

**THE CITY OF NOVATO
OFFICE OF EMERGENCY SERVICES**

CITY OF NOVATO Emergency Operations Plan (EOP)



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CITY OF NOVATO EMERGENCY OPERATIONS PLAN



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PART ONE: GENERAL INFORMATION

THE PLAN

The City of Novato Emergency Operations Plan (EOP) addresses the planned response to extraordinary emergency situations associated with disasters affecting Novato. The plan also addresses integration and coordination with other governmental agencies when required. This plan is not intended to address the day-to-day emergency or well-established emergency procedures.

This plan accomplishes the following:

- Establishes the emergency management organization required to mitigate any significant emergency or disaster affecting Novato
- Establishes the overall operational concepts associated with Novato's Emergency Operations Center (EOC) activities and the recovery process

This plan is based on the functions and principles of the California Standardized Emergency Management System (SEMS), the National Incident Management System (NIMS), and the California Incident Command System (ICS). It identifies how the Novato emergency operational system fits into the overall California and National risk-based, all-hazard emergency response and recovery operations plan.

This document serves as a planning reference and as a basis for effective response to any hazard that threatens Novato. Departments within the City of Novato, and other agencies that have roles and responsibilities identified by this plan, are encouraged to develop plans, detailed standard operating procedures (SOPs), and emergency response checklists based on the provisions of this plan.

This document serves as the legal and conceptual framework for emergency management in Novato and is divided into the following parts:

Part 1 – General Information

The "basic plan" which describes the emergency management organization, its roles, responsibilities, and operational concepts

Part 2 – Threat Summaries and Assessments

This section provides a description of Novato and provides a brief analysis of how hazards might affect the city.

Part 3 – References

EOP Annexes, Operational Area Annexes, Authorities and References, Acronyms



EMERGENCY OPERATIONS PLAN REQUIREMENTS

The Novato EOP requires approval by the Novato City Council. The City Council is responsible for its periodic review, updates, re-publishing and re-distribution of the EOP. Records of revision to this plan will be maintained by Novato's Office of Emergency Services. Those agencies or departments having assigned responsibilities under this plan are obligated to inform the City's Emergency Services Manager when changes need to be made.

The plan may be modified as a result of post-incident analyses and/or post-exercise critiques. It may be modified if responsibilities, procedures, laws, rules, or regulations pertaining to emergency management and operations change.

PURPOSE, OBJECTIVES, GOALS, ASSUMPTIONS

PURPOSE

This EOP establishes policies and procedures as well as assigning responsibilities to ensure the effective management of emergency operations within Novato. It provides information on Novato's emergency management structure and how and when the EOC staff is activated.

OBJECTIVES

The overall objective of emergency management is to effectively manage responders and resources preparing for and responding to natural disasters, technological incidents and national security emergencies. To carry out its responsibilities, the emergency management organization will accomplish the following objectives during a disaster/emergency:

- Maintain overall coordination of emergency response and recovery operations, including on-scene incident management as required
- Coordinate and liaise with appropriate other local government agencies, as well as applicable segments of private sector entities and volunteer agencies
- Establish priorities and resolve conflicting demands for support
- Prepare and disseminate emergency public information to alert, warn, and inform the public
- Disseminate damage information and other essential data



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GOALS

- Provide effective life safety measures
- Reduce property loss and damage to the environment
- Provide for the rapid resumption of impacted businesses and community services
- Provide accurate documentation and records required for cost recovery efforts

ASSUMPTIONS

- The City of Novato is primarily responsible for emergency actions and will commit all available resources to save lives, minimize injury to persons, and minimize damage to property and the environment
- The City of Novato will utilize SEMS and NIMS in emergency response and management operations
- The Director of Emergency Services will coordinate Novato's disaster response in conformance with its Emergency Organization and Functions as per Novato Municipal Code Section 2-13.6
- The City of Novato will be made available to local agencies and citizens to cope with disasters affecting this area
- The City of Novato will commit its resources to a reasonable degree before requesting mutual aid assistance
- Mutual aid assistance will be requested when disaster relief requirements exceed Novato's ability to meet them

CONCEPT OF OPERATIONS

The emergency management organization in Novato will identify potential threats to life, property and the environment. It will develop plans and procedures to protect those assets. These plans and procedures will direct emergency response and recovery activities and will be validated by the conduct of actual response or exercising. The goal is to maintain a robust emergency management organization with strong collaborative ties with other local government, community-based organizations and volunteers, public service agencies, and the private sector under SEMS/NIMS.



Actions are often categorized by four emergency management phases indicated below. However, not every disaster necessarily includes all indicated phases.

1. PREPAREDNESS PHASE

The preparedness phase involves activities taken in advance of an emergency. These activities develop operational capabilities and effective responses to a disaster. Preventative actions might include mitigation activities, emergency/disaster planning, training, exercises and public education. Members of the emergency management organization should prepare Standard Operating Procedures (SOPs), Emergency Operating Procedures (EOPs), and checklists detailing personnel assignments, policies, notification rosters, and resource lists. Personnel should be acquainted with these SOPs, EOPs and checklists through periodic training in the activation and execution procedures.

Training and Exercises

The Novato Office of Emergency Services will inform its departments of training opportunities associated with emergency management. Those with responsibilities under this plan must ensure their personnel are properly trained to carry out these responsibilities.

The best method of training emergency responders is through exercises. Exercises expose responders to potential situations and events allowing them to become more familiar with the procedures, facilities and systems that they will actually use in emergency situations.

Exercises will be conducted on a regular basis to maintain readiness. Exercises should include as many members of the City staff, Special Districts serving Novato and, as possible, other public / private partners. Novato OES will document exercises by conducting a critique, and using the information obtained from the critique to complete an After Action Report (AAR). This information will be used to develop a Corrective Action Plan (CAP) plan, revising standard operating procedures as necessary.

2. RESPONSE PHASE

Pre-Emergency

When a disaster is inevitable, actions are precautionary and emphasize protection of life. Typical responses might be:

- Alerting necessary agencies, placing critical resources and personnel on stand-by
- Evacuation of threatened populations to safe areas
- Advising threatened populations of the emergency and apprising them of safety measures to be implemented



- Identifying the need for mutual aid
- Proclamation of a Local Emergency by local authorities

Emergency Response

During this phase, emphasis is placed on saving lives, property, control of the situation and minimizing effects of the disaster. Immediate response is accomplished within the affected area by local government agencies and segments of the private sector.

Sustained Emergency

In addition to continuing life and property protection operations, mass care, relocation, public information, situation analysis, status and damage assessment operations will be initiated.

3. RECOVERY PHASE

At the onset of an emergency, actions are taken to enhance the effectiveness of recovery operations. Recovery is both short-term activities intended to return vital life-support systems to operation and long-term activities designed to return infrastructure systems to pre-disaster conditions. Recovery also includes cost recovery activities.

The recovery period has major objectives which may overlap, including:

- Reinstatement of family and individuals' autonomy
- Provision of essential public services
- Permanent restoration of private and public property
- Identification of residual hazards
- Plans to mitigate future hazards
- Recovery of costs associated with response and recovery efforts
- Coordination of state and federal, private and public assistance

As the immediate threat to life, property and the environment subsides, the rebuilding of the city of Novato will begin through various recovery activities. Recovery activities involve the restoration of services to the public and rebuilding the affected area(s). Examples of recovery activities include:



- Restoring all utilities
- Establishing and staffing Local Assistance Centers and Disaster Assistance Centers
- Applying for appropriate assistance programs
- Conducting hazard mitigation analysis
- Identifying residual hazards
- Determining recovery costs associated with response and recovery

4. PREVENTION/MITIGATION PHASE

Preventing damage and losses from a disaster includes those efforts known as mitigation activities. Mitigation efforts occur both before and following disastrous events. Post-disaster mitigation is part of the recovery process. Preventing, eliminating or reducing the impact of hazards that exist within the city and are a threat to life and property are part of the mitigation efforts. Mitigation tools include:

- Local ordinances and statutes (zoning ordinance, building codes and enforcement, etc.)
- Structural measures
- Tax levy
- Public information and community relations
- Land use planning



EMERGENCY MANAGEMENT ORGANIZATION & RESPONSIBILITIES

DIRECTOR OF EMERGENCY SERVICES

The Director of Emergency Services is supported by Novato's Office of Emergency Services and has overall responsibility for the following:

- Organizing, staffing and operating the EOC
- Operating communications and warning systems
- Providing information and guidance to the public and elected officials
- Maintaining information on the status of resources, services, and operations
- Directing overall operations
- Identifying and analyzing potential hazards and recommending appropriate counter-measures
- Collecting, evaluating and disseminating damage assessment and other essential information

MARIN COUNTY OPERATIONAL AREA EMERGENCY MANAGEMENT

When a disaster occurs and two or more of the county's local jurisdictions' EOCs within the Marin County Operational Area (OA) are activated, the Operational Area EOC will serve as the focal point for information transfer and supports requests by cities and towns such as Novato.

A local jurisdiction can also request the activation of the Operational Area EOC.

SEMS AND NIMS

STANDARDIZED EMERGENCY MANAGEMENT SYSTEM (SEMS)

After the 1991 Oakland East Bay Hills Fire, State Senator Petris passed the Senate Bill 1841 (SB1841) introducing the Standardized Emergency Management System (SEMS). Since 1994 SEMS has been required by Government Code Section 8607(a) for managing response to multi-agency and multi-jurisdiction emergencies in California. SEMS consists of five organizational levels that are activated as necessary: field response, local government, operational area, regional and state.

SEMS has been used throughout the State of California to manage and coordinate any emergency response involving more than one agency or jurisdiction. Local governments



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must use SEMS to be eligible for reimbursement of their personnel-related costs under state disaster assistance programs.

A local government under SEMS is a county, city or special district. Special districts under SEMS are units of local government with authority or responsibility to own, operate or maintain a project (as defined in California Code of Regulations 2900(s) for purposes of natural disaster assistance). This may include joint powers authority established under Section 6500 et seq. of the Code.

Cities are responsible for emergency response within their boundaries, although some cities contract for some municipal services from other agencies.

Special districts are primarily responsible during emergencies for restoration of services that they normally provide. They may also be responsible for safety of people at their facilities or on their property and for warning of hazards from their facilities or operations.

All local governments are responsible for coordinating with other local governments, the field response level and the operational area. Local governments are also responsible for providing mutual aid within their capabilities.

NATIONAL INCIDENT MANAGEMENT SYSTEM (NIMS)

In response to the September 11, 2001 attacks on the World Trade Center in New York City, the Pentagon and Flight 93, President Bush issued Homeland Security Presidential Directive-5 (HSPD-5). Released on February 28, 2003, HSPD-5 directed the Secretary of the Office of Homeland Security (OHS) to develop and administer a National Incident Management System (NIMS). NIMS include the following components:

- Command and Management, including the Incident Command System (ICS)
- Communications and Information Management
- Preparedness
- Resource Management
- Supporting Technologies
- Joint Information System (JIS)
- NIMS Management and Maintenance

RELATIONSHIP TO SEMS AND NIMS:

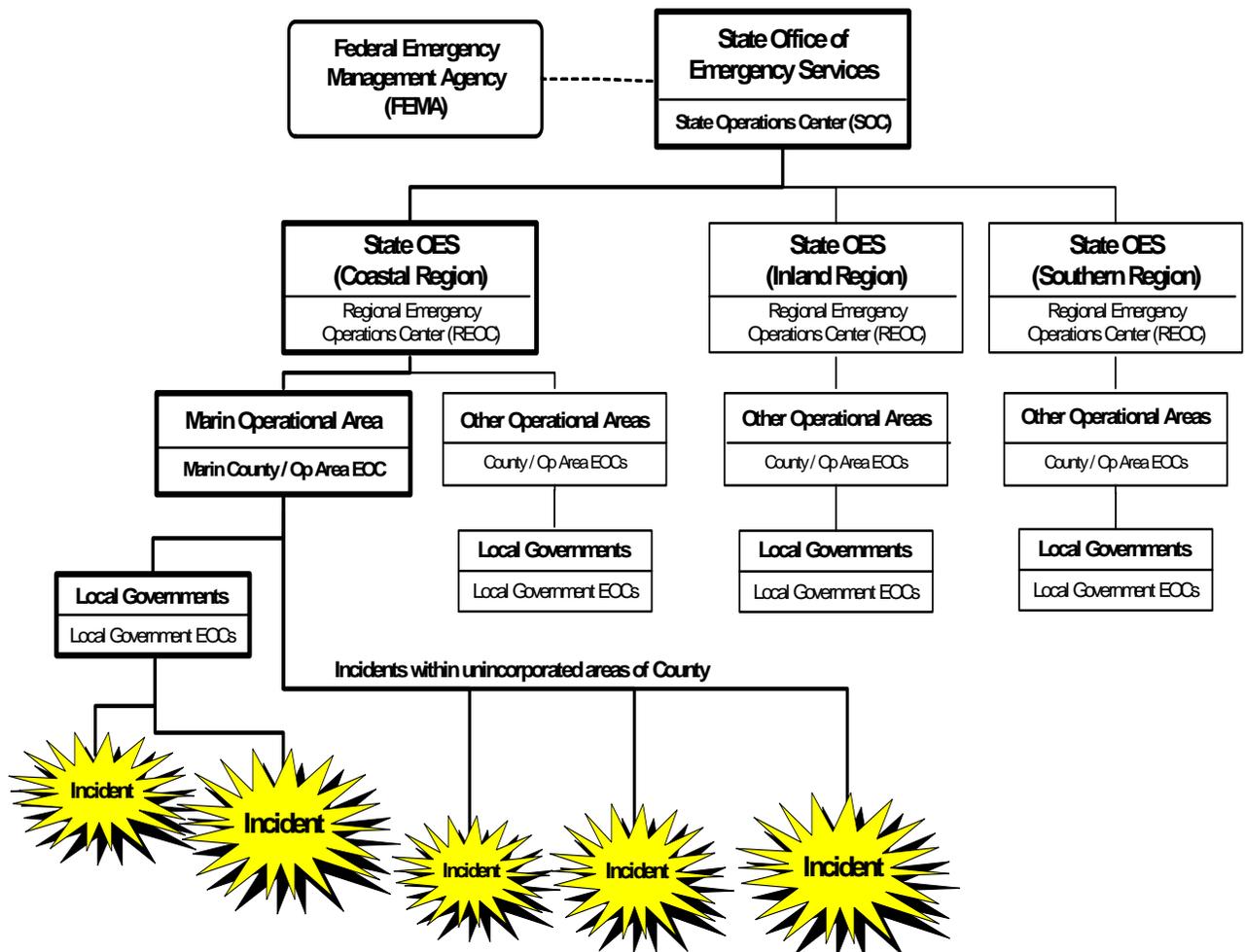


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Under SEMS and NIMS, the City of Novato has responsibilities at two levels: The Field Response and the Local Government level.

At the field response level, all agencies will use the Incident Command System (ICS) to standardize the emergency response.

At the City of Novato level, the designated EOC is used as the central location for gathering and disseminating information, coordinating all jurisdictional emergency operations, and coordinating with the Marin County Office of Emergency Services (OES) and the Marin County Operational Area. The California Emergency Services Act requires Operational Areas to coordinate emergency operations with State OES – Coastal Region during disasters.



ORGANIZATION FLEXIBILITY – MODULAR ORGANIZATION



The five essential ICS functions in SEMS and NIMS are identified as “sections” in the EOC. All other areas of responsibility are organized as branches, groups or units within these sections. Only functional elements that are required to meet current objectives will be activated.

MANAGEMENT OF PERSONNEL–HIERARCHY OF COMMAND AND SPAN-OF-CONTROL

Management of personnel within the EOC will be accomplished through the assignment of Section Chiefs for Operations, Planning/Intelligence, Logistics, and Finance/Administration functions. Section Chiefs will report to the EOC Director. It is recommended that span-of-control does not exceed 7 branches/units under one Section Chief. Oversight of units should be delegated to branch coordinators as appropriate.

MULTI-AGENCY OR INTER-AGENCY COORDINATION

Multi-agency or inter-agency coordination is important for establishing priorities for response and allocating critical resources. Strategies for handling multi-agency response problems need to be developed while jurisdictional and agencies’ objectives are not compromised. City departments, agencies and possibly affiliated special districts, volunteer agencies and private organizations coordinate emergency response at the EOC. The Novato EOC functions as a local jurisdiction EOC which will facilitate liaisons from Novato specific Special Districts and other local public and private partners. The Novato EOC will work closely with the Marin OA EOC which functions as the Multi-Agency Coordination Center (MACC) for most disaster incidents and will facilitate liaisons from local, state and federal agencies as needed.

EOC ACTION PLANS

At local, operational area, regional and state levels, the use of EOC action plans provide designated personnel with knowledge of the objectives to be attained and the steps required for achievement. Action plans give direction and provide a basis for measuring achievement of objectives and overall system performance.

