A	N/A
56	LIFT STATION P	N/A	N/A	N/A	N/A	no
57	LIFT STATION G	N/A	N/A	N/A	N/A	N/A
58	BUTTERFIELD WELL	N/A	N/A	N/A	N/A	N/A
59	EASY STREET Bstr Stn	N/A	N/A	N/A	N/A	N/A
60	HOLIDAY LAKE #2	N/A	N/A	N/A	N/A	no
61	HOLIDAY LAKE #1	N/A	N/A	N/A	N/A	no
62	JACKSON OAKS Reservoir	N/A	N/A	N/A	N/A	N/A
63	CONDIT WELL	N/A	N/A	N/A	N/A	no
64	EOC/POLICE STATION	N/A	N/A	N/A	N/A	no
65	CHEMICAL STORAGE	Open Wall	N/A	Open	N/A	no
66	CORP YARD	N/A	N/A	N/A	N/A	no
67	SF Public Works	Corner Tower	Regular	N/A	N/A	no
68	STORAGE	N/A	N/A	Open	N/A	Sway Bracing
69	LIFT STATION W	N/A	N/A	N/A	N/A	no
70	EAST DUNNE Bstr Stn	N/A	N/A	N/A	N/A	no
71	COCHRAN WELL	N/A	N/A	N/A	N/A	no
72	DIANA AVENUE WELL #3	N/A	N/A	N/A	N/A	N/A
73	STRUCTURES/NORDSTM	PLAYGROUND	N/A	N/A	N/A	no
74	DIANA AVENUE WELL #1	N/A	N/A	N/A	N/A	no
75	DIANA AVENUE WELL #2	N/A	N/A	N/A	N/A	no
76	AQUATICS CENTER	N/A	Regular	N/A	N/A	no
77	SAN PEDRO WELL	N/A	N/A	N/A	N/A	no
78	NORSTROM WELL	N/A	N/A	N/A	N/A	N/A

ID	Critical Facility	Anchored Equipment	Alternate Power	Sprinklers	Roof Material	Year Built
1	CITY HALL	N/A	N/A	N/A	N/A	N/A
2	GENERATOR	yes	N/A	N/A	N/A	N/A
3	GENERATOR BLDG	N/A	N/A	N/A	tile	N/A
4	MODULAR #2-W OF CH	N/A	N/A	N/A	N/A	N/A
5	STORAGE BLDG	N/A	N/A	N/A	N/A	N/A
6	EL TORO YOUTH CTR	N/A	N/A	N/A	N/A	N/A
7	FRIENDLY INN CENT.	N/A	N/A	N/A	N/A	N/A
8	FRIENDLY INN YMCA	N/A	N/A	N/A	N/A	N/A
9	MUSEUM	N/A	N/A	N/A	N/A	N/A
10	PEAK & MAIN Bstr Stn	N/A	yes	no	N/A	1966
11	MAIN AVENUE WELL #1	N/A	yes	no	wood shingles	1997

ID	Critical Facility	Anchored Equipment	Alternate Power	Sprinklers	Roof Material	Year Built
12	LIFT STATION H	N/A	Fitted to Receive	N/A	N/A	1994
13	NOB HILL Reservoir	N/A	no	N/A	N/A	1980
14	GLEN AYRE Reservoir	N/A	no	N/A	N/A	1980
15	GLEN AYRE Bstr Stn	N/A	Fitted to Receive	no	N/A	1999
16	BOYS RANCH #2 Reservoir	N/A	N/A	N/A	N/A	N/A
17	BOYS RANCH #3 Reservoir	N/A	N/A	N/A	N/A	N/A
18	BOYS RANCH WELL #1	N/A	Fitted to Receive	no	wood shingles	1979
19	BOYS RANCH WELL #2	N/A	Fitted to Receive	no	wood shingles	1993
20	BOYS RANCH WELL #3	N/A	Fitted to Receive	no	wood shingles	1993
21	TENNANT AVENUE WELL	N/A	N/A	N/A	N/A	N/A
22	WELL HOUSE	N/A	N/A	N/A	N/A	2005
23	WELL HOUSE	N/A	N/A	N/A	N/A	2002
24	WOODLAND ACRES Reservoir	N/A	no	N/A	N/A	1971
25	WOODLAND Bstr Stn	N/A	N/A	N/A	N/A	N/A
26	EDMUNSON Reservoir	N/A	no	N/A	N/A	2002
27	LIFT STATION O	N/A	Fitted to Receive	N/A	N/A	2003
28	LIFT STATION M	N/A	Fitted to Receive	N/A	N/A	1995
29	SPORTS FIELD/CONCESS BLDG	N/A	N/A	N/A	N/A	N/A
30	COMM CULTURAL CNTR	N/A	N/A	N/A	N/A	2002
31	LIFT STATION F	N/A	Fitted to Receive	N/A	N/A	1998
32	LIFT STATION D	N/A	Fitted to Receive	N/A	N/A	1991
33	JACKSON OAKS HYDRO PNEUMATIC Reservoir	N/A	yes	N/A	N/A	1979
34	JACKSON OAKS HYDROMATIC	N/A	yes	no	N/A	1979
35	LIFT STATION K	N/A	yes	N/A	N/A	1952
36	JACKSON OAKS Bstr Stn	N/A	N/A	N/A	N/A	N/A
37	JACKSON OAKS WELL	N/A	Fitted to Receive	no	wood shingles	1997
38	LIFT STATION J	N/A	Fitted to Receive	N/A	N/A	1998
39	LIFT STATION C	N/A	yes	N/A	N/A	2000
40	DUNNE AVENUE WELL #1	N/A	Fitted to Receive	no	wood shingles	1995
41	DUNNE AVENUE WELL #2	N/A	Fitted to Receive	no	wood shingles	2001
42	LIFT STATION A	N/A	Fitted to Receive	N/A	N/A	1995
43	LIFT STATION B	N/A	yes	N/A	N/A	1991
44	ENCINO Reservoir	N/A	no	N/A	N/A	1975
45	ENCINO Bstr Stn	N/A	Fitted to Receive	no	N/A	1975
46	LLAGAS Reservoir	N/A	no	N/A	N/A	1967
47	LLAGAS Bstr Stn	N/A	yes	no	asphalt shingles	1991
