



SUNNYVALE EAST & WEST CHANNELS

Emergency Action Plan – Quick Guide

West Valley Watershed EAP dated: July 2025

This guide summarizes key information/guidelines as described in the West Valley Watershed Emergency Action Plan and its Sunnyvale East & West Channel Appendix (EAP). Page numbers are referenced (in red) identifying the location in the EAP where full information and data can be found. This guide is a summary and does not replace the full EAP.

PURPOSE OF EAP (p. 1)

This Emergency Action Plan for Severe Storm and Flood Response in the West Valley Watershed (EAP), a Valley Water internal document, is focused on fluvial flood threats caused by severe storms and high flows in the creeks and is intended to provide general guidance for response in the West Valley Watershed. In addition, specific guidance is included for Sunnyvale East & West Channels to facilitate Valley Water's activities within the following four areas:

1. Pre-incident planning prior to a storm/flood event.
2. Response to potential, imminent or actual storm/flood events.
3. Recovery actions following a storm/flood event.
4. Collaboration and coordination with other responsible jurisdictions.

SUNNYVALE EAST & WEST CHANNELS DESCRIPTION (pp. 83-97)

The Sunnyvale East Channel flows south to north approximately 6 miles from Interstate 280 (I-280) to the Guadalupe Slough draining about 7.25 square miles within the cities of Cupertino and Sunnyvale (Figure 1B - p. 84). The channel was constructed to convey a 10-year flow from city storm drains by Valley Water in the 1960s and 1970s. It starts in a pipe at I-280 for the first 0.5 miles until it passes Inverness Way. From Inverness Way to Hwy 237 it is a mix of box culverts and trapezoidal channel (sack concrete, rock and earth). Downstream of Hwy 237 the channel is generally an earthen channel with levees.

Sunnyvale West Channel drains about 7.6 square miles in the City of Sunnyvale and flows 3 miles starting in the south at Maude Avenue and ending in the north at its confluence with Guadalupe Slough (Figure 2B - p. 85). The channel was constructed in the late 1950s and early 1960s to convey a 10-year flow from the local drainage systems. Sunnyvale West starts in a pipe at Maude Avenue for the first 0.5 miles until it passes Almanor Avenue. After Almanor Avenue it becomes a trapezoidal earth channel to Ross Drive. After Ross Drive the channel is a concrete u-frame or box culvert until Mathilda Avenue at which point it becomes an earthen trapezoidal channel with levees to its confluence with Guadalupe Slough.

LIMITATIONS OF EAP (p. 5)

The EAP shall not constrain the Incident Commander (IC) in the field or others when dealing with flooding on Sunnyvale East & West Channels. It does not replace or override existing plans, authorities, or responsibilities.

Instead, this EAP will focus on how Valley Water can improve coordination before, during and after a flood incident to include providing oversight and guidance. It is not intended to set precedent or commit resources without knowledge of the conditions that may occur, nor provide prescriptive lists of what to do during storm and flood monitoring and response, that Valley Water and other Stakeholders are individual jurisdictions and have independent responsibility to accomplish their tasks.

FLOOD THREATS (pp. 98-101 & Table 2B, pp. 106-107)

The main flood threats from these channels are:

1. Flooding due to channel overtopping from high storm flows,
2. Flooding influenced by high tides or high flows in Calabazas Creek and
3. Flooding due to backing up of the storm drain system.

Valley Water has updated flood mapping shown in Figure 5B (p. 101)

See Attachment 14 for maps of Field Information Team Hot Spots (pp. 59-61).

EAP PERSONNEL (pp. 10-14)

In keeping with the concepts of SEMS and NIMS, utilizing common functions to maintain the orderly flow of information and responsibility within an agency and between agencies is important during emergency situations. Consistency in utilizing the SEMS functions in an activation improves the organization and communication flow.

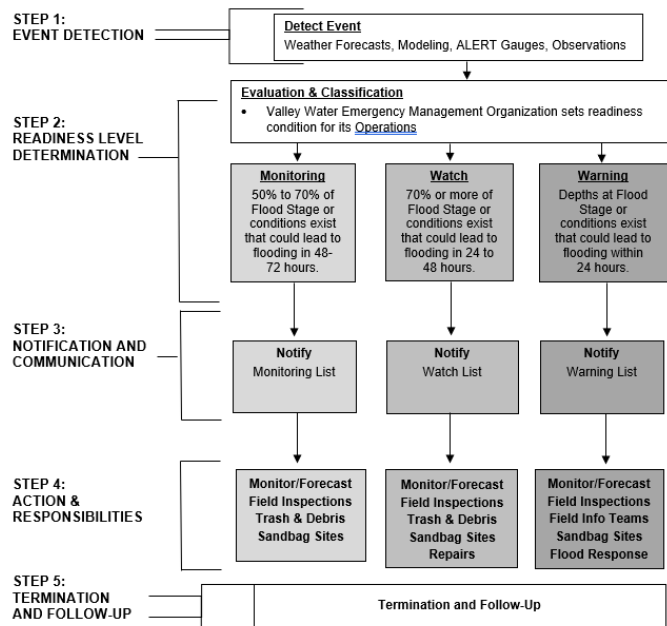
Four Emergency Management Organization (EMO) levels for Valley Water's Emergency Response are described in the Valley Water Emergency Operations Plan (EOP) and are shown below:

1. **Policy Group** – The Policy Group includes the Board of Directors, District Counsel (Risk and Legal Advisors), Chief Operating Officer (CEO), Assistant CEO and the Valley Water Emergency Steering Committee (ESC). The ESC, led by the Unclassified Leadership Team, provides direction and resourcing for emergency-related preparedness efforts.
2. **Emergency Operations Center (EOC)** – The EOC is organized based on the SEMS and NIMS functions of Management, Planning & Intelligence, Operations, Logistics, and Finance & Administration.
3. **Department Operations Center (DOC)** – The DOC is part of the Watersheds Division management that controls and coordinates actions specific to their area of operations. The DOC communicates internally and with other organizations through the EOC (when activated). They may function similar to an EOC following SEMS and NIMS, but often will utilize other procedures that are more appropriate for their response to the event while still supporting documentation necessary for an EOC activation.
4. **Field Response Teams** – These teams have specific skills and capabilities to command or support field incident objectives (e.g., Incident Commanders (IC) and Field Information Teams (FIT)).

EAP OVERVIEW (p. 19)

There are five steps in the EAP process:

1. Event Detection
2. Readiness Level Determination
3. Notification & Communication
4. Actions & Responsibilities
5. Termination & Follow-up



STEP 1 – EVENT DETECTION (pp. 20-21 & pp. 102-104)

This step describes the detection of an unusual or emergency event and provides information to assist Valley Water in determining the appropriate emergency level for the event. Unusual or emergency events may be detected by:

- **Weather Forecasts** - The National Weather Service (NWS) provides weather (e.g., precipitation) forecasts in advance of storm events and Valley Water contracts with a service provider for enhanced. During storm events, the NWS will host webinars with affected agencies and utilities to discuss forecasts and share information to enhance regional preparedness. In addition, the NWS maintains websites (Attachment 13) that provide forecasts and will issue public notices of flood threats on local television and radio programming if the level of threat is high.
- **Hydrologic/Hydraulic Modeling** - If forecasts show a heightened possibility of flooding, it is possible that Valley Water will run hydrologic and hydraulic modeling to determine risk and impact areas for a specific storm event. Valley Water and NWS will utilize this modeling to help set their threat level for Sunnyvale East & West Channels (Table 1B) and provide the information to local agencies and the public as appropriate. And, this same modeling and information that helps determine threat levels is used by Valley Water in determining flood severity levels for Sunnyvale East & West Channels (Table 2B) during storm events.
- **Gauge System** - Valley Water's Automated Local Evaluation in Real Time (ALERT) system can set alarms to automatically notify appropriate staff at predetermined stages. These gauges and alarms provide data in near real-time and can provide extra warning to determine the level of threat for flooding. A listing of all Valley Water gauges can be found at <http://alert.valleywater.org>. These gauges provide data in near real-time upstream of Highway 101 on Sunnyvale East Channel.
- **Visual Observations** - As water levels increase in the creeks, rivers, and waterways, Valley Water Field Information Teams (FITs) or other personnel or stakeholders are deployed to visually monitor and report back to an Emergency Management Organization (EMO) the water levels in areas of potential flooding. In addition, a Webcam at Agnew Road (<https://valleywateralert.org/scvwd/webcams/site.php?cid=9001>) can be monitored remotely.

HH&G maintains a master list of flooding hotspots as shown in Attachment 14 (pp. 59-61) that includes:

- Sunnyvale East at Evelyn Avenue – Check upstream of Evelyn Avenue.
- Sunnyvale East at Caribbean Drive – Check areas around Caribbean Drive. Area is low and is subject to flooding from tidal or riverine.
- Sunnyvale West at Caribbean Drive – Check area upstream of Caribbean Drive. Subject to tidal flooding.