SPECIAL DISTRICT INVOLVEMENT

Special districts are defined as local governments in SEMS/NIMS. The emergency response role of special districts is generally focused on the return to normal services. During disasters, some types of special districts may be more extensively involved in the emergency response by assisting other local governments when the disaster extends beyond city limits.

Coordination and communications should be established among special districts that are involved in emergency response, other local governments and the operational area.



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This may be accomplished in various ways depending on the local situation. Relationships among special districts, cities/towns, county government and the OA are complicated by overlapping boundaries and by the multiplicity of special districts. Special districts need to work with the local governments, as in Novato, in their service areas to determine how best to establish coordination and communication in emergencies.

When a special district is wholly contained within the city/town, the special district should have a liaison at the city/town EOC to provide direct support. An exception may occur when there are many special districts within a city.

When there are many special districts within a city/town, it may not be feasible for their EOC to accommodate representatives from all special districts during area-wide disasters. In such cases, the city/town should work with the special districts to develop alternate ways of establishing coordination and communication.

At the request of the City, special districts and other partner agencies and businesses serving Novato plan to have representatives in the Novato EOC should it be activated.



MUTUAL AID

INTRODUCTION

The foundation of California's emergency planning and response is a statewide mutual aid system which is designed to ensure that adequate resources, facilities and other support is provided to jurisdictions whenever their own resources prove to be inadequate to cope with given situation(s). The basis for the system is the California Disaster and Civil Defense Master Mutual Aid Agreement, as provided in the *California Emergency Services Act*. This Agreement was developed in 1950 and has been adopted by the state, all 58 counties and most incorporated cities in the State of California. The Master Mutual Aid Agreement creates a formal structure wherein each jurisdiction retains control of its own facilities, personnel and resources, but may also receive or render assistance to other jurisdictions within the state. State government is obligated to provide available resources to assist local jurisdictions in emergencies. It is the responsibility of the local jurisdiction to negotiate, coordinate and prepare mutual aid agreements. Mutual aid agreements exist in the following areas:

- Law Enforcement
- Fire Services
- Medical
- Public Health
- Emergency Managers
- Hazardous Materials
- Public Utilities
- Engineers
- Coroner, and others

MUTUAL AID SYSTEM

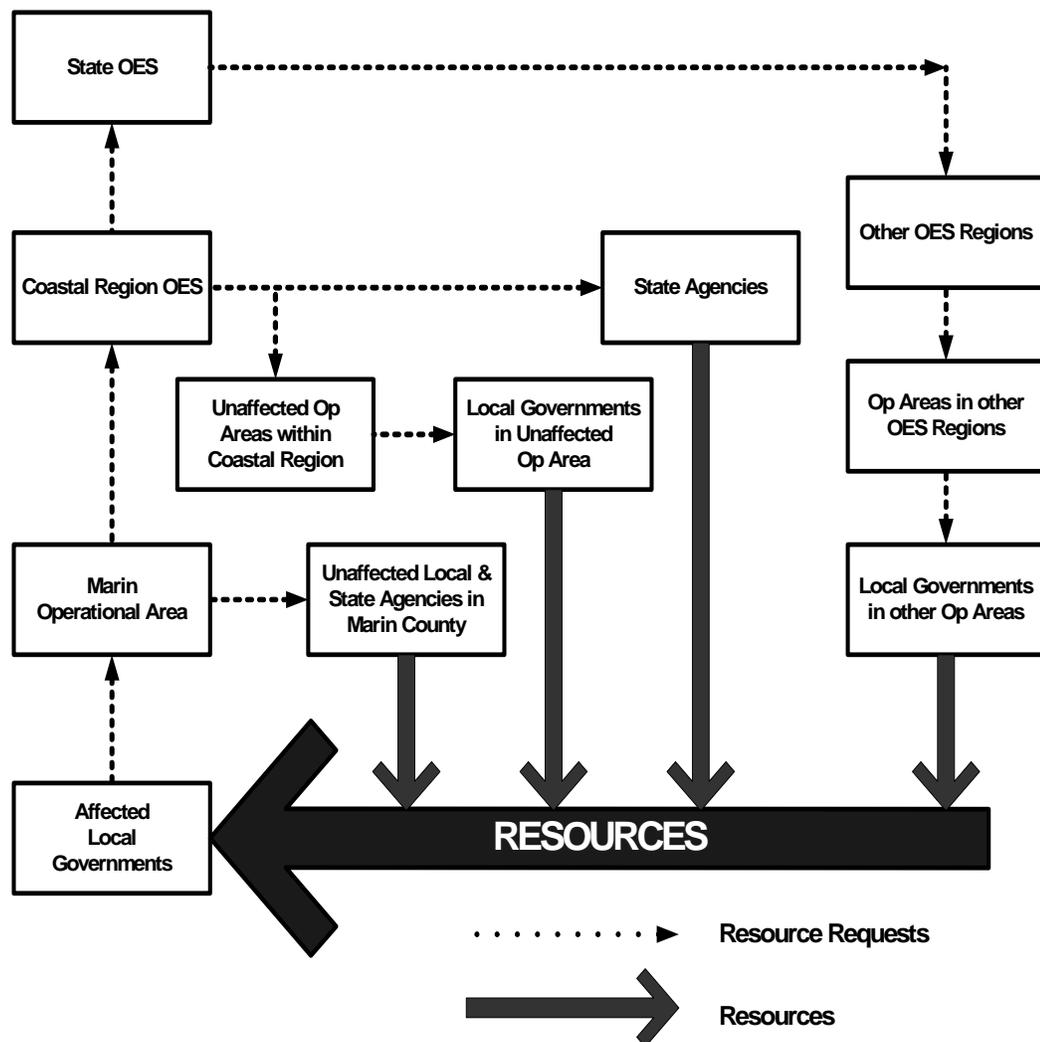
A statewide mutual aid system, operating within the framework of the Master Mutual Aid Agreement, allows for the progressive mobilization of resources to and from emergency response agencies, local governments, operational areas, regions and state with the intent to provide requesting agencies with adequate resources.



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The statewide mutual aid system includes several discipline-specific mutual aid systems, such as fire and rescue, law, medical and public works. The adoption of SEMS does not alter existing mutual aid systems. These systems work through local government, operational area, regional and state levels consistent with SEMS/NIMS and the Incident Command System (ICS) (**Figure below**). Mutual aid may also be obtained from other states. Interstate mutual aid may be obtained through direct state-to-state contacts, pursuant to interstate agreements and compacts, or may be coordinated through federal agencies.

Mutual Aid/Flow of Resource Requests (SEMS/NIMS/ICS)





MUTUAL AID COORDINATORS

To facilitate mutual aid, discipline-specific mutual aid systems work through designated mutual aid coordinators at the operational area, regional and state levels. The basic role of a mutual aid coordinator is to receive mutual aid requests, coordinate the provision of resources from within the coordinator's geographic area of responsibility and pass on unfilled requests to the next level.

Mutual aid requests that do not fall into one of the discipline-specific mutual aid systems are handled through the emergency services mutual aid system by emergency management staff at the local government, operational area, regional and state levels.

Mutual aid coordinators may function from an EOC, their normal departmental location or other locations depending on the circumstances. Some incidents require mutual aid but do not necessitate activation of the affected local government or operational area EOCs because of the incident's limited impacts. In such cases, mutual aid coordinators typically handle requests from their normal work location. When EOCs are activated, all activated discipline-specific mutual aid systems should establish coordination and communications with the EOCs as follows:

VOLUNTEER AND PRIVATE AGENCIES IN MUTUAL AID

Volunteer and private agencies may participate in the mutual aid system along with governmental agencies. For example, the disaster medical mutual aid system relies heavily on private sector involvement for medical/health resources. Some volunteer agencies such as the American Red Cross, Salvation Army and others are an essential element of the statewide emergency response to meet the needs of disaster victims. Volunteer agencies mobilize volunteers and other resources through their own systems. They also may identify resource needs that are not met within their own systems that would be requested through the mutual aid system. Volunteer agencies with extensive involvement in the emergency response should be represented in EOCs.

Some private agencies have established mutual aid arrangements to assist other private agencies within their functional area. For example, electric and gas utilities have mutual aid agreements within their industry and established procedures for coordinating with governmental EOCs. In some functional areas, services are provided by a mix of special district, municipal and private agencies. Mutual aid arrangements may include both governmental and private agencies.

A liaison should be established between activated EOCs and private agencies involved in a response. Where there is a need for extensive coordination and information exchange, private agencies should be represented in activated EOCs at the appropriate SEMS level.



EMERGENCY FACILITIES USED FOR MUTUAL AID

Incoming mutual aid resources may be received and processed at several types of facilities including marshaling areas, mobilization centers and incident facilities. Each type of facility is described briefly below.

Marshaling Area – Defined in the Federal Response Plan as an area used for the complete assemblage of personnel and other resources prior to their being sent directly to the disaster affected area. Marshaling areas may be established in other states for a catastrophic California earthquake.

Mobilization Center – Off-incident location at which emergency service personnel and equipment are temporarily located pending assignment, release or reassignment. For major area-wide disasters, mobilization centers may be located in or on the periphery of the disaster area.

Incident Facilities/Staging Areas – Incoming resources may be sent to staging areas, other incident facilities or directly to an incident, depending on the circumstances. Staging areas are temporary locations at an incident where personnel and equipment are kept while awaiting tactical assignments.

POLICIES AND PROCEDURES

Mutual aid resources will be provided and used in accordance with the California Master Mutual Aid Agreement. During a proclaimed emergency, inter-jurisdictional mutual aid will be coordinated at the county, operational area or mutual aid regional level.

Cities, such as Novato, and special districts will make mutual aid requests through the Marin County OA EOC. Request should specify at a minimum:

- Number and type of personnel needed
- Type and amount of equipment needed
- Reporting time and location
- To whom forces should report
- Access routes
- Estimated duration of operations
- Risks and hazards

Following a major disaster, the Marin County Sheriff's OES can assist local governments with reimbursement procedures for response-related costs.



VOLUNTEER RESOURCES

In response to disaster, management of resources requires integration of material, as well as personnel, into the existing Emergency Management System of the City. Volunteer groups trained in emergency response can greatly enhance and supplement emergency response personnel. Jobs for all personnel assigned to emergency response must be trained, equipped, and aligned with a qualified organization. Spontaneous volunteers, when trained and managed appropriately, can provide valuable resources to the community.

RADIO AMATEUR CIVIL EMERGENCY SERVICE (RACES)

RACES is organized under FEMA, operates according to Federal Communications Commission (FCC) rules and is a volunteer organization of licensed amateur radio operators who donate time, energy, skills and use of personal equipment for public service. RACES members may provide communications support using amateur radio, cellular, and regular phones, computers, e-mail, facsimile, Internet, microwave, public service radio, satellite, television and video-conferencing systems, as well as field and in-office support of personnel. RACES equipment is installed in both Novato's primary and alternate EOCs and RACES operators will report to the EOC as part of Novato's disaster response.

MARIN MEDICAL RESERVE CORPS (MMRC)

Marin County's Health and Human Services Division has created the Marin Medical Reserve Corps (MMRC) which enlists citizen volunteers to assist in the establishment of an organized pool of resources capable of being deployed to support Emergency Management Systems already in place in the event of a major disaster. MMRC has developed a partnership within the Marin County medical profession (active and retired) that aid in the education, training and deployment of citizen volunteers and resources in the event of a large scale, local emergency. MMRC will serve as a support role in providing volunteer medical professionals and resources to augment those services in the community that are engaged in the health and welfare of the citizenry. The MMRC is active in Novato training and working very closely with Novato Community Hospital to support the hospitals needs in a disaster.

HOMEOWNERS EMERGENCY ACTION RESPONSE TEAM (HEART)

Following a major disaster, first responders who provide fire and medical services will not be able to meet the demand for these services. Factors as number of victims, communication failures, and road blockages/closures will prevent people from accessing emergency services they have come to expect at a moment's notice through 911. The HEART program, sponsored by the Novato Fire Protection District, presents citizens training with the facts about what to expect following a major disaster and also in life saving skills with emphasis on decision-making skills and rescuer safety. It organizes teams so that HEART members are an extension of first responder services offering immediate help to victims until professional services arrive.



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HEART includes education topics such as disaster preparedness, fire and burn prevention, search and rescue, disaster first aid, wildland/urban interface and hazardous materials. Information about HEART courses is available at the Novato Fire Protection District administration office.

GET READY DISASTER PREPAREDNESS PROGRAM

The Get Ready Program was developed by the Tiburon Peninsula Disaster Preparedness Taskforce and is now available for all residents of Marin County. This two hour program is outlined by the Federal Emergency Management Agency to teach citizens what to do when help is unavailable during emergencies and disasters. The City of Novato offers the course on a regular basis to the general public and will coordinate to do trainings for specific neighborhoods, groups, business and organizations upon request.

DISASTER ASSIST REGISTRY OF NOVATO (DARN)

There are additional volunteer groups who contribute significantly. Volunteers may be called upon for their specialized training and professional skills. In Novato work is being done to revitalize the Disaster Assist Registry of Novato (DARN). Ultimately this program will be structured to recruit volunteers of all ages, identify applicable training and skills they already have, train them as appropriate and assign them to work in both disaster and non-disaster times.



CITY OF NOVATO/NFPD EMERGENCY OPERATIONS CENTER

INTRODUCTION

Day-to-day operations are conducted from departments and agencies that are widely dispersed throughout Novato. An EOC is a location from which centralized emergency management can be performed during a major emergency or disaster. This facilitates a coordinated response by the Director of Emergency Services, Emergency Management Staff and representatives from organizations who are assigned emergency management responsibilities. The level of EOC staffing will vary with the specific emergency situation.

An EOC provides a central location of authority and information. It allows for face-to-face coordination among personnel who must make emergency decisions. The following functions are performed in the Novato EOC:

- Managing and coordinating emergency operations
- Receiving and disseminating warning information
- Developing emergency policies and procedures
- Collecting intelligence from, and disseminating information to, the various EOC representatives, and, as appropriate, to county, other cities/towns, special districts, and political representatives
- Preparing intelligence/information summaries, situation reports, operational reports, and other reports as required
- Maintaining general and specific maps, information display boards, and other data pertaining to emergency operations
- Continuing analysis and evaluation of all data pertaining to emergency operations
- Directing, controlling and coordinating, within established policy, the operational and logistical support of Novato resources committed to the emergency
- Maintaining contact and coordination with support to Disaster Operations Centers, other local government EOCs, and the Marin County Operational Area EOC
- Providing emergency information and instructions to the public, making official information releases to the news media and the scheduling of press conferences as necessary

EOC LOCATION AND DESCRIPTION



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The City of Novato and the Novato Fire Protection District operate a joint EOC. The EOC is located in the Novato Fire Administration Building. The space is home to the Novato Fire administration on a day-to-day basis. During emergency conditions it is converted into a full operational EOC.

The EOC is well supplied with a computer network, wireless internet and printers, telephones, dedicated fax lines, copy machines, televisions, an internal video display system, comprehensive status boards and various communications systems. RACES operators are located in the EOC Communications Room near the Message Center and Planning and Intelligence Section. Status boards are in place for the collection and disseminations of information. Monitors are available throughout the EOC to show information on significant events and other event specific information as well as for media monitoring purposes.