48	EL TORO Reservoir	N/A	no	N/A	N/A	1966
49	EL TORO Bstr Stn	N/A	Fitted to Receive	no	N/A	1998
50	TRANSIT CENTER	N/A	N/A	N/A	N/A	N/A
51	GENERATOR BLDG.	N/A	N/A	N/A	tile	N/A
52	LIFT STATION I	N/A	yes	N/A	N/A	1986
53	PAVILLION	N/A	N/A	N/A	N/A	N/A
54	RESTROOM	N/A	N/A	N/A	N/A	N/A
55	SR&YOUTH CTR/REC&FIT	N/A	N/A	N/A	N/A	N/A
56	LIFT STATION P	N/A	Fitted to Receive	N/A	N/A	1996
57	LIFT STATION G	N/A	N/A	N/A	N/A	N/A
58	BUTTERFIELD WELL	N/A	N/A	N/A	N/A	N/A
59	EASY STREET Bstr Stn	N/A	N/A	N/A	N/A	N/A
60	HOLIDAY LAKE #2	N/A	no	N/A	N/A	1980
61	HOLIDAY LAKE #1	N/A	no	N/A	N/A	1962
62	JACKSON OAKS Reservoir	N/A	N/A	N/A	N/A	N/A
63	CONDIT WELL	N/A	no	no	wood shingles	1979
64	EOC/POLICE STATION	N/A	N/A	N/A	N/A	N/A
65	CHEMICAL STORAGE	N/A	N/A	N/A	N/A	N/A
66	CORP YARD	N/A	N/A	N/A	N/A	N/A
67	SF Public Works	N/A	N/A	N/A	N/A	N/A
68	STORAGE	N/A	N/A	N/A	N/A	N/A

ID	Critical Facility	Anchored Equipment	Alternate Power	Sprinklers	Roof Material	Year Built
69	LIFT STATION W	N/A	Fitted to Receive	N/A	N/A	1986
70	EAST DUNNE Bstr Stn	N/A	yes	no	asphalt shingles	1993
71	COCHRAN WELL	N/A	no	no	wood shingles	1998
72	DIANA AVENUE WELL #3	N/A	N/A	N/A	N/A	N/A
73	STRUCTURES/NORDSTM	N/A	N/A	N/A	N/A	N/A
74	DIANA AVENUE WELL #1	N/A	yes	no	wood shingles	1962
75	DIANA AVENUE WELL #2	N/A	yes	no	wood shingles	1997
76	AQUATICS CENTER	N/A	N/A	N/A	N/A	2004
77	SAN PEDRO WELL	N/A	Fitted to Receive	no	wood shingles	2002
78	NORSTROM WELL	N/A	N/A	N/A	N/A	N/A

ID	Critical Facility	Stories	Capacity	Bldg Insured Value	Contents Insured Value	
1	CITY HALL	1	N/A	4397000	704125	
2	GENERATOR	0	N/A	413438	N/A	
3	GENERATOR BLDG	1	N/A	38538	N/A	
4	MODULAR #2-W OF CH	1	N/A	249913	N/A	
5	STORAGE BLDG	1	N/A	124500	25563	
6	EL TORO YOUTH CTR	N/A	N/A	N/A	N/A	
7	FRIENDLY INN CENT.	1	N/A	1299900	177451	
8	FRIENDLY INN YMCA	1	N/A	N/A	N/A	
9	MUSEUM	2	N/A	533000	93188	
10	PEAK & MAIN Bstr Stn	1	N/A	215000	360000	
11	MAIN AVENUE WELL #1	1	N/A	150000	15160	
12	LIFT STATION H	N/A	N/A	150000	N/A	
13	NOB HILL Reservoir	N/A	N/A	500000	220500	
14	GLEN AYRE Reservoir	N/A	N/A	542250	1754000	
15	GLEN AYRE Bstr Stn	1	N/A	200000	N/A	
16	BOYS RANCH #2 Reservoir	0	N/A	N/A	N/A	
17	BOYS RANCH #3 Reservoir	0	N/A	N/A	N/A	
18	BOYS RANCH WELL #1	1	N/A	500000	17916	
19	BOYS RANCH WELL #2	1	N/A	500000	68906	
20	BOYS RANCH WELL #3	1	N/A	500000	68906	
21	TENNANT AVENUE WELL	0	N/A	N/A	N/A	
22	WELL HOUSE	1	800	N/A	N/A	
23	WELL HOUSE	N/A	N/A	N/A	N/A	
24	WOODLAND ACRES Reservoir	N/A	N/A	90000	217500	
25	WOODLAND Bstr Stn	0	N/A	N/A	N/A	
26	EDMUNSON Reservoir	N/A	N/A	N/A	N/A	
27	LIFT STATION O	N/A	N/A	N/A	N/A	
28	LIFT STATION M	N/A	N/A	150000	N/A	
29	SPORTS FIELD/CONCESS BLDG	0	N/A	N/A	N/A	
30	COMM CULTURAL CNTR	1	N/A	N/A	281439	
31	LIFT STATION F	N/A	N/A	150000	N/A	
32	LIFT STATION D	N/A	N/A	500000	N/A	
33	JACKSON OAKS HYDRO PNEUMATIC Reservoir	N/A	N/A	161000	260000	
34	JACKSON OAKS HYDROMATIC	1	N/A	N/A	N/A	
35	LIFT STATION K	1	N/A	34454	N/A	
36	JACKSON OAKS Bstr Stn	0	N/A	N/A	N/A	
37	JACKSON OAKS WELL	1	N/A	500000	N/A	
38	LIFT STATION J	N/A	N/A	500000	N/A	
39	LIFT STATION C	N/A	N/A	150000	N/A	
40	DUNNE AVENUE WELL #1	1	N/A	70200	2756	
41	DUNNE AVENUE WELL #2	1	N/A	500000	20673	
42	LIFT STATION A	N/A	N/A	500000	N/A	
43	LIFT STATION B	N/A	N/A	500000	N/A	
44	ENCINO Reservoir	N/A	N/A	220000	510000	
45	ENCINO Bstr Stn	1	N/A	246000	390000	