STEP 2 – READINESS LEVEL DETERMINATION (pp. 21-22 & pp. 104-105)

Evaluation—After detecting and gathering adequate intelligence regarding the situation, an evaluation of waterway conditions must be performed by appropriate personnel. The personnel evaluating the intelligence will generally be one or more Subject Matter Experts (SMEs) from O&M and HH&G. SMEs evaluation of intelligence information will be shared with an EMO with appropriate management staff for decisions on actions and establishing readiness levels.

Classification—The EAP is always active, however, after detection of an unusual event the readiness level may be changed. If the EOC is not active, **Valley Water will convene an Emergency Management Organization (EMO) that includes executive leadership to determine whether and how to activate the EOC.**

Based on a technical evaluation of the intelligence detected by SMEs that the threat exists, they may recommend that the EMO monitor the situation over a general area or for a specific creek and location. If a specific creek is being assessed the recommendation for monitoring or activating the EOC would be based on facility specific thresholds detailed in an Appendix of the EAP or situations as described in [Attachment 1](#). These thresholds are consistent with Flood Severity Levels used by the National Weather Service as shown in Table 3.

If the EOC is activated, the readiness level of either Watch or Warning would be set by the EMO (EOC Management) based on all intelligence gathered.

The decision for a change in readiness level from Preparedness to Monitoring is made at a meeting of Valley Water EMO. If they determine that the EOC should be activated, the EOC Director, as part of the EMO, will take the lead to determine whether to set the readiness level at Watch or Warning Tables below describe the Flood Readiness Levels and the Flood Severity Levels. These levels are consistent with those issued by the National Weather Service.

Flood Readiness Levels

PREPAREDNESS	<p>This is the base stage of readiness that will be the typical condition throughout most of the year. An Emergency Management Organization (EMO) is not active at this level. Preparedness is defined as:</p> <ul style="list-style-type: none"> Flood stage (Minor Flooding or greater) is not estimated within the next 72 hours or Measured stream depth is below 50% of flood stage.
MONITORING	<p>This condition is variable and requires more intense monitoring and a heightened level of alertness. A portion of the EMO may be minimally active to monitor for any developing flood concern. Monitoring is defined as:</p> <ul style="list-style-type: none"> Flood stage may occur in 48 to 72 hours, or Measured stream depth is at 50% to 70% of flood stage, or For areas that are controlled purely by storm drain runoff (flashy systems), the stream depth is estimated to reach flood stage within 24 hours.
WATCH	<p>Flood level or a serious flood threat is expected to occur. Multiple portions of the EMO may be activated at an appropriate level. Watch is defined as:</p> <ul style="list-style-type: none"> Stream depth is estimated to reach flood stage or greater within 24 to 48 hours, or Measured stream depths are at 70% to 100% of flood stage, or For areas that are controlled purely by storm drain runoff (flashy systems), the stream depth is estimated to reach flood stage within 6-12 hours.
WARNING	<p>This is a more urgent situation with flooding imminent or occurring. The EMO is more completely active. Warning is defined as:</p> <ul style="list-style-type: none"> Flood stage or greater is occurring or is estimated to occur within 24 hours, or For areas that are controlled purely by storm drain runoff (flashy systems), the stream depth is estimated to reach flood stage or greater within minutes/hours or is occurring.
<p>Note: Flood stage is the depth of water at which a stream or facility begins flooding (see Glossary of Terms).</p>	

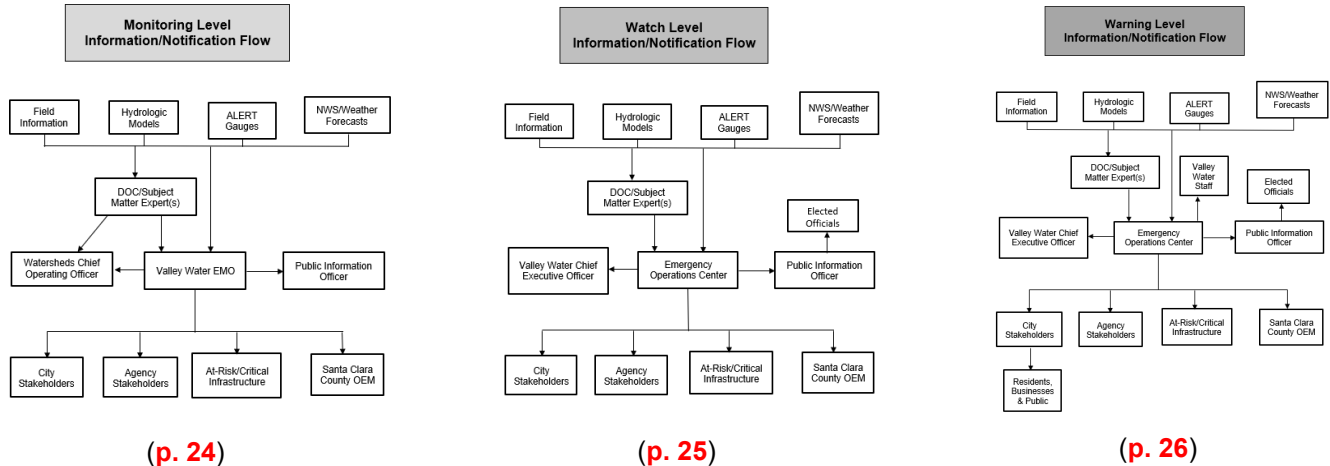
Sunnyvale East & West Channels Flood Severity Levels Stream Gauge on Sunnyvale East Channel