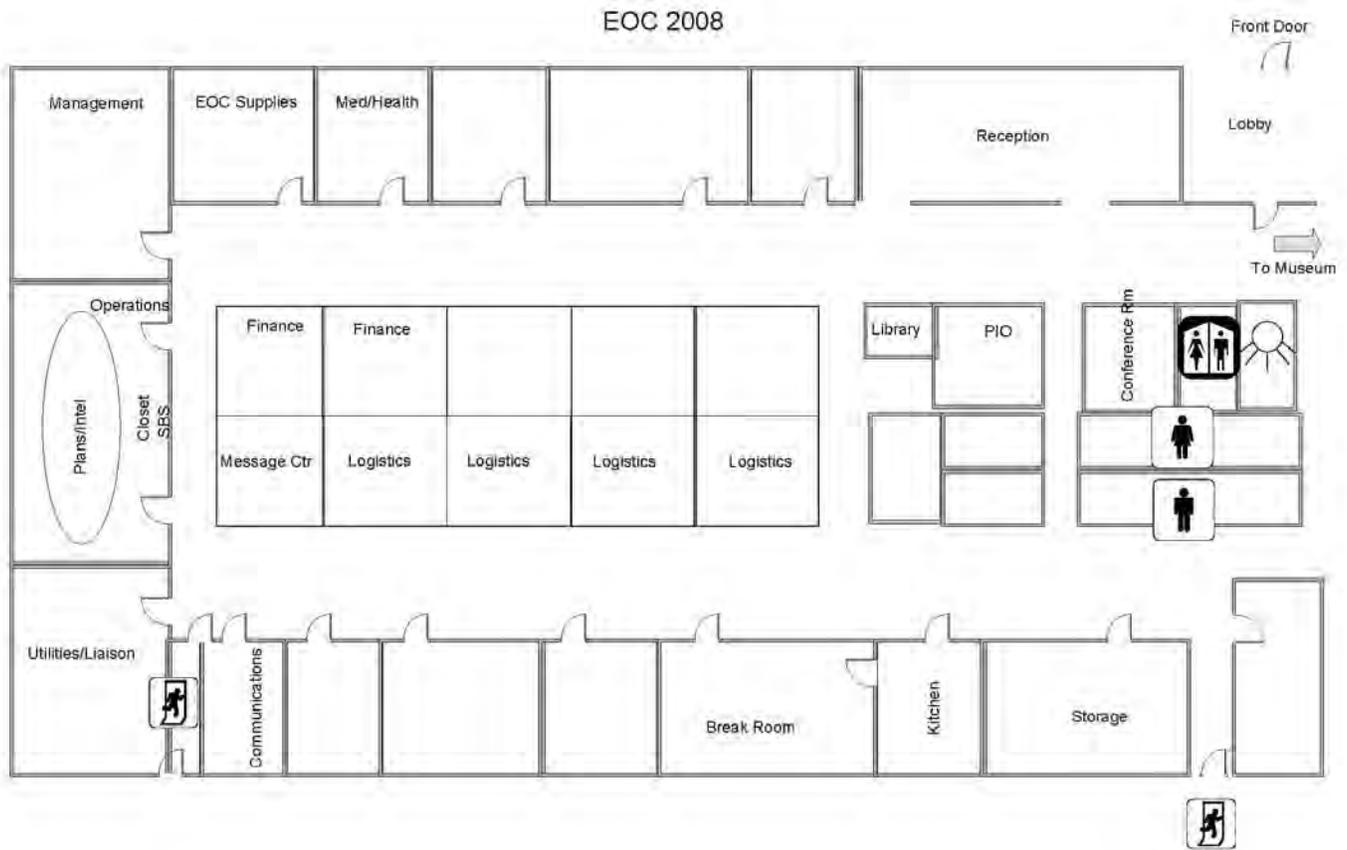
The staffing pattern is SEMS based, and operational periods are determined during the initial stages of an event. The City Manager, or other designated staff, serves as the EOC Director with additional staffing supplied by City Department Heads and/or other designated personnel. Other supporting agencies include Novato Fire Protection District, North Marin Water District, Novato Sanitary District, Novato Unified School District, American Red Cross (ARC), Novato Community Hospital, Fireman's Fund Insurance Company and other organizations, as needed.

ALTERNATE EOC LOCATION AND DESCRIPTION

Novato's alternate EOC is located in the Police Department Training Room. The alternate EOC will be activated if, for some reason, the Primary EOC is not functional, or access to the Primary EOC is hindered. Direction and control authority will be transferred from the primary EOC to the alternate EOC when deemed necessary by the EOC Director. The operational capabilities of the alternate EOC are relatively limited. The Logistics section will arrange for relocation and/or acquisition of staff and supplies for the alternate EOC if activated. The EOC Coordinator will ensure that the Operational Area EOC is aware that the alternate EOC is being used.

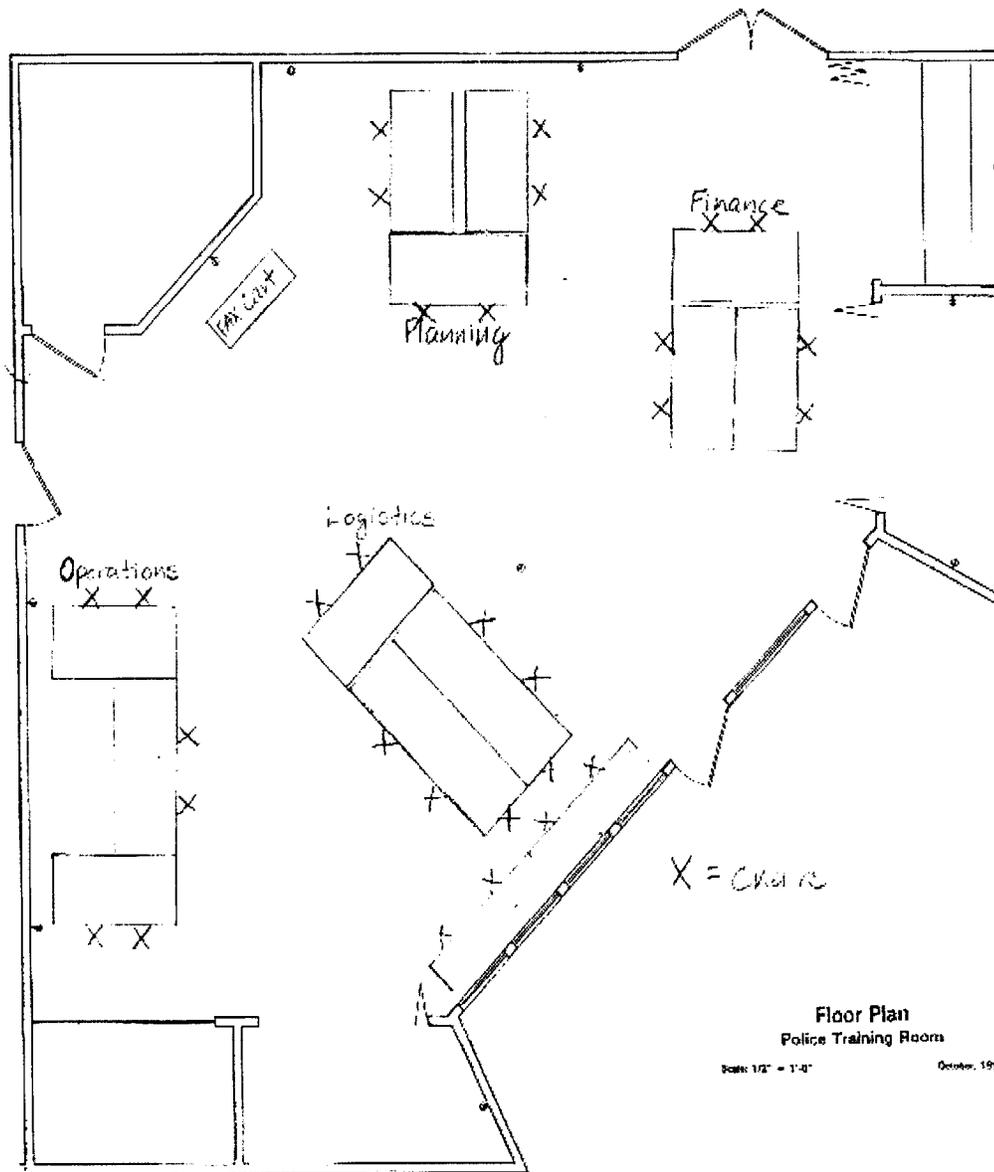


City of Novato Emergency Operations Center Floor Plan





City of Novato Alternate Emergency Operations Center Floor Plan





WHEN TO ACTIVATE THE EOC:

A matrix has been developed for Novato showing three levels of events/situations that could impact the city. A guide has been developed indicating who on the Emergency Management Team should be notified and who should respond to the EOC during incidents at each of these levels. This is meant to be used only as a guideline. Information available at the time of an incident may dictate the need to adjust the notification and response. That matrix and associated staffing information follows:

Event/Situation
Major emergency impacting the City
Multiple departments with heavy resource involvement
Major earthquake damage
Major wildfire affecting developed area
Moderate Earthquake with reports of damage
Major wind or rain storm
Two or more large incidents involving two or more local response agencies
Significant resources are requested from outside the City
Severe Weather Advisory
Major wildfire affecting undeveloped area
Small incident involving three or more local response agencies
Flood Warning

N=Notify R=Respond



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Position/Title	Level I	Level II	Level III
EOC Director	N	R	R
EOC Coordinator	N	R	R
Public Information Officer	N	R	R
Safety/Security Officer		N	R
Legal Advisor		N	R
Section Support Staff			R
Liaison Officer			R
Operations Section Chief	N	R	R
Law Branch Coordinator		R	R
Fire and Rescue Branch Coordinator		R	R
Public Works Branch Coordinator		R	R
Medical and Health Unit Coordinator		N	R
Special District/Liaison Representative*		N	R
Section Support Staff			R
Planning/Intelligence Section Chief	N	R	R
Situation Analysis Branch Coordinator		R	R
Documentation/Display Branch Coordinator		N	R
Damage Assessment Unit Leader		N	R
Advance Planning Unit Leader		N	R
Demobilization Unit Leader		N	R
Recovery Planning Unit Leader		N	R
Section Support Staff			R
Logistics Section Chief	N	R	R
Care and Shelter Branch Coordinator		R	R
Supply and Procurement Branch Coordinator		R	R
Communication Unit Leader		N	R
Personnel Unit Leader		N	R
Transportation Unit Leader		N	R
Facilities Unit Leader		N	R
Resource Status Unit Leader		N	R
Section Support Staff		N	R
Volunteer Unit Leader		N	R
Finance/Admin Section Chief	N	R	R
Payables/Records Branch Coordinator		N	R
Time Recording Branch Coordinator		N	R
Compensation and Claims Unit		N	R
Section Support Staff		N	R

* Special District/Liaison Representatives and Technical Specialist will be called in as appropriate



CITY OF NOVATO EMERGENCY OPERATIONS PLAN

WHO CAN ACTIVATE THE EOC:

The following City of Novato and Novato Fire Protection District employees (or their designees) are authorized to activate the EOC:

- City Manager
- Police Chief
- Police Captains or Watch Commander
- Fire Chief
- Deputy Fire Chief
- Emergency Services Manager with concurrence of any of the above

HOW TO ACTIVATE THE EOC

- Contact the Novato Emergency Services Manager. If the ESM is unavailable, contact the Novato Police Department Dispatch Center
- Identify yourself and provide a callback confirmation phone number
- Briefly describe the emergency/disaster situation causing the request

STATUS BOARDS

Because the EOC's major purpose is accumulating and sharing information to ensure coordinated and timely emergency response, status boards for tracking emergency activities will be made available for use in both the primary and alternate EOCs. All EOC sections must maintain display devices so that other sections can quickly comprehend what actions have been taken, what resources are available, and to track damage in Novato. The Planning/Intelligence Section is responsible for coordinating the display of information. All display charts, boards, and materials are stored in the EOC.

At the onset of any disaster, a log will also be compiled for the duration of the emergency situation. Key disaster related information will be recorded in the log; e.g., casualty information, health concerns, property damage, fire status, size of risk area, scope of the hazard to the public, number of evacuees, etc. The posting of the log is the responsibility of the Planning/Intelligence Section staff.

COMMUNICATIONS

Various communication tools exist in/through the Novato EOC or through the Marin OA EOC:

- **TENS** – The City of Novato and the Novato Fire District-wide Telephone Emergency Notification System



CITY OF NOVATO EMERGENCY OPERATIONS PLAN

- **Computer Aided Dispatch (CAD)** for Novato Police Department and Novato Fire Protection District
- **MERA** – Marin Emergency Radio Authority voice radio system
- **RACES** – A county-wide organization of over 120 amateur radio operators
- **SAT Phones** – Satellite phones
- **RIMS** – Response Information Management System
- **EAS** – Emergency Alert System
- **HAR** – Highway Advisory Radio **Novato Radio 530 AM**
- **EDIS** – Emergency Digital Information System
- **OASIS** – Operational Area Satellite Information System

This does not include additional assets that could be provided to the County by other outside agencies and/or mutual aid providers.

EOC COORDINATION WITH VOLUNTEER AND PRIVATE AGENCIES

Local jurisdictions' EOCs will generally be a focal point for coordination of response activities with many non-governmental agencies and should establish communication with private and volunteer agencies providing services within their jurisdiction.

Agencies that play key roles in the response should have representatives in the EOC. If an agency supports several functions and has only one representative in the EOC, the agency representative should be located in the liaison area. If an agency is supporting one function only its representative may be located with that functional element. For example, American Red Cross (ARC) personnel will likely be part of the staffing for the Care and Shelter element of the EOC which is located in the Logistics Section.

During large events, agencies that have countywide response roles and cannot respond to numerous local jurisdictions' EOCs should be represented at the OA level.

Private non-profit community based organizations (CBO's) may be important resources for emergency response and recovery services. Some of these agencies are critical in the welfare of their clients who have special needs. The Marin Interagency Disaster Coalition (MIDC) provides countywide coordination and communication with non-governmental and volunteer agencies in Marin County. MIDC has a representative at the OA EOC.

In the event of a disaster that impacts communications and movement of resources, non-profit organizations within Novato may be of critical assistance. Some may need help with their special clients. Use of local CBO's and their services will be coordinated through the Logistics Section.



CITY OF NOVATO COORDINATION LINKS

**CALIFORNIA EMERGENCY MANAGEMENT AGENCY
(CalEMA)**



CalEMA COASTAL REGION/MUTUAL AID REGION II



MARIN OPERATIONAL AREA EOC



**CITY OF NOVATO/NOVATO FIRE DISTRICT
EOC**



NOVATO FIELD LEVEL RESPONSE



EOC POSITION DESCRIPTIONS AND RESPONSIBILITIES

EOC STRUCTURE

SEMS regulations require local governments to provide five functions: management, operations, planning/intelligence, logistics and finance/administration. These functions are the basis for structuring the EOC organization

Management - Responsible for overall emergency policy and coordination through the joint efforts of governmental agencies and private organizations

Operations - Responsible for coordinating all jurisdictional operations in support of emergency response through implementation of the local government's EOC Action Plan

Planning/Intelligence - Responsible for collecting, evaluating and disseminating information; assist in developing the County OA's EOC Action Plan, After Action Report, and Corrective Action Report, in coordination with the EOC Emergency Services Coordinator

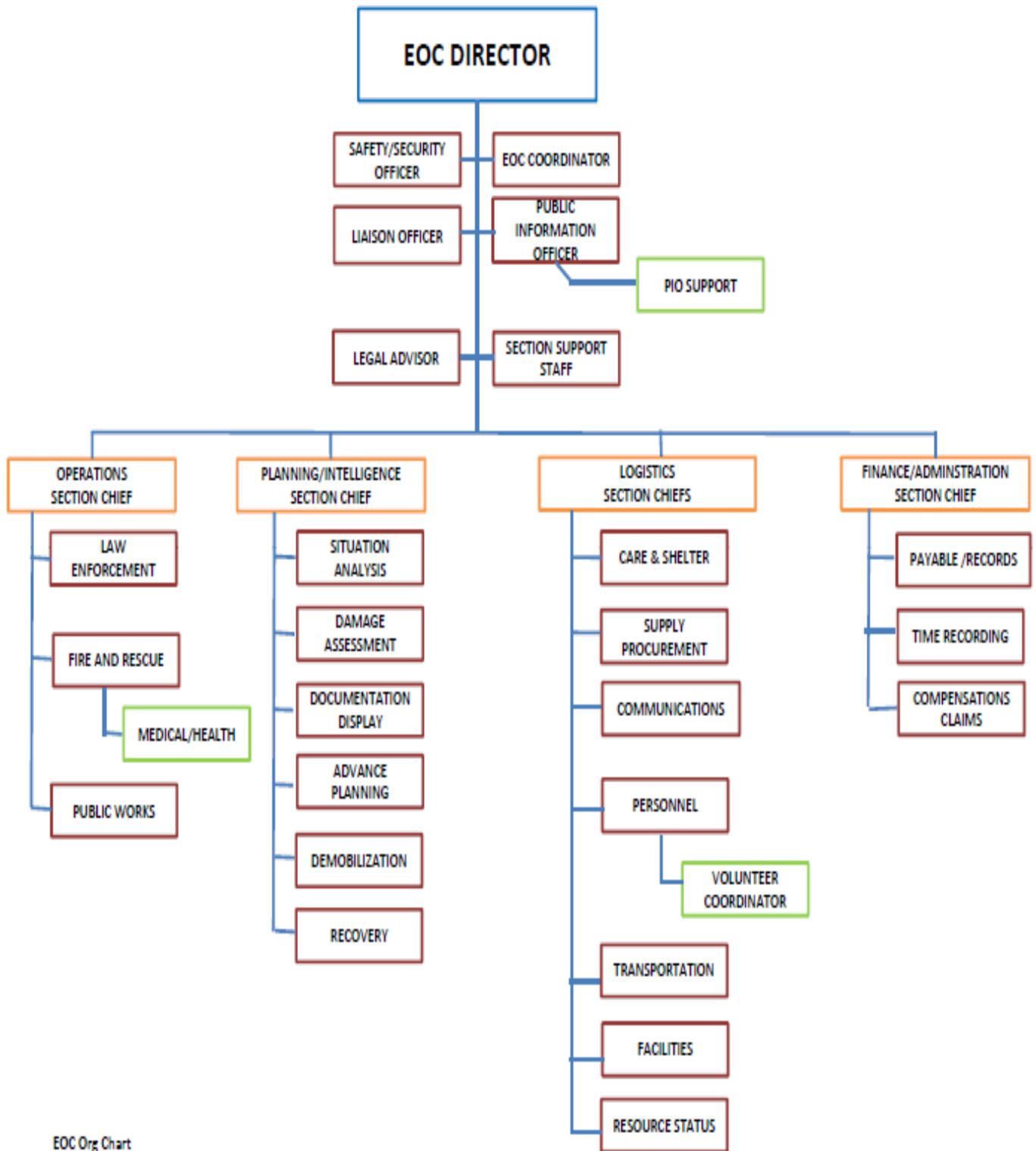
Logistics - Responsible for supporting operations, providing facilities, services, personnel, equipment and materials

Finance/Administration - Responsible for financial activities and other administrative aspects

The EOC organization may include representatives from special districts, volunteer agencies, and private agencies with significant response roles



CITY OF NOVATO EMERGENCY OPERATIONS PLAN



EOC Org Chart
PD773:Rev 04/07/09



MANAGEMENT SECTION

The Management Section is responsible for overall management and administration of the incident. Management also includes certain support staff functions required to support the EOC Management function and the field command function.