ID	Critical Facility	Stories	Capacity	Bldg Insured Value	Contents Insured Value	
46	LLAGAS Reservoir	N/A	N/A	253500	764900	
47	LLAGAS Bstr Stn	1	N/A	1150000	537469	
48	EL TORO Reservoir	N/A	N/A	206719	N/A	
49	EL TORO Bstr Stn	1	N/A	130000	N/A	
50	TRANSIT CENTER	1	N/A	41000	120000	
51	GENERATOR BLDG.	1	N/A	21589	N/A	
52	LIFT STATION I	N/A	N/A	150000	N/A	
53	PAVILLION	0	N/A	150000	N/A	
54	RESTROOM	1	N/A	N/A	N/A	
55	SR&YOUTH CTR/REC&FIT	0	N/A	N/A	N/A	
56	LIFT STATION P	N/A	N/A	150000	N/A	
57	LIFT STATION G	0	N/A	N/A	N/A	
58	BUTTERFIELD WELL	0	N/A	N/A	N/A	
59	EASY STREET Bstr Stn	0	N/A	N/A	N/A	
60	HOLIDAY LAKE #2	N/A	N/A	363750	190000	
61	HOLIDAY LAKE #1	N/A	N/A	150000	N/A	
62	JACKSON OAKS Reservoir	0	N/A	N/A	N/A	
63	CONDIT WELL	1	N/A	500000	5513	
64	EOC/POLICE STATION	0	N/A	N/A	N/A	
65	CHEMICAL STORAGE	1	N/A	N/A	N/A	
66	CORP YARD	1	N/A	777348	1253519	
67	SF Public Works	1	N/A	1130000	247000	
68	STORAGE	1	N/A	N/A	N/A	
69	LIFT STATION W	N/A	N/A	500000	N/A	
70	EAST DUNNE Bstr Stn	1	N/A	500000	165375	
71	COCHRAN WELL	1	N/A	500000	55125	
72	DIANA AVENUE WELL #3	0	N/A	N/A	N/A	
73	STRUCTURES/NORDSTM	0	N/A	200000	N/A	
74	DIANA AVENUE WELL #1	1	N/A	500000	8269	
75	DIANA AVENUE WELL #2	1	N/A	150000	N/A	
76	AQUATICS CENTER	1	N/A	N/A	N/A	
77	SAN PEDRO WELL	1	N/A	N/A	N/A	
78	NORSTROM WELL	0	N/A	N/A	N/A	

ID	Critical Facility	# of Dams	Wildland-Urban Interface (WUI) Fire Threat	Wildfire Threat	FEMA Flood Zone	Tsunami
1	CITY HALL	0	Outside WUI hazard area	Litte/No	500 Year	Not Affected
2	GENERATOR	0	Outside WUI hazard area	Litte/No	500 Year	Not Affected
3	GENERATOR BLDG	0	Outside WUI hazard area	Litte/No	500 Year	Not Affected
4	MODULAR #2-W OF CH	0	Outside WUI hazard area	Litte/No	500 Year	Not Affected
5	STORAGE BLDG	0	Outside WUI hazard area	Litte/No	500 Year	Not Affected
6	EL TORO YOUTH CTR	0	Fire-threatened area	Moderate	500 Year	Not Affected
7	FRIENDLY INN CENT.	0	Fire-threatened area	Moderate	500 Year	Not Affected
8	FRIENDLY INN YMCA	0	Fire-threatened area	Moderate	500 Year	Not Affected
9	MUSEUM	0	Fire-threatened area	Moderate	500 Year	Not Affected
10	PEAK & MAIN Bstr Stn	0	Fire-threatened area	Moderate	500 Year	Not Affected
11	MAIN AVENUE WELL #1	1	Fire-threatened area	Litte/No	100 Year	Not Affected
12	LIFT STATION H	1	Fire-threatened area	Litte/No	500 Year	Not Affected
13	NOB HILL Reservoir	0	Fire-threatened area	Moderate	500 Year	Not Affected
14	GLEN AYRE Reservoir	0	Outside WUI hazard area	Moderate	500 Year	Not Affected
15	GLEN AYRE Bstr Stn	0	Outside WUI hazard area	Moderate	500 Year	Not Affected
16	BOYS RANCH #2 Reservoir	1	Outside WUI hazard area	Very High	100 Year	Not Affected
17	BOYS RANCH #3 Reservoir	1	Outside WUI hazard area	Very High	100 Year	Not Affected
18	BOYS RANCH WELL #1	1	Outside WUI hazard area	Very High	100 Year	Not Affected
19	BOYS RANCH WELL #2	1	Outside WUI hazard area	Very High	100 Year	Not Affected
20	BOYS RANCH WELL #3	1	Outside WUI hazard area	Very High	100 Year	Not Affected
21	TENNANT AVENUE WELL	1	Fire-threatened area	Litte/No	Undetermined	Not Affected

ID	Critical Facility	# of Dams	Wildland-Urban Interface (WUI) Fire Threat	Wildfire Threat	FEMA Flood Zone	Tsunami
22	WELL HOUSE	1	Outside WUI hazard area	Moderate	Undetermined	Not Affected
23	WELL HOUSE	1	Outside WUI hazard area	Moderate	Undetermined	Not Affected
24	WOODLAND ACRES Reservoir	0	Fire-threatened area	Moderate	500 Year	Not Affected