Action (Yellow)	<p>An established gauge height which when reached by a rising stream, lake, or reservoir represents the level where action is taken in preparation for possible significant hydrologic activity.</p> <ul style="list-style-type: none"> 6.5' Stage – Stream Gauge on Sunnyvale East upstream Hwy 101 <u>Sunnyvale East</u> – Flooding north of Hwy 101 can be intensified by high tides or flows coming in from Calabazas and San Tomas Aquino Creeks - check stage gauge at Sunnyvale East Channel at Baylands Park (Stream Sensor 5149) for a rough indication. Rough vegetation is known to grow quickly in some reaches north of Hwy 101 and can intensify flooding as well. <u>Sunnyvale West</u> – No flooding.
Minor Flooding (Orange)	<p>Minimal or no property damage, but possibly some public threat (e.g., inundation of roads).</p> <ul style="list-style-type: none"> 8' Stage – Stream Gauge on Sunnyvale East upstream Hwy 101 <u>Sunnyvale East</u> – Levees immediately downstream of Caribbean Drive overtop both banks, causing mostly less than 1 ft depth of flooding of the Twin Creeks Sports Complex (to the east) and the auxiliary side channel ditch (to the west). East bank immediately upstream of Tasman Drive overtops, flowing approximately 2,500 ft along Tasman Drive and causing some minor flooding (mostly less than 1 ft depth) in the smaller streets of Plaza Del Rey and Casa De Amigos Mobile Home Parks. <u>Sunnyvale West</u> – No flooding.

<p>Moderate Flooding (Red)</p>	<p>Some inundation of structures and roads near stream, evacuations of people and/or transfer of property to higher elevations.</p> <ul style="list-style-type: none"> 9' Stage – Stream Gauge on Sunnyvale East upstream Hwy 101 <u>Sunnyvale East</u> – Flooding continues to get worse at the two aforementioned locations. In addition levees upstream of Caribbean Drive start overtopping on both banks, continuing to flood parkland areas near Twin Creeks Sports Complex, and flooding some ground adjacent to businesses on the west bank. Upstream of Tasman Drive the flooding continues to expand in the mobile home parks of Plaza Del Rey and Casa De Amigos, flooding more buildings and side streets with depths up to 2 feet. <u>Sunnyvale West</u> – No flooding.
<p>Major Flooding (Purple)</p>	<p>Extensive inundation of structures and roads, significant evacuations of people and/or transfer of property to higher elevations.</p> <ul style="list-style-type: none"> 10' Stage – Stream Gauge on Sunnyvale East upstream Hwy 101 <u>Sunnyvale East</u> Downstream of Highway 237: There is significant flooding at Twin Creeks Sports complex and the Bayland Park. Some minor flooding of several properties/businesses south of Caribbean Drive. To the west of the channel Caribbean Drive floods up to 2 ft depth for a length of about 4,000 feet, extend almost to Sunnyvale West Channel. Flooding of some properties occurs to the south of Caribbean Drive (up to 3 ft). A portion of Crossman Avenue floods up to 3ft depth. Tasman Drive: Overtopping south of Tasman on the east bank expands, with flood waters inundating a short (~300 ft long) reach of Lawrence Expressway, continuing to the east, and causing minor flooding (up to 1ft) of side streets and possibly a handful of businesses. The flooding continues to expand in the mobile home parks of Plaza Del Rey and Casa De Amigos, flooding more buildings and side streets with depths reaching over 2 feet. U/S of Hwy 101: Overtopping of the west bank causes up to 1.5 ft depth of flooding of an apartment complex adjacent to the channel and minor street flooding along Ahwanee Avenue, North Ahwanee Terrace and South Ahwanee Terrace. Overtopping of the east channel bank floods mostly streets, impacting Ahwanee Avenue for about 2,500 ft up to San Rafael Street. Other minor streets along Ahwanee Avenue that flood are San Juniper Drive, San Mateo Court, San Pablo Avenue, and Satna Paula Avenue. Overtopping also occurs between Wolfe Road and Duane Avenue along the east bank, partially flooding the parking lot of a business adjacent to the creek. With any higher flows, the flooding at Wolfe Road would get worse, with flood flows traveling north and comingling with the flooding at Highway 101. In addition, the reach just upstream of Evelyn Avenue would start flooding and could impact the following streets: Evelyn Avenue, Wolfe Road, Hornbeam Terrace, Bramble Terrace, and Holly Terrace. The Sandalwood Condominiums as well as the Windsor Ridge Apartments could also potentially flood. <u>Sunnyvale West</u> East Java Drive: Flows overtopping the east bank south of East Java Drive flood Borregas Avenue, East Java Drive and several parking lots (up to 1 ft). Overtopping north of East Java drive floods the parking lots (up to 1.5 ft) of several businesses adjacent to the east side of the creek. With larger than 100yr flows, flows would spread northeast, flooding several roads and a block of businesses (up to 3ft) bounded by Capsian Drive, Borregas Avenue, Geneva Drive, and Caribbean Drive; comingling with flooding from the Sunnyvale East Channel.