- EOC Director
- EOC Coordinator
- Public Information Officer
- Safety/Security Officer
- Legal Advisor
- Liaison Officer

EOC Director - The EOC Director is responsible for directing Novato's response and recovery for any disaster or emergency. In Novato the City Manager is the primary EOC Director and may delegate this responsibility.

EOC Coordinator – The EOC Coordinator serves as a resource and assists the EOC Director in the administration of emergency response. In addition, the EOC Coordinator provides guidance to all other EOC staff in performing their responsibilities.

Public Information Officer – The Public Information Officer (PIO) acts under the direction of the EOC Director and Emergency Services Coordinator and coordinates city public information activities. The PIO ensures that the media and citizens are fully informed on all aspects of the emergency. The PIO ensures that in a regional event the message being transmitted is consistent with the message that is intended to be released by emergency management partners at the local and regional levels.

Safety and Security Officer – The Safety and Security Officer acts as an advisor to the EOC Director. He or she watches over all aspects of the emergency organization to ensure the safety of all personnel. The Safety Officer is responsible for correcting unsafe operations and for working with all sections to protect the safety of all emergency services workers in the EOC.

Legal Advisor – The Legal Advisory provides advice to the EOC Director in all legal matters relating to the emergency. The Legal Advisor assists the EOC Director in proclaiming a local emergency and implementation of emergency powers.

Liaison Officer – When an incident has a multi-agency or multi-jurisdictional response, the Liaison Officer provides and maintains coordination with outside agency representatives, local businesses and employers, the Op Area EOC and other political representatives.



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OPERATIONS SECTION

The Operations Section is under the supervision of the Operations Section Chief who is in charge of all functions within the Operations Section. The Operations Section directs the Novato operational resources and coordinates mutual aid resources. In addition, the Operations Section is responsible for coordinating with the field incident commanders. The following branches are in the Operations Section. Various Branches/Groups can be added as needed.

- Operations Section Chief
- Law Branch
- Fire and Rescue Branch
- Public Works Branch

Operations Section Chief – The Operations Section Chief is in charge of all branches/units in the Operations Section and reports directly to the EOC Director. The Operations Section Chief assists in the development and execution of the Action Plan. The Operation Chief shall be advised of all requests for Mutual Aid and other resources.

Law Branch – The Law Branch directs the response activities of the Novato Police Department units, and volunteers. It also coordinates with the Coroner activities and all law mutual aid.

Fire and Rescue Branch – The Fire Branch directs the response activities of the Novato Fire District, volunteers and with all fire mutual aid. The Branch coordinates rescue operations other agencies as required for heavy rescue.

Public Works Branch – The Public Works Branch directs and coordinates response to public works problems, maintains surviving utilities and services and will coordinate any necessary public works mutual aid within or out of Novato. This Branch also assists in evaluating the safety of structures and public infrastructure. Public Works will also assist other units with traffic control, search and rescue and transportation as needed.

PLANNING AND INTELLIGENCE SECTION

The Planning and Intelligence Section is under the supervision of the Planning/Intel Section Chief. The duties and responsibilities of the Planning Section are to gather and analyze all data regarding the incident and the assigned resources. The Planning Section maintains an incident log, EOC display maps, and charts. The Planning Section is also responsible for preparing situation reports, assessing damage, conducting planning meetings, documenting all EOC activities, and assisting in the preparation of the Action Plan. The following branches are in the Planning Section. Various Branches/Groups can be added as needed.

- Planning/Intelligence Section Chief
- Situation Analysis Branch
- Documentation/Display Branch
- Technical Specialists



CITY OF NOVATO EMERGENCY OPERATIONS PLAN

Planning/Intelligence Section Chief – The Planning/Intelligence Section Chief manages the Planning and Intelligence Section and is responsible for the collection, evaluation and dissemination of incident information.

Situation Analysis Branch – The Situation Analysis Branch's primary role is to collect, collate and process all information and intelligence including Damage Assessment. Situation Analysis is also responsible for maintaining the Master Incident Log and map displays.

Documentation/Display Branch – The Documentation/Display Branch maintains and files all EOC messages, maintains official history of the emergency to insure complete documentation for the purpose of recovery of funds and advance planning.

Technical Specialist – Technical Specialists provide expert information in the development of an Action Plan. Some areas of expertise might be river levels, weather forecasting, Geographic Information System/Maps, hazardous materials or radiological materials.

LOGISTICS SECTION

The Logistics Section is under the supervision of the Logistics Section Chief and provides all emergency support needs. The Logistics Section orders all resources, manages volunteer personnel, and provides communications, facilities, transportation, supplies, equipment, fuel, food, and shelter. The Logistics Section is made up of the following branches. Various Branches/Groups can be added as needed.

- Logistics Section Chief
- Care and Shelter Branch
- Supply and Procurement Branch

Logistics Section Chief – The Logistics Section Chief ensures the logistics function proceeds in support of the Novato EOC, and is in charge of the functions within the Logistics Section.

Care and Shelter Branch – The Care and Shelter Branch directs and coordinates response activities in cooperation with the American Red Cross, the Salvation Army and other organizations active in disaster response and the Marin OA EOC Care and Shelter Branch to aid in providing care and shelter services to all those impacted by an emergency or disaster.

Supply and Procurement Branch – The Supply and Procurement Branch oversees the procurement and allocation of supplies and material not normally provided through mutual aid channels. It coordinates delivery of supplies, manages donated goods programs, establishes and maintains staging areas and coordinates procurement actions with the Finance/Administration Section.

FINANCE/ADMINISTRATION SECTION



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The Finance/Administration Section provides for the authorization of funds and/or tracking of accounts, for materials and equipment associated with the disaster response. The section tracks the time worked by all emergency personnel involved in the incident, provides cost analysis and projections, and records any and all injury claims for compensation. Various Branches/Groups can be added as needed.

- Finance Section Chief
- Payables/Records Branch
- Time Keeping Branch

Finance Section Chief – The Finance Section Chief provides supervision to members of the Finance Section and manages all financial aspects of the emergency. In addition he/she manages the receipt of claims for compensation against the City.

Payables/Records Branch – The Payables/Records Branch provides the projected cost of supplies and materials to support the emergency. In addition, it collects all cost data and records, performs cost effectiveness analysis and provides cost estimates and cost savings recommendations. This branch also manages claims for worker's compensation.

Time Keeping Branch – The Time Keeping Branch maintains records of all personnel time worked at the emergency which includes all volunteers that may or may not be previously registered as Disaster Service Workers.



EMERGENCY PROCLAMATIONS

LOCAL EMERGENCY

In the City of Novato, a Local Emergency may be proclaimed by the City Manager. The City Council must ratify the Local Emergency proclamation within seven (7) days. The City Council must continue to review the need to continue the proclamation at least every fourteen (14) days until the Local Emergency is terminated. The Local Emergency must be terminated as soon as local conditions warrant. Proclamations are normally made when there is an actual incident or threat of disaster or extreme peril to the safety of persons and property within Novato, caused by natural or man-made situations.

The Marin County Sheriff's Office of Emergency Services (OES) will be notified of the proclamation and, as appropriate, requested to include Novato in an Operational Area proclamation of emergency and to pass the same request on to the Governor's office for inclusion in a State proclamation.

The proclamation of a Local Emergency (city or OA level) provides the governing body with the legal authority to:

- Promulgate or suspend orders and regulations necessary to provide for the protection of life and property, including issuing orders or regulations imposing a curfew within designated boundaries
- Exercise full power to provide mutual aid to any affected area in accordance with local ordinances, resolutions, emergency plans, or agreements
- Require the emergency services of any local official or employee
- Requisition necessary personnel and materials from any local department or agency
- Obtain vital supplies and equipment and, if required, immediately commandeer the same for public use
- Impose penalties for violation of lawful orders
- Conduct emergency operations without incurring legal liability for performance, or failure of performance. *Note: Article 17 of the Emergency Services Act provides for certain privileges and immunities*



STATE OF EMERGENCY

The Governor may proclaim a State of Emergency when:

- Conditions of disaster or extreme peril exist which threaten the safety of persons and property within the state caused by natural or man-made incidents.
- The Governor is requested to do so by local authorities
- The Governor finds that local authority is inadequate to cope with the emergency

Whenever the Governor proclaims a State of Emergency:

- Mutual aid shall be rendered in accordance with approved emergency plans when the need arises in any county, city and county or city for outside assistance
- The Governor shall, to the extent he deems necessary, have the right to exercise all police power vested in the State by the Constitution and the laws of the State of California within the designated area
- Jurisdictions may command the aid of citizens as deemed necessary to cope with the emergency
- The Governor may suspend the provisions of orders, rules or regulations or any state agency; and any regulatory statute or statute prescribing the procedure for conducting state business
- The Governor may commandeer or make use of any private property or personnel (other than the media) in carrying out the responsibilities of his office
- The Governor may promulgate, issue and enforce orders and regulations deemed necessary
- The Governor can request additional assistance by asking for a Presidential Declaration

STATE OF WAR EMERGENCY

Whenever the Governor proclaims a State of War Emergency, or if a State of War Emergency exists, all provisions associated with a State of Emergency apply. In addition, all state agencies and political subdivisions are required to comply with the lawful orders and regulations of the Governor which are made or given within the limits of his authority as provided in the Emergency Services Act.



CONTINUITY OF GOVERNMENT

PURPOSE

A major disaster or an enemy attack could result in great loss of life and property, including the death or injury of key government officials. At the same time, there could be partial or complete destruction of established seats of government and the destruction of public and private records essential to continued operations of government and industry.

In the aftermath of a major disaster, law and order must be preserved and essential government services must be maintained. Civil government accomplishes this best. To this end, it is particularly essential that local units of government continue to function.

Applicable portions of the California Government Code and the State Constitution (cited in the next paragraphs) provide authority for the continuity and preservation of state and local government.

RESPONSIBILITIES

Government at all levels is responsible for providing continuous, effective leadership and authority under all aspects of emergency services operations (preparedness, response, recovery, and mitigation). Under California's concept of mutual aid, local officials remain in control of their jurisdiction's emergency operations while others may provide additional resources upon request. A key aspect of this control is the ability to communicate official requests, situation reports and emergency information throughout the disaster.

PRESERVATION OF LOCAL GOVERNMENT

Article 15 of the *California Emergency Services Act* (Chapter 7 of Division 1 of Title 2 of the Government Code) provides the authority, as well as the procedures to be employed, to ensure continued functioning of political subdivisions within the State of California. Article 15 provides for the succession of officers who head departments responsible for maintaining law and order, or in furnishing public services relating to health and safety.

Article 15 also outlines procedures to ensure continued functioning of political subdivisions in the event the governing body, including standby officers, is unavailable to serve.

LINES OF SUCCESSION FOR OFFICIALS CHARGED WITH DISCHARGING EMERGENCY RESPONSIBILITIES

The first step in ensuring continuity of government is to have personnel who are authorized and prepared to carry out emergency actions for government in the event of a natural, technological, or national security disaster.



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Article 15, Section 8637 of the Emergency Services Act authorizes political subdivisions such as City of Novato to provide for the succession of officers (department heads) having duties related to law and order and/or health and safety.

Article 15, Section 8643 Emergency Services Act describes the duties of a governing body during emergencies as follows:

- Ascertain the damage to the jurisdiction and its personnel and property
- Reconstitute itself and any subdivisions
- Perform functions in preserving law and order and furnishing local service

A copy of the succession list will be kept at both the EOC and the City Manager's Office.

Preservation of Vital Records

In the City of Novato each department is responsible for the preservation of vital records.

Vital records are defined as those records that are essential to:

- Protect and preserve the rights and interests of individuals, governments, corporations and other entities. Examples include vital statistics, land and tax records, license registers and articles of incorporation.
- Conduct emergency response and recovery operations. Records of this type include utility systems maps, locations of emergency supplies and equipment, emergency operations plans and procedures, personnel rosters, etc.
- Re-establish normal governmental functions and protect the rights and interests of government: constitutions and charters, statuettes and ordinances, court records, official proceedings and financial records.

Each department within the City should identify, maintain and protect its own essential records.



PART TWO: THREAT SUMMARY AND ASSESSMENTS

GENERAL

This section of the City of Novato EOP consists of a series of threat summaries based on the results of the Marin County's hazard analysis. Within Novato, not all threats are considered to be a critical concern. However, threats that may seem unlikely to affect Novato directly, will indirectly impact our community.

It is important to note that a disaster could include more than one event. For instance, a major earthquake could cause major structure loss, inundation by dam collapse, fires, extensive hazardous materials spills from vehicles on the roadway and ruptured underground pipelines. In general, those agencies assigned roles under this plan should be prepared for the worst and expect minimal help from outside the city.

Especially threatening are acts of terrorism. Many of the hazards could be a deliberate act which would increase the danger due to the targeted nature of the event. For example, a hazardous materials release would be much more dangerous if it were timed to coincide with commuter periods, a large public event or were located in an especially sensitive area.

LOCATION AND POPULATION

The city of Novato is the northern most city in Marin County, which is located north of the Golden Gate Bridge. Novato covers twenty-eight square miles and has a population of approximately 51,000. The city and county are part of the California Emergency Management Agency's Coastal Region.

The city of Novato is divided by U.S. Highway 101. San Pablo Bay lies to the east and hills with open space lie to the immediate west. Sonoma County borders Novato to the north and the City of San Rafael borders it to the south.

Marin County is surrounded by water on three sides and is connected to surrounding cities and counties by the following bridges: The Golden Gate Bridge to the south; the Richmond/San Rafael Bridge to the east; State Route 37 and the Petaluma River Bridge to the east (along a northern part of San Pablo Bay on landfill); and U.S. Highway 101 to the north (which narrows to a 4-lane uncontrolled road that traverses San Antonio Creek).

One of the major problems the city and county face during an emergency is the possibility of being isolated from the surrounding communities and any resources or help.



CITY OF NOVATO EMERGENCY OPERATIONS PLAN





TRANSPORTATION AND INFRASTRUCTURE

Transportation – The primary travel corridor through Novato and all of Marin county is U.S. Highway 101 (running north and south) along which 70 percent of the population lives. This is the main economic and transportation corridor for the county and the entire North Bay, as well as the main tourist route through Northern California. Other means of transportation in Novato and Marin county include:

- A regional general aviation airport at Gness Field – staffed and maintained by the County Department of Public Works (DPW) for the benefit of the flying public
- Golden Gate Transit - bus service to other counties as well as local county service
- The Marin Airporter and Charter Service Marin Transit – responsible for local transit and para-transit services within Marin county
- Whistlestop Wheels – a service for persons with disabilities who are ADA-certified to use Para-transit
- The future-operational Sonoma Marin Area Rail Transit line running through the county parallel to Highway 101 and the North Coast Rail Authority line running through the northeast section of the area.

POTENTIAL HAZARDS AND THREATS SUMMARY

Cities, towns and the unincorporated areas of Marin County are vulnerable to a wide range of threats. In recent years we have experienced several events such as earthquakes, floods, fires, hazardous materials spills and storms. The threat picture is further complicated by the increased use, storage and transportation of numerous hazardous materials in various locations of our communities.

There are three broad categories of hazards that can affect Novato in some way: natural, technological and man-made threats.

Natural

- Earthquake
- Flood
- Wildland Fire
- Winter Storm
- Tsunami
- Landslide
- Drought
- Public Health Crisis

Technological

- Hazardous Materials Incident
- Transportation Accident
- Dam Failure
- Energy Disruption



Radiological Incident

Manmade

- Terrorism
- Civil Disturbance
- National Security Emergency



THREAT ASSESSMENT 1: EARTHQUAKE

GENERAL SITUATION

Varying in type and intensity, earthquakes are perhaps the least predictable of any of the potential hazards. They may cause no real damage or the area could be heavily impacted. Often, the main earthquake is followed by a series of aftershocks. Aftershocks can be larger than the original quake and pose a significant threat to those responding to the first event.