25	WOODLAND Bstr Stn	0	Fire-threatened area	High	500 Year	Not Affected
26	EDMUNSON Reservoir	0	Fire-threatened area	Litte/No	Undetermined	Not Affected
27	LIFT STATION O	2	Fire-threatened area	Litte/No	500 Year	Not Affected
28	LIFT STATION M	2	Fire-threatened area	Litte/No	100 Year	Not Affected
29	SPORTS FIELD/CONCESS BLDG	1	Outside WUI hazard area	Moderate	Undetermined	Not Affected
30	COMM CULTURAL CNTR	1	Fire-threatened area	Litte/No	Undetermined	Not Affected
31	LIFT STATION F	0	Fire-threatened area	Moderate	Undetermined	Not Affected
32	LIFT STATION D	0	Fire-threatened area	Moderate	Undetermined	Not Affected
33	JACKSON OAKS HYDRO PNEUMATIC Reservoir	0	Fire-threatened area	Moderate	500 Year	Not Affected
34	JACKSON OAKS HYDROMATIC	0	Fire-threatened area	Moderate	500 Year	Not Affected
35	LIFT STATION K	0	Fire-threatened area	Moderate	500 Year	Not Affected
36	JACKSON OAKS Bstr Stn	0	Fire-threatened area	Moderate	500 Year	Not Affected
37	JACKSON OAKS WELL	0	Fire-threatened area	Moderate	500 Year	Not Affected
38	LIFT STATION J	0	Fire-threatened area	Moderate	500 Year	Not Affected
39	LIFT STATION C	0	Fire-threatened area	Moderate	Undetermined	Not Affected
40	DUNNE AVENUE WELL #1	0	Fire-threatened area	Very High	Undetermined	Not Affected
41	DUNNE AVENUE WELL #2	0	Fire-threatened area	Very High	Undetermined	Not Affected
42	LIFT STATION A	0	Fire-threatened area	Moderate	500 Year	Not Affected
43	LIFT STATION B	0	Fire-threatened area	Moderate	Undetermined	Not Affected
44	ENCINO Reservoir	1	Fire-threatened area	Litte/No	500 Year	Not Affected
45	ENCINO Bstr Stn	1	Fire-threatened area	Litte/No	500 Year	Not Affected
46	LLAGAS Reservoir	1	Fire-threatened area	Litte/No	500 Year	Not Affected
47	LLAGAS Bstr Stn	1	Fire-threatened area	Litte/No	500 Year	Not Affected
48	EL TORO Reservoir	1	Fire-threatened area	Litte/No	500 Year	Not Affected
49	EL TORO Bstr Stn	1	Fire-threatened area	Moderate	500 Year	Not Affected
50	TRANSIT CENTER	1	Fire-threatened area	Litte/No	500 Year	Not Affected
51	GENERATOR BLDG.	1	Outside WUI hazard area	Moderate	500 Year	Not Affected
52	LIFT STATION I	1	Outside WUI hazard area	Moderate	500 Year	Not Affected
53	PAVILLION	1	Fire-threatened area	Moderate	500 Year	Not Affected
54	RESTROOM	1	Fire-threatened area	Moderate	500 Year	Not Affected
55	SR&YOUTH CTR/REC&FIT	2	Fire-threatened area	Moderate	500 Year	Not Affected
56	LIFT STATION P	1	Fire-threatened area	Litte/No	500 Year	Not Affected
57	LIFT STATION G	1	Fire-threatened area	Moderate	500 Year	Not Affected
58	BUTTERFIELD WELL	1	Fire-threatened area	Litte/No	500 Year	Not Affected
59	EASY STREET Bstr Stn	0	Fire-threatened area	Litte/No	500 Year	Not Affected
60	HOLIDAY LAKE #2	0	Outside WUI hazard area	Litte/No	100 Year	Not Affected
61	HOLIDAY LAKE #1	0	Outside WUI hazard area	Litte/No	100 Year	Not Affected
62	JACKSON OAKS Reservoir	0	Fire-threatened area	Litte/No	500 Year	Not Affected
63	CONDIT WELL	1	Outside WUI hazard area	Moderate	Undetermined	Not Affected
64	EOC/POLICE STATION	1	Fire-threatened area	Litte/No	500 Year	Not Affected
65	CHEMICAL STORAGE	1	Fire-threatened area	Litte/No	500 Year	Not Affected
66	CORP YARD	1	Fire-threatened area	Litte/No	500 Year	Not Affected
67	SF Public Works	1	Fire-threatened area	Litte/No	500 Year	Not Affected
68	STORAGE	1	Fire-threatened area	Litte/No	500 Year	Not Affected
69	LIFT STATION W	2	Fire-threatened area	Litte/No	500 Year	Not Affected
70	EAST DUNNE Bstr Stn	1	Fire-threatened area	Moderate	500 Year	Not Affected
71	COCHRAN WELL	1	Outside WUI hazard area	Moderate	500 Year	Not Affected
72	DIANA AVENUE WELL #3	1	Outside WUI hazard area	Moderate	500 Year	Not Affected
73	STRUCTURES/NORDSTM	1	Outside WUI hazard area	Litte/No	500 Year	Not Affected
74	DIANA AVENUE WELL #1	1	Outside WUI hazard area	Litte/No	500 Year	Not Affected
75	DIANA AVENUE WELL #2	1	Outside WUI hazard area	Litte/No	500 Year	Not Affected
76	AQUATICS CENTER	1	Outside WUI hazard area	Litte/No	500 Year	Not Affected
77	SAN PEDRO WELL	1	Outside WUI hazard area	Litte/No	500 Year	Not Affected

ID	Critical Facility	# of Dams	Wildland-Urban Interface (WUI) Fire Threat	Wildfire Threat	FEMA Flood Zone	Tsunami
78	NORSTROM WELL	1	Outside WUI hazard area	Moderate	500 Year	Not Affected

ID	Critical Facility	Existing Landslide Areas	EQ-Induced Landslide	EQ Shake Potential	Liquefaction Susceptibility	EQ-Induced Liquefaction
1	CITY HALL	Surficial Deposits	Outside of CGS Landslide Zone	55	Moderate	Outside of CGS Liquefaction Zone
2	GENERATOR	Surficial Deposits	Outside of CGS Landslide Zone	55	Moderate	Outside of CGS Liquefaction Zone
3	GENERATOR BLDG	Surficial Deposits	Outside of CGS Landslide Zone	55	Moderate	Outside of CGS Liquefaction Zone
4	MODULAR #2-W OF CH	Surficial Deposits	Outside of CGS Landslide Zone	55	Moderate	Outside of CGS Liquefaction Zone
5	STORAGE BLDG	Surficial Deposits	Outside of CGS Landslide Zone	55	Moderate	Outside of CGS Liquefaction Zone
6	EL TORO YOUTH CTR	Surficial Deposits	Outside of CGS Landslide Zone	55	Moderate	Outside of CGS Liquefaction Zone
7	FRIENDLY INN CENT.	Surficial Deposits	Outside of CGS Landslide Zone	55	Moderate	Outside of CGS Liquefaction Zone
8	FRIENDLY INN YMCA	Surficial Deposits	Outside of CGS Landslide Zone	55	Moderate	Outside of CGS Liquefaction Zone
9	MUSEUM	Surficial Deposits	Outside of CGS Landslide Zone	55	Moderate	Outside of CGS Liquefaction Zone
10	PEAK & MAIN Bstr Stn	Surficial Deposits	Outside of CGS Landslide Zone	55	Moderate	Outside of CGS Liquefaction Zone
11	MAIN AVENUE WELL #1	Surficial Deposits	Outside of CGS Landslide Zone	55	Moderate	Outside of CGS Liquefaction Zone
12	LIFT STATION H	Surficial Deposits	Outside of CGS Landslide Zone	55	Moderate	Outside of CGS Liquefaction Zone
13	NOB HILL Reservoir	Surficial Deposits	Earthquake-Induced Landslide Zone	55	Moderate	Outside of CGS Liquefaction Zone
14	GLEN AYRE Reservoir	Few Landslides	Outside of CGS Landslide Zone	55	Very Low	Outside of CGS Liquefaction Zone
15	GLEN AYRE Bstr Stn	Few Landslides	Outside of CGS Landslide Zone	55	Very Low	Outside of CGS Liquefaction Zone
16	BOYS RANCH #2 Reservoir	Surficial Deposits	Outside of CGS Landslide Zone	65	Moderate	Liquefaction Hazard Zone
17	BOYS RANCH #3 Reservoir	Surficial Deposits	Outside of CGS Landslide Zone	65	Moderate	Liquefaction Hazard Zone
18	BOYS RANCH WELL #1	Surficial Deposits	Outside of CGS Landslide Zone	65	Moderate	Liquefaction Hazard Zone
19	BOYS RANCH WELL #2	Surficial Deposits	Outside of CGS Landslide Zone	65	Moderate	Liquefaction Hazard Zone
20	BOYS RANCH WELL #3	Surficial Deposits	Outside of CGS Landslide Zone	65	Moderate	Liquefaction Hazard Zone
21	TENNANT AVENUE WELL	Surficial Deposits	Mapping in Progress	65	Low	Mapping in Progress