The city of Novato is located in one of the most seismically active areas of the nation. Located within and next to Marin County are several known active and potentially active earthquake faults, including the San Andreas, the Rogers Creek/Healdsburg and the Hayward faults. (*Reference Earthquake Faults Map page 50*)

- The San Andreas Fault enters the county on the southwestern corner and continues north along the coast. The fault lies close to many smaller coastal communities which host many tourists in the summer months. This fault is also capable of generating a near-shore Tsunami (see Tsunami Hazard). During the 1906 earthquake, portions of fences and roads were offset by up to sixteen feet in Tomales - even though the epicenter was in South San Francisco.
- The Rogers Creek / Healdsburg Fault runs just east of Marin county with the northern part of the county being less than ten miles away from the fault.
- The Hayward Fault (located about 8 miles east of the eastern edge of the Novato Sphere of Influence) has a maximum credible earthquake of a 7.5 magnitude. The most severe earthquake effects in Novato would likely come from this fault.

A major earthquake occurring in or near these areas could result in deaths, casualties, property and environmental damage, and disruption of normal government and community services and activities. The effects could be aggravated by collateral emergencies such as fires, flooding, hazardous material spills, utility disruptions, landslides, dam failures, and transportation emergencies. The location of the epicenter, as well as the time of day and season of the year, would significantly influence the number of casualties and the amount of damage.

Such an event would likely exceed the response capability of Novato's emergency management organization, requiring assistance from volunteer and private agencies, the Marin County Sheriff's OES, the Governor's Office of Emergency Services and the federal government. Response efforts will be significantly hampered by the loss of communications and transportation systems.

A major effort would be needed to remove debris and clear roadways, demolish unsafe structures, assist in reestablishing public services and utilities and provide continuing care and temporary housing for affected citizens.



The economic impact of a major earthquake may also be significant. Employment may decline, businesses may suffer or even fail, tourism will drop, and a corresponding reduction in tax revenues will strain the basic financial systems in local communities. Additionally, costs for basic services and supplies can be expected to increase along with additional infrastructure maintenance, replacement, or repair expenses. Effects can last for months and years unless addressed quickly and aggressively.

SPECIFIC SITUATION

Freeways and Major Highways

Freeways and critical highways pass through key parts of Marin County. Highway 101 runs directly through the middle of Novato. Alternate routes need to be identified. Should overpasses or bridges collapse or become unsafe, or roads close due to landslides, communities could be isolated for days. There are several overpasses in Novato. A collapse of the Rowland Boulevard overpass would result in virtually dividing Novato into two jurisdictions. The opening of crossings and traffic control will be a major factor for emergency services personnel.

Railroads

Many railroad bridges are susceptible to seismic damage because of age, design and construction. Large lengths of line are vulnerable to landslide.

Dam and Flood Control Channels

Based upon current design, construction practices and ongoing programs of review and modification, catastrophic dam failure is considered unlikely, but still possible. An intensive evaluation completed on Stafford Dam in the early 1970's determined that the dam had an adequate safety margin to hold up under an earthquake of magnitude 8.25 on the San Andreas Fault. Strong shaking could cause some dams to consolidate and/or to overflow and cause localized flooding. Many flood control channels are expected to suffer minor damage. Damage to intake structures and scours could hinder getting water into the system or the ability for controlled releases.

Hazardous Sites

Underground fuel pipelines, chemical storage tanks, and manufacturing locations may be damaged or destroyed and the resulting leaks may constitute a considerable threat to individual areas. Additionally, the area is crossed with many high voltage lines which supply electricity to the majority of the area. Should they fall, roadways will be blocked and the potential for fire and shock hazards will be significant until Pacific Gas and Electric can shut them off.

Population Control

In addition to caring for their own citizens, Novato, along with other jurisdictions, may



also have to support seasonal visitors in the area at the time of the event or evacuees from other Bay Area jurisdictions. Local agencies may have to restrict access and dedicate large numbers of resources to traffic management and transportation. Such populations may place excessive demands upon any established mass care facilities or shelters within the city.

DAMAGE TO VITAL PUBLIC SERVICES, SYSTEMS AND FACILITIES

Medical Facilities

Approximately half of the beds in the county's medical facilities could be lost during a major earthquake due to the age and type of construction of some of the hospitals and rehabilitation centers in Marin. These hospitals will have services limited by damages, staff shortages, and lack of supplies. Local clinics, surgical facilities, and field treatment sites may be needed to handle the initial demand. Marin's Mass Casualty Incident (MCI) plan will be implemented but may be overwhelmed by the number of victims. Novato Community Hospital, although built to stringent earthquake standards, will likely not be immune to damages resulting in loss of beds, operating facilities, supplies and equipment. Access to the facility may be hampered if the Novato Creek Bridge or Franklin overpass on Hwy 101 should go down.

The most common injuries will be glass cuts on hands and feet. The most serious injuries will be to crush or burn victims. It may be necessary to transport many injured to out-of-county facilities.

Fire Operations

Although total collapse of fire stations is not expected, possible disruption of utilities, damaged doors and loss of power can create major problems. Numerous fires due to disruption of power and natural gas networks can be expected. Many connections to major water sources may be damaged and storage facilities would have to be relied upon. Water supplies could be inadequate or non-existent. Rescuers should expect loss of electricity and water, jammed doors, restricted mobility due to debris, possible loss of communications capability and delays in reaching maximum effectiveness due to personnel shortages.

Communications

The use of telephones will be limited. Traditional and cellular systems will be affected by infrastructure failure, overloads, and loss of electrical power. Immediately following an event, numerous failures will occur, compounded by system use overloads. 80% of the telephone system is likely to be disabled for the first 24 hours.

Radio systems are expected to operate at 40% effectiveness the first 12 hours following an earthquake, increase to 50% for the second 12 hours, then decline to approximately 40% within 36 hours. A major issue will be batteries for portable radios.

Equipment reliant on microwave transmission will experience loss of power. Damage to



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antennas and loss of alignment will reduce the equipment effectiveness to 30% or less.

Electrical Power

Novato has a major Nor Cal substation located in Ignacio along with other smaller ones in town.

Extra-high-voltage transmission equipment is generally the most susceptible component of the electrical system. Transmission lines are especially vulnerable in Marin due to the rugged and remote terrain. Generating plants usually fare better but could also fail. Up to 60% of the system load may be interrupted immediately.

Repairs may require physically clearing roadways, bringing in special equipment, and safeguarding against aftershocks and other hazards. Close coordination is required with regional and local utility representatives. Power restoration may take days or even weeks with the priority being restoration to critical facilities (i.e. hospitals, police and fire stations, emergency communications, water and sewage plants). Emergency generators may have to be relied on for at least 72 hours.

Natural Gas

Damage to natural gas facilities serving Novato and other Marin's communities will consist primarily of isolated breaks in major transmission lines. Two major transmission lines pass through Novato. Breaks in mains and individual service connections within the distribution system will be significant. Leaks pose a fire threat in these susceptible areas of intense ground shaking and/or poor ground near the shoreline. Breaks in the system will affect the most developed portions of the county and restoration could be significantly delayed.

Propane Gas

Many residents and businesses rely upon propane or bottled gas. Many of these tanks are not secured and will likely tip over or become disconnected. The leaking tanks will pose a fire/explosion hazard and many households will be without cooking and heating capabilities. Re-supply and repair of this service will be delayed until roads can be cleared and outside assistance is brought into the area by the vendors. Priority for repair and re-supply will be given to critical facilities such as medical sites, shelters, and emergency generators at remote radio repeater sites.

Water

Primary water sources may be incapacitated for an extended period of time due to power failure, damage to the treatment plant, pump stations and/or the pipelines that distribute potable water. There are a number of small water districts which may be susceptible to total destruction.



Priority for water distribution will go to fire suppression, life support, medical facilities, decontamination, and shelter operations. Portions of water systems may have to be isolated to keep water in the system and not flowing out of leaking pipes. All of this may result in significant rationing. The use of surface-laid pipes and water tanker trucks to maintain a minimal supply to some areas will almost certainly be required.

The three major reservoirs within Marin include Kent, Soulajule, Nicasio and There are also a host of smaller reservoirs. The supply lines should be considered likely to fail during a major earthquake.

Sanitation Systems

These systems will be generally affected in the same manner and degree as potable water. However, there is limited storage capacity in the wastewater plants. This could result in releases of minimally treated or even untreated sewage. Without flow to the plants, the whole system will back up (possibly into buildings) causing possible health issues. Damaged or un-powered pumping stations and sewer line breaks may result in small spills of untreated sewage. Household sewer connections may break and plug.



CITY OF NOVATO EMERGENCY OPERATIONS PLAN



Earthquake Faults



THREAT ASSESSMENT 2: FLOOD

GENERAL SITUATION

Floods are generally classed as either slow-rise or flash floods. Slow-rise floods may be preceded by a warning time measured in hours or days. Evacuation and sandbagging for a slow-rise flood may lessen flood-related damage. Conversely, flash floods are the most difficult to prepare for, due to the extremely short warning time, if any is given at all. Flash flood warnings usually require immediate evacuation within the hour.

The National Weather Service issues flash flood watches and warnings. A flash flood “Watch” is issued when flash flooding is possible within the designated watch area -- all persons should be alert. A flash flood “Warning” is issued when a flash flood has been reported or is imminent -- all persons should take necessary precautions.

No area is immune to flash floods. In small streams, especially near the headwaters of creek basins, water levels may rise quickly in heavy rainstorms, and flash floods can begin before the rains stop. There is little time between the detection of flood conditions and the arrival of the flood crest. Swift action is essential to protect life and property.

All low lying areas, both coastal and inland, are subject to flood conditions. Urban development in flood plain areas are often subject to seasonal inundation. The flood plain is a natural extension of any waterway, although infrequently used. Storm water runoff, when exceeding the capabilities of the physical channel characteristics of a stream, results in the natural flooding of a localized area, inundating vehicles and causing considerable damage to properties located near stream and drainage channels.

Once flooding begins, personnel will be needed to assist in rescuing persons trapped by flood water, securing utilities, evacuating residents, moving equipment, cordoning off flooded areas and controlling traffic. These actions may overtax local agencies, and additional personnel and resources may be required.

Specific Situation

Key areas of Marin County are subject to flash flooding, urban flooding (storm drain failure/infrastructure breakdown), and creek channel overflow. The Marin Flood Control and Water Conservation District manages eight Flood Control Zones:

- Novato
- Mill Valley
- Bel Aire
- Stinson Beach
- San Rafael Meadows
- Santa Venetia
- Ross Valley
- Inverness



Winter storms can generate rains and significant debris in waterways which, alone, or when combined with high tides and/or high winds, can cause localized flooding in low-lying areas adjacent to the waterways.

Novato Creek and its tributaries have a long history of flooding and are the main flood hazard to the community. Flooding along Novato Creek usually occurs in three stages: 1) when the water levels rise above storm drains water backs up, resulting in flooded roads and property; 2) when Warner Creek and Arroyo Avichi rise and overflow their banks at the confluence with Novato Creek; and 3) when Novato Creek itself rises to a level where it overflows at low points in its banks. In addition, localized flooding occurs periodically in certain locations due to creek blockages such as fallen trees and debris. The frequency and severity of flooding has been reduced as a result of flood control improvements for Novato, Warner and Avichi Creeks over the years.

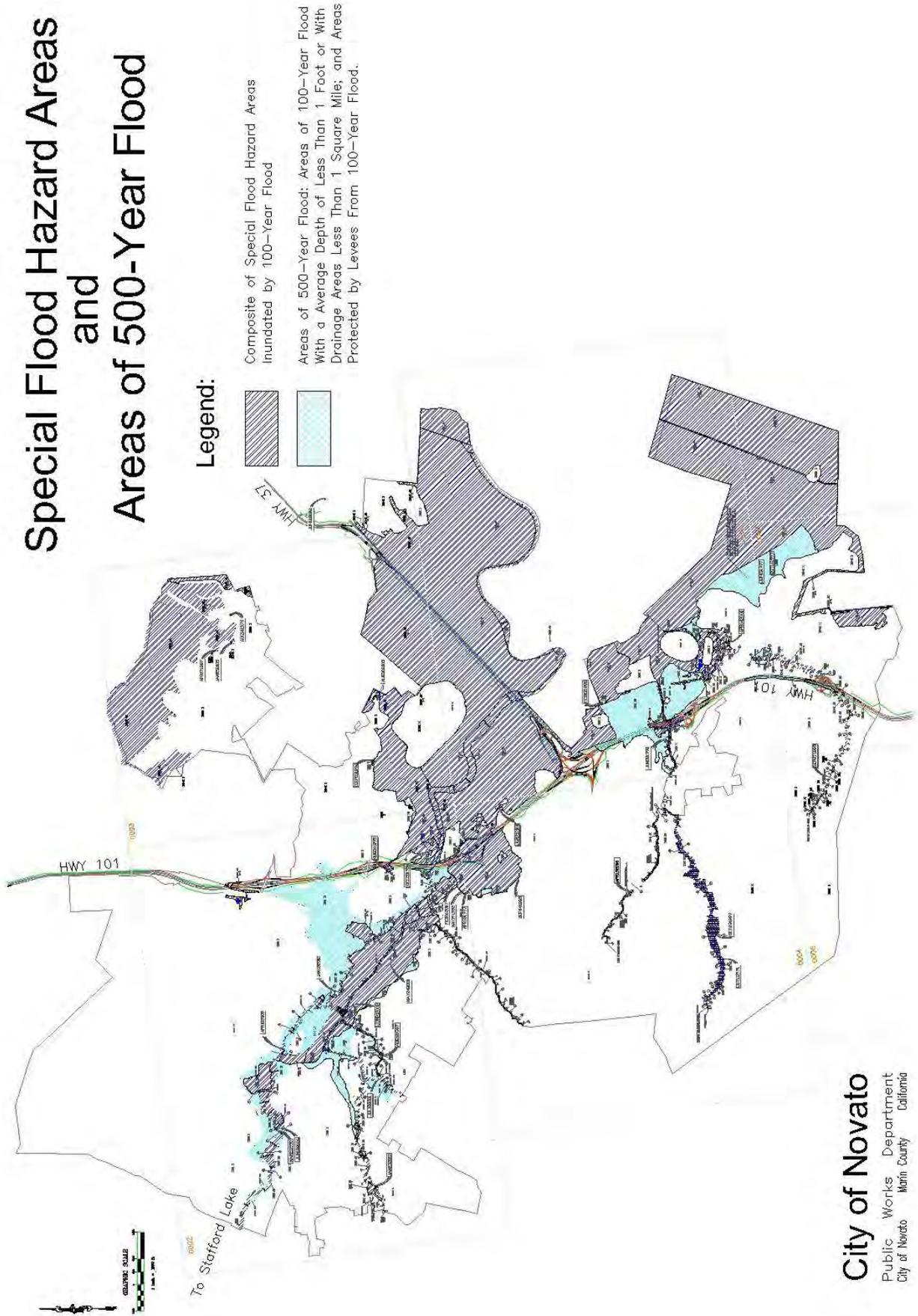
Hamilton Levee

The Hamilton Levee is situated on low-lying land (below sea level). The area behind the levee includes detached single family homes, townhouses and condominiums, senior living units, rehabilitated hangars converted to commercial space, a community center, an amphitheater and park facilities. The levee is located at the eastern edge of development and protects the development from the waters of San Pablo Bay. In addition a secondary, outer levee and the raising of wetlands elevation between the levees provide additional protection to the developments. Storm drainage water is pumped via two pump stations with adequate flow capacity, powered by diesel engines from the developments into the bay.

In the highly unlikely event of a levee failure during flooding conditions or a severe storm, combined with a high tide, parcels could be threatened with immediate flooding. An imminent threat of levee failure could require a rapid evacuation of affected residents in a short period of time, with little to no advanced warning.



Special Flood Hazard Areas and Areas of 500-Year Flood





THREAT ASSESSMENT 3: WILDLAND AND URBAN INTERFACE FIRE

GENERAL SITUATION

Wildland fire hazards exist in varying degrees over approximately 85% of Marin County. The fire season generally lasts from five to six months. The wildland fire hazard is caused by a combination of factors including rugged, sometimes steep terrain, highly flammable vegetation and forested areas, long summers, human activity and often times limited access.

There are several areas in the county which contain heavy fuel loads. Many homes have been built on steep slopes with vegetation in close proximity. These slopes are often steep, located in rugged terrain and have very few access routes. The onset of Sudden Oak Death has significantly increased the number of dead or weakened trees in most areas. The lack of clearing naturally or by residents has led to a fuel build up.