22	WELL HOUSE	Surficial Deposits	Mapping in Progress	65	Low	Mapping in Progress
23	WELL HOUSE	Surficial Deposits	Mapping in Progress	65	Low	Mapping in Progress
24	WOODLAND ACRES Reservoir	Few Landslides	Earthquake-Induced Landslide Zone	45	Very Low	Outside of CGS Liquefaction Zone
25	WOODLAND Bstr Stn	Few Landslides	Mapping in Progress	45	Very Low	Mapping in Progress
26	EDMUNSON Reservoir	Surficial Deposits	Mapping in Progress	65	Moderate	Mapping in Progress
27	LIFT STATION O	Surficial Deposits	Mapping in Progress	65	Low	Mapping in Progress
28	LIFT STATION M	Surficial Deposits	Mapping in Progress	65	Low	Mapping in Progress
29	SPORTS FIELD/CONCESS BLDG	Surficial Deposits	Outside of CGS Landslide Zone	65	Low	Outside of CGS Liquefaction Zone
30	COMM CULTURAL CNTR	Surficial Deposits	Outside of CGS Landslide Zone	65	Moderate	Liquefaction Hazard Zone
31	LIFT STATION F	Few Landslides	Outside of CGS Landslide Zone	65	Very Low	Outside of CGS Liquefaction Zone
32	LIFT STATION D	Few Landslides	Outside of CGS Landslide Zone	65	Very Low	Outside of CGS Liquefaction Zone
33	JACKSON OAKS HYDRO PNEUMATIC Reservoir	Few Landslides	Outside of CGS Landslide Zone	65	Very Low	Outside of CGS Liquefaction Zone
34	JACKSON OAKS HYDROMATIC	Few Landslides	Outside of CGS Landslide Zone	65	Very Low	Outside of CGS Liquefaction Zone
35	LIFT STATION K	Few Landslides	Outside of CGS Landslide Zone	65	Very Low	Outside of CGS Liquefaction Zone
36	JACKSON OAKS Bstr Stn	Few Landslides	Outside of CGS Landslide Zone	65	Very Low	Outside of CGS Liquefaction Zone
37	JACKSON OAKS WELL	Few Landslides	Outside of CGS Landslide Zone	65	Very Low	Outside of CGS Liquefaction Zone
38	LIFT STATION J	Few Landslides	Outside of CGS Landslide Zone	65	Very Low	Outside of CGS Liquefaction Zone
39	LIFT STATION C	Few Landslides	Earthquake-Induced Landslide Zone	65	Very Low	Outside of CGS Liquefaction Zone
40	DUNNE AVENUE WELL #1	Few Landslides	Earthquake-Induced Landslide Zone	65	Very Low	Outside of CGS Liquefaction Zone
41	DUNNE AVENUE WELL #2	Few Landslides	Earthquake-Induced Landslide Zone	65	Very Low	Outside of CGS Liquefaction Zone
42	LIFT STATION A	Few Landslides	Earthquake-Induced Landslide Zone	65	Very Low	Outside of CGS Liquefaction Zone
43	LIFT STATION B	Mostly Landslide Area	Earthquake-Induced Landslide Zone	65	Very Low	Outside of CGS Liquefaction Zone
44	ENCINO Reservoir	Surficial Deposits	Mapping in Progress	55	Low	Mapping in Progress
45	ENCINO Bstr Stn	Surficial Deposits	Mapping in Progress	55	Low	Mapping in Progress
46	LLAGAS Reservoir	Surficial Deposits	Outside of CGS Landslide Zone	55	Moderate	Outside of CGS Liquefaction Zone
47	LLAGAS Bstr Stn	Surficial Deposits	Outside of CGS Landslide Zone	55	Moderate	Outside of CGS Liquefaction Zone
48	EL TORO Reservoir	Surficial Deposits	Outside of CGS Landslide Zone	55	Moderate	Outside of CGS Liquefaction Zone
49	EL TORO Bstr Stn	Surficial Deposits	Outside of CGS Landslide Zone	55	Moderate	Outside of CGS Liquefaction Zone
50	TRANSIT CENTER	Surficial Deposits	Outside of CGS Landslide Zone	55	Moderate	Outside of CGS Liquefaction Zone
51	GENERATOR BLDG.	Surficial Deposits	Outside of CGS Landslide Zone	55	Moderate	Outside of CGS Liquefaction Zone
52	LIFT STATION I	Surficial Deposits	Outside of CGS Landslide Zone	55	Moderate	Outside of CGS Liquefaction Zone