In several areas, an "Urban Interface" fire hazard is created as older neighborhoods directly border wild lands, parks, or forests. These areas often have mature vegetation, large tree canopies and invasive fire-prone brush which could cause the fire to spread quickly.

SPECIFIC SITUATION

Winds

The western portion of the county is heavily influenced by the Pacific Ocean in terms of local climate. In these environments, the fire hazard is mitigated by summer fog intrusion and lower temperatures. However, during the two to three weeks of "off-shore" wind events each fall, even the coastal areas become an extreme fire hazard, as lack of rain and dried vegetation with gusty winds equate to a high fire potential.

In the east, the large inland valleys create their heat-generated wind systems and more closely match the climates of California's Central Valley.

Topography

The topography in the county is typical of the mountains in the Coastal Range where they abruptly rise upward from the rugged shoreline to elevations of more than 2000 feet.

This creates an opportunity for a wildland fire to spread uphill in many directions making it extremely difficult for the firefighters to control a fire in these areas. This is made more difficult when trying to protect structures. In addition, typical small winding roads on steep grades make timely and effective fire fighting difficult.

The topography in the inland areas can also cause significant fire fighting challenges due to hotter, drier climates. The higher density of homes and population further



complicates fire-fighting efforts, as well as reduced water storage and pressure in these situations.

Fire Causes

People, and their activities, may cause wildland fires. Since the heaviest concentrations of people are found along Highway 101, most fires start there. Use of equipment, people playing with fire, arson, off-road vehicles, mowing, and debris burning are among the most common causes of wildland fires. Trees growing into power lines have been a frequent cause of large and damaging fires. Lightning strikes can spark many fires simultaneously in widely separated areas. Many of these fires may smolder for days before becoming very active.

Wildland/Open Space

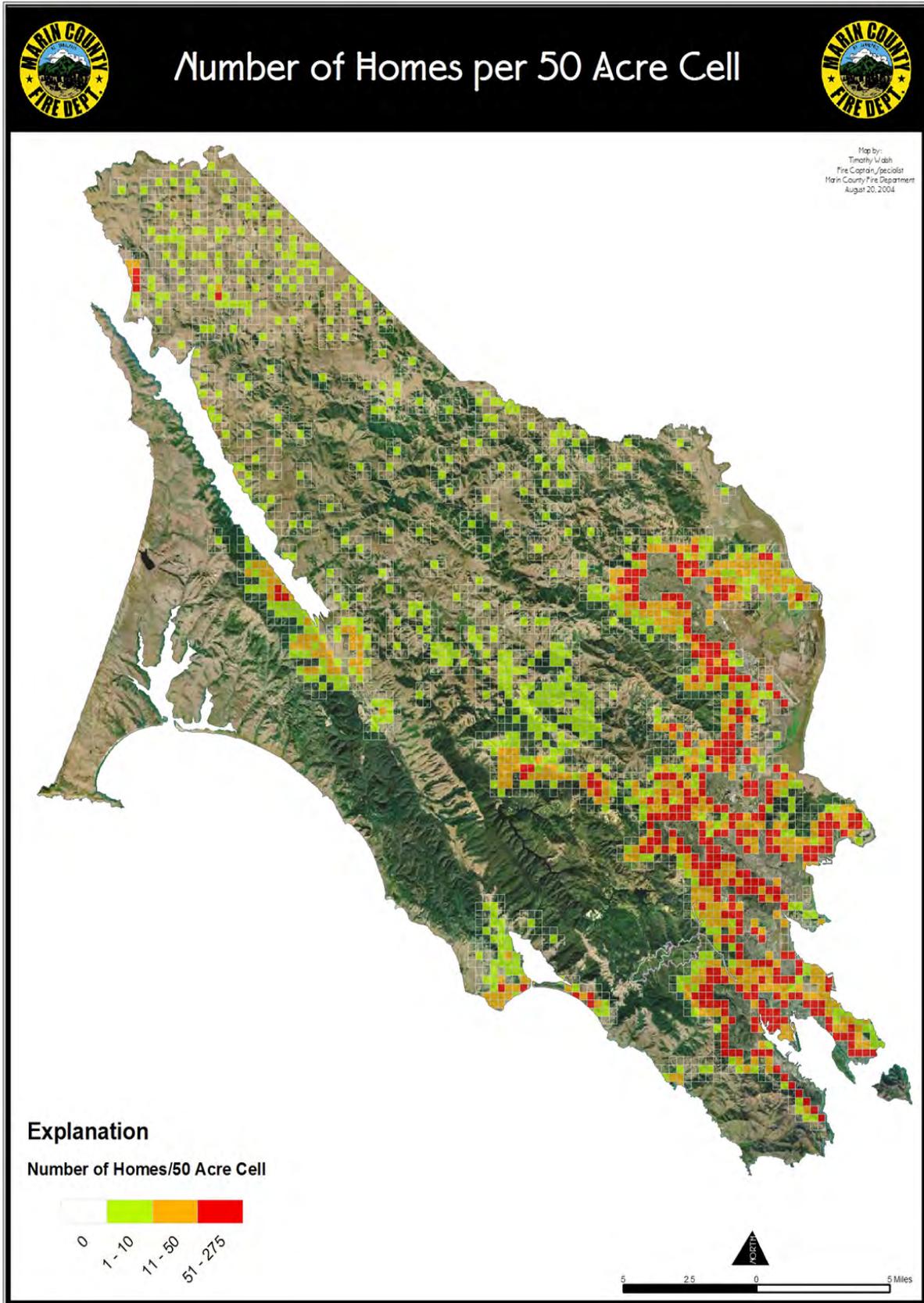
Over 50% of Novato land is open space creating a huge wildland interface, creating an additional risk to homes that surround open space areas. In many cases, open space becomes an island surrounded by homes. There are several rural areas in and around Novato where wildland fires could cause significant damage to buildings. The highest risk area is Black Point, just outside the city limits, which has narrow roads, older structures, limited access, steep slopes and chaparral vegetation. The other areas are Wild Horse Valley (just outside City Limits), parts of Bahia, Ridge Road and Pacheco Valle, which have dense brush and grass near homes.

Wildland Fire in Combination with Other Threats

The fire hazard can be significantly affected by other hazards such as earthquake, drought or Sudden Oak Death Syndrome. One worst-case scenario could involve a major earthquake during fire season. Broken gas lines or downed electrical wires could spark multiple fires and winds could spread the fires. Firefighters would be hampered by disrupted communications, impassible roads, and the need to perform rescue/medical operations.

Assets at Risk

Numerous factors affect how vulnerable a structure is to a wildland fire ignition. Roof composition, siding material, construction type and materials, slope, fire-resistant vegetation and defensible space are some general variables that affect structure survivability. For this analysis, the total hazard classification and housing density were used to define structure vulnerability (*refer to page 56*). Each 50-acre cell was assessed to determine the number of homes within each cell. A rank was assigned to each 50-acre cell based on housing density.





Urban Fires

There is significant wildland/urban interface in Novato and surrounding unincorporated areas. There are several areas (i.e. Green Point, Bahia, Verissimo Valley, Wild Horse Valley, Indian Valley and Pacheco Valle) where a 10 to 30 acre wildland fire could result in great losses. In these areas, under an extreme weather window, many homes could be lost, with dollar losses reaching the multi-millions.

Wood frame apartment complexes or condominiums present varying degrees of fire risk and fire control problems that generally go unrecognized. In addition, because close spacing is common in the City's mobile home parks, these dwellings are particularly susceptible to fire damage if a fire is not controlled quickly.

The downtown commercial area (Old Town) is comprised of wood, closely packed frame structures without adequate firewalls, which pose serious conflagration potential. Commercial/industrial areas that are congested and were built prior to the enactment of the automatic sprinkler ordinance create some potential for a fire of a magnitude that is beyond the City's resources. A loss of a block of Old Town could result in a major financial loss for the community, requiring significant response from the City in the area of Recovery Operations.

The Novato Fire Protection District (NFD) and City of Novato have taken the following Measures to reduce the risk of wildland/urban interface fires:

- Implemented an ordinance prohibiting combustible roof materials.
- Developed a vegetation abatement and fire hazard reduction program.
- Published and distributed a homeowner's guide to help the public prepare for and survive a wildland fire.

The growing trend is for larger and more damaging fires due to the increasing urban-wildland interface development. Increasing public awareness of wildland fires and developing stronger preventative measures, are essential to reducing the risk of this type of natural disaster.

Fire Protection

The Novato Fire Protection District's goal is to respond to 80 percent of all emergency incidents within eight minutes or less. NFD has five fire stations and adequate equipment to meet local needs. In addition, NFD's Fire Prevention Division establishes requirements for new buildings, carries out code enforcement, and conducts public education programs on fire prevention and safety. The City's Uniform Fire Code requires automatic sprinklers in all new single family homes and new buildings 2,500 square feet or larger. In cooperation with NFD, the City carries out weed abatement and other fire prevention programs and reviews new developments to reduce fire hazards. The NFD and the City encourage property owners to provide defensible areas and to prepare for fires.



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The North Marin Water District (NMWD) has adopted minimum fire flow standards of 1,000 gallons per minute at hydrants, as specified by Title 22 of the State of California Administrative Code. In addition, NMWD continues to upgrade storage and the water delivery system to assist in fire suppression.

Marin fire agencies have signed a county-wide mutual aid agreement to insure that firefighting resources and personnel will be available to combat a wildland/urban interface fire. If these resources are not enough to meet the threat, fire resources from throughout California can be summoned under the State's Master Mutual Aid Agreement administered by the California Emergency Management Agency.



THREAT ASSESSMENT 4: WINTER STORM

GENERAL SITUATION

In recent years, winter storms in California have grown increasingly intense and longer-lasting. Throughout the state flash floods, mudslides, high coastal surf, coastal erosion, stream and creek flooding, snowstorms, and avalanches have all recently occurred. Especially noteworthy are the tropical storms that are blown into California on a wind current called the “Pineapple Express”. From the central Pacific, warm moisture laden storm cold fronts move quickly and directly northeast picking up energy and pulling moisture from the ocean as they travel. Once they come ashore and are forced to rise over the coastal mountains, cooling occurs and rains occur.

SPECIFIC SITUATION

In Marin County, winter storms frequently drop large amounts of rain onto the coastal mountains. This often causes flash flooding and landslides.

Another frequent storm element is high wind. High winds are most common and dramatic along the coast and in the coastal mountains. The high winds result in damage to structures, downed trees, broken phone lines, as well as arcing and downed electrical lines. Due to the rugged nature of the area, it can take days or weeks to make full repairs to electrical transmission and distribution lines. Power outages are a major issue almost every winter.

History

In recent history, the winter storms of 1970, 1973, 1982, 1983, 1986, 1998, 2005 and 2006 caused significant damage. Novato Creek historically caused damage to numbers of homes in the 1960’s until the Novato Flood Control Project was completed in the 1980’s by the County.

Flooding in Corte Madera Creek has caused severe damage to the surrounding communities. The largest recorded flow occurred in the winter of 1982. Widespread localized flooding occurred in almost all areas of the County during these periods. San Anselmo, Ross, Fairfax, and Mill Valley were the most heavily impacted. Electrical outages peaked at 10,000 customers. Nine schools closed due to mud, water and road damages and over 20 major roads were closed during the early part of the storm. Two levies in the Novato area were damaged. Over a thousand homes, apartments, and businesses were damaged or destroyed. More recent damaging storms occurred in December 2005 and January 2006.

Novato has a few areas that are more likely to flood than others. The 2008 dredging of the Novato Creek (part of an every four year cycle) and work on Vineyard Creek should help decrease the possibility of flooding in those areas. It remains important, however, that public and privately owned drainage systems be kept clear of debris to allow water flow.



THREAT ASSESSMENT 5: TSUNAMI

GENERAL SITUATION

A tsunami is a series of traveling ocean waves generated by earthquake or underwater landslides. As the tsunami crosses the deep ocean, its length from crest to crest may be one hundred miles or more, its height from the bottom of the wave to the crest only a few feet. It cannot be felt aboard ships in deep water and cannot be seen from the air, but in deep water, tsunami waves may reach forward speeds exceeding 600 miles per hour.

As the tsunami enters the shallow water of coastlines in its path, the velocity of its waves diminishes and wave height increases. It is in these shallow waters that tsunamis become a threat to life and property, as they can crest to heights of more than 100 feet, and strike with devastating force. This danger is not over until the entire wave-series has passed. All tsunamis, like hurricanes, are potentially dangerous, even though they may not damage every coastline they strike. At present, there is no way to determine, in advance, the amplitude or size of tsunamis in specific locations. A small tsunami at one beach can be a giant one a few miles away.

Tsunamis may also be generated by earthquakes or underwater landslides just off shore. These “near-shore tsunamis” can also be very large but may arrive with little or no warning. In addition to the initial event, additional - and even larger - waves may continue to arrive for hours.

Damage

The great waves of a tsunami may crush buildings, smash vehicles and boats, uproot trees, and disrupt vital public services, systems and facilities. The effects may be aggravated by the secondary effects of fire, debris and contamination. Efforts will likely be required to remove debris and clear roadways, reestablish public services and utilities and provide temporary housing for displaced persons.

Evacuation

It is essential to evacuate persons in low-lying coastal areas and around the rims of bays and harbors, for these areas consistently sustain the greatest damage by tsunamis. Potential danger exists for all areas within one mile of the coast and less than 50 feet above sea level for tsunamis of distant origin, and for all areas within one mile of the coast and less than 100 feet above sea level for tsunamis of local origin.

Tsunami Warning System

The National Oceanic and Atmospheric Administration (NOAA) maintains the international Tsunami Warning System. The occurrence of a major earthquake anywhere in the Pacific Ocean area brings an immediate response from the system.



Tsunami Watch

When an earthquake of sufficient magnitude to generate a tsunami occurs, Tsunami Warning System staff determines the location of the earthquake epicenter. If the epicenter is under or near the ocean, a tsunami is possible. The Warning System issues a TSUNAMI WATCH, which tells recipients that an earthquake has occurred, its location, and that the possibility of a tsunami exists. A TSUNAMI WATCH constitutes the System's first alerting action.

SPECIFIC SITUATION

While the major impact of a Tsunami would be to the coastal area of Marin County Novato could see an impact from a large surge of water going into the San Francisco Bay increasing the amount of water typically entering and exiting the Bay. These effects could be somewhat mitigated or heightened depending on tidal flows through San Pablo Bay. No significant damage would be expected.



THREAT ASSESSMENT 6: LANDSLIDE

GENERAL SITUATION

Landslides include all movements of soil, rock or debris as a result of falling, sliding or flowing. Landslides are categorized according to the types of motion and material involved. They can be directly caused by earthquakes or be completely independent of them.

Falls describe the sudden movement of material from vertical or near-vertical slopes, and are generally labeled by the type or material displaced (e.g., soil fall, rock fall).

Slides refer to movements in which the material moves more or less as a unit along recognizable shear surfaces. If the shear surface is concave, the slide movement will be rotational, and is denoted by the term "slump". If the shear surface is flat, the term "slide" is used alone.

Flows describe the movement of material in which small-scale movements, rather than massive sliding, is the dominant mechanism of transport. Flows are described by the type of material involved and the rate at which it moves (e.g., debris flow, mudflow).

Landslides can occur due to both natural and human factors. Natural factors include the cohesive strength and characteristics of the affected minerals, the orientation of joints and planes of weakness between slide material and bedrock, the steepness of slopes, seismic activity, the degree of saturation of ground materials (highly affected by rainfall), and the density of vegetation. Human factors include the creation of excessively steep and overloaded slopes, the removal of natural vegetation, and the addition of water to the soil by watering lawns and septic system drain fields, and onsite creations of ponds for storm runoff and redirection of natural water flows and concentration of water.

Landslides will usually be associated with earthquakes or heavy rainfall. There are many identified sites within the county. Many threaten key highways. Some jurisdictions may be directly affected or simply isolated.

Landslides and debris flowing can damage or destroy buildings and property, block roads, sever utilities, disrupt water supplies, and injure or kill people. Damage control and emergency response operations may be seriously hampered by road closures, land instability and loss of communications. Evacuation of dangerous areas may become necessary. Extensive efforts may be needed to rescue trapped people, recover bodies, remove debris, and restore utilities and services.

SPECIFIC SITUATION

Landslides in Marin County tend to occur with the greatest frequency on steep slopes adjacent to foothill roads. With nearly every winter storm in the county, some landslide damage is incurred. Due to the 1998 storms, over \$2.5M damages were caused due to landslide damages. One resident was killed in 2006 as a result of a slide in Mill Valley.



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The basic geographical boundaries of Novato include Big Rock Ridge to the south, beyond Stafford Lake to the west, Mt. Burdell to the north and San Pablo Bay to the east. Elevations are varied within the area with the Bahia area listed as five feet above sea level, Mt. Burdell summit at 1,558 feet and Big Rock Ridge summit at 1,887 feet. Parts of the Hamilton area are 2 feet below sea level.

The only bedrock slopes within the area that appear vulnerable to landslides are the very steep ones high on Burdell Mountain and the steep street cuts in otherwise stable rock in the hills of southern Novato. Whether or not they fall in mass land sliding, these steep slopes are likely sites of loose rolling rocks in the event of strong earthquakes. The Buck Center for Research facility on Mount Burdell is a moderate concern despite being built to modern earthquake standards and local remediation of a large slide area in the Partridge Knolls area below it.



THREAT ASSESSMENT 7: DROUGHT

GENERAL SITUATION

A gradual phenomenon, drought often takes two or three consecutive winters, with less than average precipitation to produce any significant impacts. California has experienced major droughts in 1912-13, 1918-20, 1923-24, 1929-34, 1947-50, 1959-61, 1976-77, and 1987-92.

Drought produces a variety of impacts that spans many sectors of the economy and reaches well beyond the area experiencing physical drought. Impacts are commonly referred to as direct or indirect. Reduced crop, rangeland, and forest productivity; increased fire hazard; reduced water levels; increased livestock and wildlife mortality rates; and rationing are a few examples of direct impacts. These problems can, in turn, produce others. For example, a reduction in crop, rangeland, and forest productivity may result in reduced income for farmers and agribusiness, increased prices for food and timber, unemployment, reduced tax revenues, increased crime, and foreclosures on bank loans to farmers and businesses, and migration.

SPECIFIC SITUATION

Marin County is very sensitive to the impacts of drought due to its growing population, dependence on varied water sources, agricultural economic base and environmental concerns. Several local communities at times see dramatic drops in their water supplies.

Drought of 1976-77

The drought of 1976-77 was the worst in the state's recent history due to the driest (1977) and fourth driest (1976) years on record. Statewide, California's average annual rainfall is 200,000,000 acre-feet. In 1977, precipitation totaled only 90,000,000 acre-feet, or 45 percent of average. This drought left California with dangerously low reservoir and ground water levels. 47 of the state's 58 counties declared emergencies and economic losses totaled \$2.4 billion.

In Marin County, drought response measures included rationing or eliminating water allocations and importing water from the East Bay via a special pipeline and pumps. Public education campaigns were undertaken to convince the public to use less water. Low water levels threatened to reduce water availability in fire-fighting hydrant systems.

Water Sources

Marin County has two principal sources of water for domestic, commercial, industrial and agricultural use: the Mt. Tamalpais watershed and water imported from the Russian River. Some communities make use of limited groundwater sources. Additional water sources include diversions from small streams and reservoirs. The



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Marin Municipal Water District (MMWD) is proposing a desalination plant for using bay water and several sanitary districts are producing reclaimed water for irrigation.

2009 began with the Bay Area in what is considered a time of “moderate” drought.



THREAT ASSESSMENT 8: PUBLIC HEALTH CRISIS

GENERAL SITUATION

One of the gravest threats to the life safety of Marin County residents and visitors is posed by biological agents that occur naturally. Bacteria and viruses continue to evolve and spread. Drug-resistant strains of these pathogens also pose serious challenges to modern medicine. A public health crisis will immediately impact the width and breadth of emergency medical services.

In order to reduce costs, the medical community has worked to increase its efficiency by reducing or closing facilities, reducing staff, and relying on just-in-time inventory systems for medical supplies. This has resulted in an indirect reduction in the capacity to handle large-scale health events and an increased reliability on crisis response systems.

Public Health events are likely to impact whole regions and nations. Resources from outside Marin County may not be available. American society has not had to respond to a major health crisis in modern times. Existing concepts and response systems may be overwhelmed.

In addition to the direct threat to the population, a public health crisis will have major impacts on the social infrastructure, including utilities, social services and government. Traditional emergency responders (fire, law, EMS, public health) are at greater risk for contracting illnesses due to their increased exposure.

In the last few years, such threats have included Bacterial Meningitis, Sudden Acute Respiratory Syndrome (SARS), Monkey Pox and West Nile Virus. These events highlighted the potential for new and lethal pathogens to emerge and demonstrated the need to have capacity to respond with flexibility to new infectious disease threats. Epidemiologists agree that the probability is high that new strains of the viruses will emerge.

Under California law and Marin County Code, the County Public Health Officer (PHO) has the primary responsibility for responding to a public health emergency such as an influenza pandemic. This includes Novato and all jurisdictions within the Marin OA.

It is difficult to quantify the impact of a public health crisis due to the variety of threats. However, it may be useful to review a “worst-case” scenario to assess the potential impacts and effects on emergency response systems.

In 1918, more than twenty million people died worldwide from the previously unknown strain of influenza that came to be called the “Spanish Flu”. Two other pandemics in the 20th century caused widespread illness and social disruption. They were the 1957 Asian Flu which caused 70,000 deaths in the United States and the 1968 Hong Kong Flu which caused 34,000 US deaths.



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Unlike most public health emergencies, pandemic influenza could impact most of the world within hours or days. Depending on the viral strain, different segments of the population may be at greater risk – in 1918, the Spanish flu posed the greatest threat to young men. Increasing the likelihood of spread is the mobility of people and their ability to travel great distances once not possible.

SPECIFIC SITUATION

Based on extrapolations of estimates from the Centers for Disease Control, a future pandemic influenza could produce the following results:

	UNITED STATES	MARIN COUNTY
INFECTION	200 Million	160,000
SEVERE ILLNESS	40 – 100 Million	40,000 – 80,000
DEATH	88,000 – 300,000	150 – 240
ECONOMIC LOSSES	\$71 Billion – 166 Billion	Unknown

The City of Novato cannot be effectively isolated and thus its residents are subject to contracting and spreading the illness. It can be anticipated that a number of City employees and/or family members will become ill and City services will likely be impacted. This will be the same with emergency response personnel and emergency services.



THREAT ASSESSMENT 9: HAZARDOUS MATERIALS INCIDENT

GENERAL SITUATION

A hazardous material is any substance that may be explosive, flammable, poisonous, corrosive, reactive, radioactive, or any combination thereof, because of its quantity, concentration or characteristics. Hazardous materials require special care and handling because of the threats they pose to public health, safety and the environment. The production, transportation, and use of hazardous materials have become a normal part of society.

Accidental releases of hazardous materials can be especially damaging when they occur in highly populated areas or along transportation routes used simultaneously by commuters and hazardous materials transports. Incidents are more likely to occur along highways and railways. Fixed facilities, such as manufacturing and light industrial facilities experience hazardous materials incidents; however stringent safety requirements help to limit these.

Hazardous materials incidents in the urban areas of the county may require precautionary evacuations, or may have residents do shelter-in-place. Such an event may produce many victims suffering from exposure to the agent or burns and require implementation of the county's Mass Casualty Incident (MCI) Plan.

SPECIFIC SITUATION

The city of Novato is not home to the large industrial complexes normally associated with a high incidence of hazardous material emergencies. Marin County is served by one Hazardous Materials team located in San Rafael. Due to traffic congestion, it is estimated that significant out-of-county assistance may be unavailable for a period of one to three hours - especially if the incident occurs at a peak traffic time.

Transportation Routes or Fixed Hazardous Materials Facilities

Hazardous materials incidents in Marin County would most likely occur on the transportation routes or at fixed hazardous materials sites within the various cities. Hazardous materials are often moved through the area on U.S. Highway 101 and State Route 37. Surface arterial streets are used for the local transportation of hazardous materials. Trucks and other vehicles transport various categories of hazardous materials through Novato on a daily basis, including flammable liquids, flammable gases, corrosives, explosives, oxidizers and others. A significant accidental release of any of these products could result in a serious direct threat to life, property and the environment, as well as secondary effects of fire, explosion or chemical reaction.

Novato Community Hospital, as well as the other two hospitals located in Marin County, use a variety of hazardous materials, radioactive materials and solvents. They maintain current lists of the materials in their facilities.



Community Colleges and high schools have hazardous materials on-site, primarily flammable materials, corrosives, and poisonous materials. They are in smaller quantities, but could pose a threat to rescue efforts. Water and wastewater treatment sites contain potentially hazardous chemicals.

Agriculture

The large agriculture industry is one potential source of hazardous materials incidents. Accidental release of pesticides, fertilizers and other agricultural chemicals may pose short and long-term threats to public health and the environment. These materials are generally stored in remote rural areas but are often transported from one site to another.

To more effectively track businesses that use hazardous materials, the City of Novato, Novato Fire Protection District and Novato Sanitary District have developed an occupancy permit process program to help track the storage of hazardous materials at businesses. Industrial facilities are mostly focused in the Bel Marin Keys industrial park area.

Oil or Fuel Spill

An oil or fuel spill can be a significant hazard to Marin County's ecosystems including wildlife and environmentally sensitive sites (resources at risk).

Sewage Spills

Sewage spills into the county's waterways or the San Francisco Bay may cause significant contamination causing sickness to people who come in contact with those waters as well as distressed and sick wildlife. A sewage spill is often caused by waste treatment facilities pump and alarm failures as well as human errors.

Other Sources

Another source of hazardous materials incidents is the illegal manufacturing of drugs in clandestine laboratories. The residue and hazardous waste from these laboratories are usually dumped illegally, posing a public health and safety hazard and a threat to the environment. In many cases, criminals will conduct their activities in the midst of residential or commercial neighborhoods to remain hidden.

The County of Marin has the overall responsibility and authority to regulate hazardous materials storage and emergency response within the County, including Novato. This responsibility includes:

- Regulating various hazardous materials
- Reviewing business plans to determine hazardous materials inventories and hazardous waste estimates.
- Developing an emergency response plan for unauthorized releases.
- Forwarding notice of unauthorized releases to NFPD.
- Inspection and enforcement.



THREAT ASSESSMENT 10: TRANSPORTATION ACCIDENTS

A major incident involving an airplane, truck, or train could result in numerous casualties and could significantly impact Marin County's transportation systems. The ability of emergency response teams to respond and transport victims to hospitals will be affected by the time of day and traffic congestion.

A major incident on any of the primary routes will produce road closures of at least four or more hours. Extensive search and rescue operations may be required to assist trapped and injured persons. Emergency medical care and temporary shelter would be required for injured or displaced persons. Identification, movement and temporary storage of any significant number of dead will be difficult. Families may be separated, particularly if the incident should occur during working hours. In some instances, the loss of communications and disruption of other essential services may hamper emergency operations.

Under certain circumstances, government effort will be required to remove debris and clear roadways, demolish unsafe structures, and assist in re-establishing public services. It may be necessary to provide continuing care and welfare for the affected population.

Each of these hazards could produce several secondary threats, such as a hazardous materials incident, fire, severe damage to nearby buildings or vehicles, loss of life in either adjacent buildings or vehicles and pedestrians.

Major accidents could involve an airplane crash, trucking incident or a train crash. The following assessments provide additional details unique to each type of incident:

AIRPLANE CRASH

General Situation

Often the impact of a disabled aircraft as it strikes the ground creates the potential for multiple explosions, resulting in an intense fire. Wherever the crash occurs, the resulting explosion and fires have the potential to cause injuries, fatalities and the destruction of property. The time of day when the crash occurs may have a profound effect on the number of dead and injured. As well, an airplane crash produces profound mental health issues for survivors, surrounding residents, and emergency responders.

Specific Situation

Marin County has no commercial service airports with regularly scheduled air carrier passenger service. The Marin County Airport at Gnos Field is a Regional General Aviation airport which is home to several charter companies. The county lies along the West Coast air corridor and traffic patterns for Bay Area and Sacramento airports traverse the area. The crash of a small (light) aircraft would result in obvious issues if



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the incident took place near heavily-populated areas. In remote areas, the rugged terrain could make access and communications difficult.

A far more significant event would be the crash of an airliner. A large area could be affected with falling parts, burning fuel and destroyed buildings. Many state and federal agencies would respond to the scene in a very short period and media attention would be intense.

TRUCKING INCIDENT

General Situation

A major truck incident that occurs in a heavily-populated industrial area or residential area can result in considerable loss of life and property. Potential hazards could be overturned tank trailers, direct impact either into a residence or industrial building, release of loaded materials or livestock or cutting into the normal flow of traffic.

Specific Situation

The main transportation arteries through Marin are U.S. Highway 101 and State Route 37. These routes are heavily used most hours of the day and the control of vehicular traffic in and around the affected area of a multi-casualty or hazardous materials incident will be the primary problem at any time.

In many areas there are few, if any, good alternate routes. During commute hours, the problem will be severely compounded. It will be essential to expedite the flow of essential emergency response vehicles through the area and divert nonessential traffic. In a major accident, it is not uncommon for these roads to close for most of a day to support rescue, recovery and accident investigation activities.

In a major disaster, increased reliance on goods and equipment being trucked into the county and into Novato combined with restricted or damaged roads could result in a greater chance for a major accident.

TRAIN CRASH

General Situation

A major train derailment that occurs in a heavily populated industrial area can result in considerable loss of life and property. As a train leaves its track, there is no longer any control as to the direction it will travel. Potential hazards could include overturned rail cars, hazardous materials incidents, and impact to an adjacent building or entering into normal street traffic.

Train accidents could be caused by derailment, an accident with a vehicle at a crossing, an accident with a pedestrian at a crossing, a collision with another train, or an explosion or fire in or near the train. Any hazardous materials carried as freight or in



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another impacted vehicle could substantially complicate response actions and require that the situation be monitored until all debris is removed.

There would be a great number of agencies responding to the scene. Traffic control and resource management will be difficult but essential to maintain. Schools near the site may be isolated or called upon to evacuate immediately. Media attention can be expected to be significant.

Specific Situation

Novato and north will be served by the North Coast Rail Authority (NCRA) and by Sonoma Marin Area Rail Transit in 2010. Rail passenger service was largely discontinued in the mid 1950s; rail freight service is also currently discontinued.



THREAT ASSESSMENT 11: DAM FAILURE

GENERAL SITUATION

Dam failure is the collapse or failure of an impoundment that causes significant downstream flooding. The most common cause of dam failure is an earthquake or structural weakness near the seams.

The collapse and structural failure of a dam may be caused by a severe storm, earthquakes, internal erosion of piping and foundation leakage. Seismic activity may also cause inundation by the action of a seismically-induced wave that overtops the dam without causing failure of the dam, but still floods downstream. Landslides flowing into a lake may also cause a dam to fail or overflow.

The principle consequences of dam failure are injury, loss of life, and significant downstream property damage.

SPECIFIC SITUATION

Dam inundation, or flooding which occurs as a result of structural failure of a dam, poses a serious threat to specific areas within Marin County. Although there is no history of major dam failure in the area, any failure could have serious impacts. Marin County's dams include: Alpine, Bon Tempe, Lagunitas, Nicasio, Peters, Phoenix, Soulajule, and Stafford.

Failure of county dams even during a catastrophic event, such as a severe earthquake, is considered very unlikely. Owing to the method of construction of these dams, they have performed well in earthquakes and failure is not expected to occur. Most are long standing earthfill dams which have consolidated and stabilized over many years. Only Alpine is a concrete structure.

Additionally there are numerous "agricultural" ponds in the county, which can be considered as threats. If these ponds break, they could damage homes or roads, but not on as large a scale. The State of California Emergency Management Agency is currently in the process of identifying all ponds and dams and evaluating their risk to all residents not just to owners.

The vast majority of these dams and ponds are not constantly monitored. Therefore, detection of any problems such as leaking or overflowing will depend upon the owner and local residents.

Stafford Dam

Stafford Dam, built in 1950, was designed according to the earthquake standards in effect at that time. The earth embankment dam is 71 feet high and under the jurisdiction of the California Division of Safety of Dams. This dam creates Stafford Lake, which has a capacity of 4,430 acre-feet of water. The dam is located upstream of Novato along Novato Creek at Stafford Lake.



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As a result of a State law passed in 1972, an intensive analysis of Stafford Dam was completed. This evaluation determined that the dam has an adequate safety factor to hold up under an earthquake of magnitude 8.25 on the San Andreas Fault, with the epicenter 10 miles from the dam. This report provided an inundation zone that would possibly result from the complete failure of the structure. The inundation zone is on file with the North Marin Water District.

In the Stafford Dam inundation area, the flow is relatively confined to the initial 8,000 feet downstream from the dam. This is due to canyon-like topography in this reach. As the flood reaches Sutro Avenue the flow begins to fan out as the terrain flattens. As the flow continues, it once again becomes relatively confined to a 1,000-foot width. From this point the flow fans out, reaching an approximate width of 6,000 feet at Redwood Highway. At this point the water is briefly confined again to an approximate 2,000-foot width after entering an area bounded by Novato Boulevard and Redwood Boulevard on the southwest, Highway 37 on the southeast, Atherton Avenue on the northeast and the hilly area north of Olive Avenue. Assuming the entire capacity of the reservoir was to flow to this area, it would fill the basin to an average depth of three feet. This water would eventually flow back into Novato Creek and discharge into San Pablo Bay.