53	PAVILLION	Surficial Deposits	Mapping in Progress	55	Low	Mapping in Progress

ID	Critical Facility	Existing Landslide Areas	EQ-Induced Landslide	EQ Shake Potential	Liquefaction Susceptibility	EQ-Induced Liquefaction
54	RESTROOM	Surficial Deposits	Mapping in Progress	55	Low	Mapping in Progress
55	SR&YOUTH CTR/REC&FIT	Surficial Deposits	Mapping in Progress	55	Low	Mapping in Progress
56	LIFT STATION P	Surficial Deposits	Outside of CGS Landslide Zone	55	Low	Outside of CGS Liquefaction Zone
57	LIFT STATION G	Surficial Deposits	Outside of CGS Landslide Zone	55	Low	Outside of CGS Liquefaction Zone
58	BUTTERFIELD WELL	Surficial Deposits	Outside of CGS Landslide Zone	55	Low	Outside of CGS Liquefaction Zone
59	EASY STREET Bstr Stn	Few Landslides	Mapping in Progress	55	Very Low	Mapping in Progress
60	HOLIDAY LAKE #2	Undetermined	Outside of CGS Landslide Zone	65	Moderate	Outside of CGS Liquefaction Zone
61	HOLIDAY LAKE #1	Undetermined	Outside of CGS Landslide Zone	65	Moderate	Outside of CGS Liquefaction Zone
62	JACKSON OAKS Reservoir	Surficial Deposits	Outside of CGS Landslide Zone	65	Moderate	Outside of CGS Liquefaction Zone
63	CONDIT WELL	Surficial Deposits	Outside of CGS Landslide Zone	65	Low	Outside of CGS Liquefaction Zone
64	EOC/POLICE STATION	Surficial Deposits	Mapping in Progress	65	Low	Mapping in Progress
65	CHEMICAL STORAGE	Surficial Deposits	Mapping in Progress	65	Low	Mapping in Progress
66	CORP YARD	Surficial Deposits	Mapping in Progress	65	Low	Mapping in Progress
67	SF Public Works	Surficial Deposits	Mapping in Progress	65	Low	Mapping in Progress
68	STORAGE	Surficial Deposits	Mapping in Progress	65	Low	Mapping in Progress
69	LIFT STATION W	Surficial Deposits	Mapping in Progress	65	Low	Mapping in Progress
70	EAST DUNNE Bstr Stn	Surficial Deposits	Outside of CGS Landslide Zone	65	Low	Outside of CGS Liquefaction Zone
71	COCHRAN WELL	Surficial Deposits	Outside of CGS Landslide Zone	65	Low	Outside of CGS Liquefaction Zone
72	DIANA AVENUE WELL #3	Surficial Deposits	Outside of CGS Landslide Zone	65	Low	Outside of CGS Liquefaction Zone
73	STRUCTURES/NORDSTM	Surficial Deposits	Outside of CGS Landslide Zone	65	Low	Outside of CGS Liquefaction Zone
74	DIANA AVENUE WELL #1	Surficial Deposits	Outside of CGS Landslide Zone	65	Low	Outside of CGS Liquefaction Zone
75	DIANA AVENUE WELL #2	Surficial Deposits	Outside of CGS Landslide Zone	65	Low	Outside of CGS Liquefaction Zone
76	AQUATICS CENTER	Surficial Deposits	Outside of CGS Landslide Zone	65	Low	Outside of CGS Liquefaction Zone
77	SAN PEDRO WELL	Surficial Deposits	Outside of CGS Landslide Zone	65	Low	Outside of CGS Liquefaction Zone
78	NORSTROM WELL	Surficial Deposits	Outside of CGS Landslide Zone	65	Low	Outside of CGS Liquefaction Zone

ID	Critical Facility	Sea Level Risk 16"	Sea Level Rise 55"			
1	CITY HALL	Not Affected	Not Affected			
2	GENERATOR	Not Affected	Not Affected			
3	GENERATOR BLDG	Not Affected	Not Affected			
4	MODULAR #2-W OF CH	Not Affected	Not Affected			
5	STORAGE BLDG	Not Affected	Not Affected			
6	EL TORO YOUTH CTR	Not Affected	Not Affected			
7	FRIENDLY INN CENT.	Not Affected	Not Affected			
8	FRIENDLY INN YMCA	Not Affected	Not Affected			
9	MUSEUM	Not Affected	Not Affected			
10	PEAK & MAIN Bstr Stn	Not Affected	Not Affected			
11	MAIN AVENUE WELL #1	Not Affected	Not Affected			
12	LIFT STATION H	Not Affected	Not Affected			