THREAT ASSESSMENT 12: ENERGY DISRUPTION

GENERAL SITUATION

Modern society has increasingly grown dependent on technologies which use various sources of energy. Events in the last 30 years have underscored the major impacts that a disruption in the energy supply can have:

- The major Arab Oil Embargo in 1973 led to significant economic and political changes including increased domestic oil production, additional investment in alternative energy sources, inflation, and a marked reduction in the Gross National Product.
- In 1993 the West Coast grid went out causing most of Northern California to experience outages.
- The California electrical shortages of 2001 resulted in the use of rotating electrical outages, also known as rolling blackouts. This crisis created a great deal of confusion, loss of power, increased utility rates, and negatively impacted the state budget.
- Long term electricity loss can have a very large effect on finances and ability to buy supplies and food among other consequences.

Fossil Fuels

This includes natural gas, oil, and gasoline. Disruptions in the supply of these resources would immediately cause serious problems in transportation, electrical generation, business, communications, and would cause prices for most goods and services to rise dramatically.

Electrical Power

A power failure is any interruption or loss of electrical service due to disruption of power generation or transmission caused by an accident, sabotage, natural hazard, equipment failure, or fuel shortage. These interruptions can last anywhere from a few seconds to several days. Power failures are considered significant problems only if the local emergency management organization is required to coordinate the provision of food, water, heating, etc. as a result. Power failures are common when severe weather and winter storm activity occur. Critical systems including telecommunications will fail unless provided with alternate or redundant power sources.

SPECIFIC SITUATION

Marin County does not manufacture any petroleum products. The majority of these products are imported from Bay Area refineries. Two natural gas transmission pipelines feed the majority of the population along the U.S. Highway 101 corridor.



THREAT ASSESSMENT 13: RADIOLOGICAL INCIDENT

GENERAL SITUATION

Depending upon the type, location, and quantity released, nuclear (radiological) materials can damage human health, the environment, and property. Such an accidental release is extremely rare. Commercial nuclear plants began generating power in 1957. The United States has had only one major incident that occurred at the Three Mile Island facility near Harrisburg, Pennsylvania in 1979. Other minor incidents have occurred, but these have been infrequent and have caused few off-site consequences.

Common sources of radiological materials include those used in medical procedures, research, industrial production, and construction.

It is important to note that a radiological event differs from a regular Hazardous Materials spill in that the affected area could be large; radioactivity is difficult to detect; specialized equipment is required to pinpoint sources; and clean up may require tremendous resources. Long-term effects may be difficult to determine. Public perception will play a critical role in the incident. Media coverage of such an event will be massive. Federal agencies will play a key role in managing response and recovery efforts.

Generally, shielding, limited exposure time, and increased distance from the source are the keys to effective mitigation and response.

SPECIFIC SITUATION

Marin County is a combination suburban/rural area, removed from the multiple risks of nuclear (radiological) materials emergencies normally associated with a more urban environment. Only a few sites (medical facilities and hospitals) use such materials - and these are considered a relatively low-level threat. As U.S. Highway 101 is the primary north/south corridor for California's North Coast, some industrial and medical grade radiological materials are transported on this route.

The use and storage of radioactive materials in Novato is limited to medical facilities and the Buck Center Research facility. These are considered a relatively low-level threat. The potential danger to Novato residents from radioactive materials is related to the possibility of a truck-related incident resulting in rupture of containers holding radioactive materials, and from terrorist-related incidents involving weapons of mass destruction.



THREAT ASSESSMENT 14: TERRORISM

GENERAL SITUATION

The Federal Bureau of Investigation (FBI) defines terrorism as “the unlawful use of force against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in the furtherance of political or social objectives.”

Since the events of September 11, 2001, a significant increase in the assessment and preparation for terrorism has been a national priority.

Terrorism can be state-sponsored or the outgrowth of a frustrated, extremist fringe of polarized and/or minority groups of people. Extremists have a different concept of morality than the mainstream society. Terrorist groups include:

- Ethnic separatists and political refugees
- Leftwing radical organizations
- Rightwing racists, anti-authority survivalist groups
- Extremist issue-oriented groups such as animal rights, environmental, religious, anti-abortionists

Events could typically be expected in urban areas near public gatherings, government facilities, or highly visible areas, but no one area is less likely to be a target than any other. Communities are vulnerable to terrorist incidents and most have high visibility and vulnerable targets. These facilities, sites, systems, and special events in the community are usually located near routes with high transportation access. Examples include:

- Government office buildings, courthouses, schools, hospitals, and shopping centers
- Dams, water supplies, power distribution systems
- Military installations
- Railheads, interstate highways, tunnels, airports, ferries, bridges, seaports, pipelines
- Recreational facilities such as stadiums, theaters, parks, casinos, concert halls
- Financial institutions and banks
- Sites of historical and symbolic significance
- Scientific research facilities, academic institutions, museums
- Telecommunications, newspapers, radio and television stations
- Chemical, industrial, and petroleum plants, business offices, and convention centers
- Law, fire, emergency medical services facilities, and operations centers
- Special events, parades, religious services, festivals, celebrations
- Family planning facilities



Weapons of Mass Destruction

Experts generally agree that there are five categories Weapons of Mass Destruction (WMD) which terrorists could use: Chemical, Biological, Radiological, Nuclear, and Explosive (CBRNE). It is important to note that developing and properly employing such weapons is very difficult - but not impossible. Each category of weapon is discussed below:

- Chemical agents are compounds with unique chemical properties that can produce lethal or damaging effects in humans, animals, and plants. Chemical agents can exist as solids, liquids, or gases depending on temperature and pressure. Most chemical agents are liquid and can be introduced into the unprotected population relatively easily using aerosol generators, explosive devices, breaking containers, or other forms of covert dissemination. Dispersed as an aerosol, chemical agents have their greatest potential for inflicting mass casualties.
- Biological agents pose a serious threat because of their accessible nature and the rapid manner in which they spread. These agents are disseminated by the use of aerosols, contaminated food or water supplies, direct skin contact, or injection. Several biological agents that could be adapted for use by terrorists include anthrax, tularemia (rabbit fever), cholera, the plague, botulism, and pandemic flu. A biological incident will most likely be first recognized in the hospital emergency room, medical examiner's office, or within the public health community long after the terrorist attack. The consequences of such an attack will present communities with an unprecedented requirement to provide mass protective treatment to exposed populations, mass patient care, mass fatality management, and environmental health clean-up procedures and plans.
- A radiological weapon involves the detonation of a large conventional explosive that incorporates nuclear material or detonation of an explosive in close proximity to nuclear materials in use, storage, or transit.
- A nuclear threat is the use or threatened detonation of a nuclear bomb or device. At present, there is no known instance in which any non-governmental entity has been able to obtain or produce a nuclear weapon.
- Explosive incidents account for 70 percent of all terrorist attacks worldwide. Bombs are the terrorist's weapon of choice. The Internet and local libraries provide ample information on the design and construction of explosive devices. The FBI reported that 3,163 bombing incidents occurred in the United States in 1994, 77 percent were due to explosives. Residential properties are the bombers' most common targets.

Cyber terrorism

In addition to WMD attacks, cyber terrorism is a relatively new phenomenon used to



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potentially disrupt our society and exploit our increasing reliance on computers and telecommunication networks. Cyber terrorism threatens the electronic infrastructure supporting the social, health, and economic well being of our communities. Interlinked computer networks regulate the flow of power, water, financial services, medical care, telecommunication networks, and transportation systems.

SPECIFIC SITUATION

Some smaller terrorist attacks have occurred in Marin County. Most notably, in 1970, a murder and kidnapping case in a Marin County Courthouse shooting, which was triggered by extremist political issues, left for dead, including a Marin County Judge. The county and the jurisdictions within its boundaries remain vulnerable to the threat of terrorism. All public facilities are considered subject to a terrorist attack.

The San Francisco Bay Area contains many high profile sites and buildings which are considered potential terrorist targets. Therefore, even though Marin County and the city of Novato may not suffer such an attack, it is likely that it will be asked to provide support to this major metropolitan area that has been impacted. Another consideration is the potential for large numbers of the public to move from the impacted area due to actual or perceived dangers.

The federal and state response to terrorist activities has been intense since the attack of September 11, 2001. Emergency Management actions have centered on terrorist threat assessment, planning, grant administration, and training. Detailed terrorism threat assessments for the County and the State of California have been completed and are considered confidential.



THREAT ASSESSMENT 15: CIVIL DISTURBANCE

Civil disturbance includes incidents that are intended to disrupt a community to the degree that law enforcement intervention is required to maintain public safety. Civil disturbances are generally associated with controversial political, judicial, or economic issues and/or events. The effects of civil disturbances could include traffic congestion or gridlock, illegal assemblies, disruption of utility service, property damage, injuries and potential loss of life. This is in contrast to Civil Disobedience.

The County of Marin has experienced minor civil disturbances in several of its cities and in the unincorporated areas. In the future, protest events tied to world economic and environmental issues could potentially produce a situation for larger civil disturbances to occur.

While possible, the threat of a civil disturbance in Novato is considered extremely low.

THREAT ASSESSMENT 16: NATIONAL SECURITY EMERGENCY

A national defense emergency will normally be announced by the Federal government; however, unless there is a sudden, unprovoked attack, there should be some time available for planning and initiation of evacuation procedures. It is not the duty of civil authorities to fight the war, but rather to control and care for the local population. Local and state authorities under a "State of War" have not been exercised since World War Two.

Potential impacts of a national security emergency include:

Military Call-up and Activity

A major national defense emergency would require the activation of the Military Reserve Forces and the National Guard. Members of those organizations would be called to duty. Their service in the federal government takes precedence over local authority. There would be no trained replacement personnel immediately available. This would affect government agencies at all levels and organizational restructuring might be necessary. There are very few military installations in the region which would be deploying troops. However, movement through the area could place a great deal of strain on major highways and local resources.

Civilian Activity

The civilian population may also be immediately affected by a declaration of a national emergency. Most certainly there will be a significant portion of the population which would try to evacuate the area in advance. This could produce some civil disobedience. Employee safety could become a significant concern.



Outright War or Attack

An attack upon the United States (either conventional or nuclear) is extremely unlikely. The potential for such an event, however, does exist. Although the chances of a massive nuclear strike on the U.S. have greatly diminished, several countries throughout the world have developed, or are seeking to develop the capability of deploying nuclear weapons, either on a tactical basis or a strategic one. Additionally, the possibility exists that a terrorist organization might acquire the capability of creating a small nuclear detonation. A single nuclear detonation in the United States would likely produce fallout affecting an area many times greater than that of the blast itself.

In the event of a conflict involving the major world powers, an attack on the Bay Area would be an almost certainty. In most probability, the attack would be from missiles with nuclear warheads. An attack on the coast by amphibious forces is unlikely. This is normally the responsibility of the federal agencies; however, protection of municipal facilities and resources would be an important consideration.

There are several "strategic" targets in the Bay Area which are/would be targeted for a nuclear strike. In addition to the military installations, defense production and communications-related civilian activities may be designated as targets. Destruction would be complete in many areas and all normal sources of power and water will cease to exist. The surviving population would flee the area by any means possible. Areas not directly affected by the blast of weapons will suffer the effects of radioactive particulate dispersed into the atmosphere.

In the event of a massive attack, there would be no help from outside agencies for a prolonged period. It would be the responsibility of law enforcement to restore order and the job of the entire government to re-assert its authority and re-establish any systems possible to aid in the placement and care of refugees as well as local citizens.



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The California Emergency Plan, which is promulgated by the Governor, is published in accordance with the Act and provides overall statewide authorities and responsibilities, and describes the functions and operations of government at all levels during extraordinary emergencies, including wartime. Section 8568 of the Act states, in part, that "the State Emergency Plan shall be in effect in each political subdivision of the state, and the governing body of each political subdivision shall take such action as may be necessary to carry out the provisions thereof". Local emergency plans are, therefore, considered to be extensions of the California Emergency Plan.

The National Response Plan (NRP) establishes a single, comprehensive approach to domestic incident management to prevent, prepare for, respond to, and recover from terrorist attacks, major disasters, and other emergencies. The NRP is an all-hazards plan built on the template of the National Incident Management System (NIMS). The NRP can be partially or fully implemented in the context of a threat, anticipation of a significant event, or in response to an incident requiring a coordinated Federal response. The NRP applies to all incidents requiring a coordinated Federal response as part of an appropriate combination of Federal, State, local, tribal, private-sector, and nongovernmental entities. The NRP is always in effect; however, the implementation of NRP coordination mechanisms is flexible and scalable.

The California Civil and Government Codes contain several references to liability release (Good Samaritan Act) for those providing emergency services.

Federal

Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 (Public Law 93-288, as amended)

Federal Civil Defense Act of 1950 (Public Law 920), as amended

Federal Response Plan (FEMA)

Federal Departments and agencies HSPD-5 requirements for adoption of NIMS by State and local organizations

NRT-1, Hazardous Materials Emergency Planning Guide and NRT-1A Plan Review Guide (Environmental Protection Agency's National Response Team)

State

Standardized Emergency Management System (SEMS) Regulations (Chapter 1 of Division 2 of Title 19 of the California Code of Regulations) and (Government Code Section 8607(a).

Standardized Emergency Management System (SEMS) Guidelines.



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California Emergency Services Act (Chapter 7 of Division 1 of Title 2 of the Government Code).

'Good Samaritan' Liability

California Emergency Plan

California Natural Disaster Assistance Act (Chapter 7.5 of Division 1 of Title 2 of the Government Code)

Preservation of Local Government, Article 15 of the California Emergency Services Act (Chapter 7 of Division 1 of Title 2 of the Government Code)

Temporary County Seats, Section 23600, Article 1 of Chapter 4 of Division 1 of Title 3 of the Government Code

California Hazardous Materials Incident Contingency Plan

California Health and Safety Code, Division 20, Chapter 6.5, Sections 25115 and 25117, Chapter 6.95, Sections 2550 et seq., Chapter 7, Sections 25600 through 25610, dealing with hazardous materials

Orders and Regulations which may be Selectively Promulgated by the Governor during a State of Emergency

Orders and Regulations Promulgated by the Governor to Take Effect upon the Existence of a State of War Emergency

California Master Mutual Aid Agreement

California Law Enforcement Mutual Aid Plan

California Fire and Rescue Operations Plan

Judicial System, Article VI, Section 1, 4, 5, and 10, of the Constitution of California

Local Government, Article XI, of the Constitution of California

Americans with Disabilities Act

All operations and facilities involved in the disaster response activities shall take special note of the Americans with Disabilities Act (ADA). Appropriate efforts shall be made to insure that necessary considerations are given to accommodate victims with disabilities. Public warning, emergency communications, transportation, and sheltering are areas that require special attention.



ACRONYMS

AAR	After Action Report
ADA	Americans with Disabilities Act
ARC	American Red Cross
C&S	Care and Shelter
CalTrans	California Department of Transportation
CAD	Computer Aided Dispatch
CAP	Corrective Action Plan
CBO	Community Based Organizations
CBRNE	Chemical, Biological, Radiological, Nuclear and Explosive
CHP	California Highway Patrol
DPW	Department of Public Works
EAS	Emergency Alert System
EDIS	Emergency Digital Information System
EMS	Emergency Medical Services
EOC	Emergency Operations Center
EOP	Emergency Operations Plan/Emergency Operating Procedures
ESM	Emergency Services Manager
FBI	Federal Bureau of Investigation
FCC	Federal Communications Commission
FEMA	Federal Emergency Management Agency
HAR	Highway Advisory Radio
HEART	Homeowner Emergency Action Response Team
HSPD-5	Homeland Security Presidential Directive-5
ICS	Incident Command System
MACC	Multi-Agency Coordination Center
MCI	Mass Casualty Incident
MERA	Marin Emergency Radio Authority
MIDC	Marin Inter-Agency Disaster Coalition
MMRC	Marin Medical Reserve Corps
MMWD	Marin Municipal Water District
NFPD	Novato Fire Protection District
NGO	Non-Government Organizations
NIMS	National Incident Management System
NMWD	North Marin Water District
NOAA	National Oceanic and Atmospheric Administration
NRP	National Response Plan
OA	Operational Area
OASIS	Operational Area Satellite Information System
OHS	Office of Homeland Security
PHO	Public Health Officer
PIO	Public Information Officer
RACES	Radio Amateur Civil Emergency Services
REOC	Regional Emergency Operations Center
RIMS	Response Information Management System
SEMS	Standardized Emergency Management System



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SOC	State Operations Center
SOP	Standard Operating Procedures
TSA	The Salvation Army
TENS	Telephone Emergency Notification System
WMD	Weapons of Mass Destruction