13	NOB HILL Reservoir	Not Affected	Not Affected			
14	GLEN AYRE Reservoir	Not Affected	Not Affected			
15	GLEN AYRE Bstr Stn	Not Affected	Not Affected			
16	BOYS RANCH #2 Reservoir	Not Affected	Not Affected			
17	BOYS RANCH #3 Reservoir	Not Affected	Not Affected			
18	BOYS RANCH WELL #1	Not Affected	Not Affected			
19	BOYS RANCH WELL #2	Not Affected	Not Affected			
20	BOYS RANCH WELL #3	Not Affected	Not Affected			
21	TENNANT AVENUE WELL	Not Affected	Not Affected			
22	WELL HOUSE	Not Affected	Not Affected			
23	WELL HOUSE	Not Affected	Not Affected			
24	WOODLAND ACRES Reservoir	Not Affected	Not Affected			
25	WOODLAND Bstr Stn	Not Affected	Not Affected			
26	EDMUNSON Reservoir	Not Affected	Not Affected			
27	LIFT STATION O	Not Affected	Not Affected			
28	LIFT STATION M	Not Affected	Not Affected			
29	SPORTS FIELD/CONCESS BLDG	Not Affected	Not Affected			
30	COMM CULTURAL CNTR	Not Affected	Not Affected			

ID	Critical Facility	Sea Level Risk 16"	Sea Level Rise 55"			
31	LIFT STATION F	Not Affected	Not Affected			
32	LIFT STATION D	Not Affected	Not Affected			
33	JACKSON OAKS HYDRO PNEUMATIC Reservoir	Not Affected	Not Affected			
34	JACKSON OAKS HYDROMATIC	Not Affected	Not Affected			
35	LIFT STATION K	Not Affected	Not Affected			
36	JACKSON OAKS Bstr Stn	Not Affected	Not Affected			
37	JACKSON OAKS WELL	Not Affected	Not Affected			
38	LIFT STATION J	Not Affected	Not Affected			
39	LIFT STATION C	Not Affected	Not Affected			
40	DUNNE AVENUE WELL #1	Not Affected	Not Affected			
41	DUNNE AVENUE WELL #2	Not Affected	Not Affected			
42	LIFT STATION A	Not Affected	Not Affected			
43	LIFT STATION B	Not Affected	Not Affected			
44	ENCINO Reservoir	Not Affected	Not Affected			
45	ENCINO Bstr Stn	Not Affected	Not Affected			
46	LLAGAS Reservoir	Not Affected	Not Affected			
47	LLAGAS Bstr Stn	Not Affected	Not Affected			
48	EL TORO Reservoir	Not Affected	Not Affected			
49	EL TORO Bstr Stn	Not Affected	Not Affected			
50	TRANSIT CENTER	Not Affected	Not Affected			
51	GENERATOR BLDG.	Not Affected	Not Affected			
52	LIFT STATION I	Not Affected	Not Affected			
53	PAVILLION	Not Affected	Not Affected			
54	RESTROOM	Not Affected	Not Affected			
55	SR&YOUTH CTR/REC&FIT	Not Affected	Not Affected			
56	LIFT STATION P	Not Affected	Not Affected			
57	LIFT STATION G	Not Affected	Not Affected			
58	BUTTERFIELD WELL	Not Affected	Not Affected			
59	EASY STREET Bstr Stn	Not Affected	Not Affected			
60	HOLIDAY LAKE #2	Not Affected	Not Affected			
61	HOLIDAY LAKE #1	Not Affected	Not Affected			
62	JACKSON OAKS Reservoir	Not Affected	Not Affected			
63	CONDIT WELL	Not Affected	Not Affected			
64	EOC/POLICE STATION	Not Affected	Not Affected			
65	CHEMICAL STORAGE	Not Affected	Not Affected			
66	CORP YARD	Not Affected	Not Affected			
67	SF Public Works	Not Affected	Not Affected			
68	STORAGE	Not Affected	Not Affected			
69	LIFT STATION W	Not Affected	Not Affected			
70	EAST DUNNE Bstr Stn	Not Affected	Not Affected			
71	COCHRAN WELL	Not Affected	Not Affected			
72	DIANA AVENUE WELL #3	Not Affected	Not Affected			
73	STRUCTURES/NORDSTM	Not Affected	Not Affected			
74	DIANA AVENUE WELL #1	Not Affected	Not Affected			
75	DIANA AVENUE WELL #2	Not Affected	Not Affected			
76	AQUATICS CENTER	Not Affected	Not Affected			
77	SAN PEDRO WELL	Not Affected	Not Affected			
78	NORSTROM WELL	Not Affected	Not Affected			