STEP 3 – NOTIFICATION & COMMUNICATION (pp. 22-26)

Notification: After the condition levels and severity have been determined, appropriately communicating the situation to responsible agencies, staff, and other identified individuals and groups is critical. Depending on the condition level, responsibilities for notifications and who is notified would vary. The charts shown below show the flow of information for the three flood threat condition levels and the contact list is Attachment 9 (p. 49).



STEP 4 – ACTIONS & RESPONSIBILITIES (pp.14-18)

As the weather conditions change, the responsibilities of the City, District and other Stakeholders adjust. The list of responsibilities provided in Table 2 (pp. 15-18) illustrate in general terms what actions are needed at each threat level, and who has lead responsibility. Specific responsibilities for personnel are included in Attachments 3-8 (pp. 33-47).

The list of progressive responsibilities and activities listed in Table 2 are not intended to be all-inclusive or to commit resources without knowledge of the conditions that may occur, nor are they intended to be a prescriptive list of what to do before and during storm and flood monitoring and response. The actual conditions dictate the response needs and availability of staff and resources as each situation can be different and updates in stream management and control systems could vary the conditions.

[illegible][illegible]

Responsibility/Activity	Stakeholder/Personnel/Club
Review emergency planning needs	HAEM
Report to Agency Stakeholder EOC when directed and available	City Stakeholders and County EOC Planning/Intelligence and Management
Activate the EOC, and determine what role you have to activate	County EOC
Establish and maintain communication for "Virtual" EOC	Valle Verde EMO
Establish and maintain communications with Policy Group	County EOC
Establish and maintain communications with Incident Management Team	EOC EOC Director
Establish incident response and priorities for Action Cards during the incident	EOC Director
Provide information to and from Incident EOC's, including status reports	EOC Management
Report to Agency Stakeholder EOC when directed and available	Agency Representative, Management, Planning, Intelligence and Operations
Coordinate with other EOC's	EOC Management/PIO/Liaison
Brief and communicate to brief affected offices	
Update status of your assignment level	PIO
Activate other public notification offices (e.g., Alert SOC, Sheriff's Office, etc.)	City Stakeholder in lead
Coordinate with other EOC's	County EOC
Activate Joint Incident Situation (JIS) and, if necessary, Joint Incident Management Team (JIMT)	City Stakeholders or County EOC
Participate in JIS/JIC/JIMT, as directed	EOC Management/PIO
Communicate with media as needed	EOC Director Stakeholder PIO/Liaison County EOC
Display public notification systems as appropriate	EOC Operations and/or EOC Management
Begin planning to evaluate and report regarding a department's ability to maintain and coordinate resources and resources	Planning/Intelligence and Management
Coordinate with other EOC's to develop possible recommendations for City storm pump station operating changes and communicate with City	Planning/Intelligence and Management
Coordinate with other EOC's to develop possible recommendations of remedial actions to be taken in Appendix 2	EOC Operations and/or EOC Management
Coordinate with other EOC's to develop and be affected and/or, provide coordinate with each responding Agency Stakeholder	EOC (e.g., City and/or County) EOC
Evaluate need and implement education and sheltering staff	EOC Management
Coordinate resources information shared through respective EOC's	EOC Management or Liaison
Display and distribute Flood Information Trainers (FIT)	EOC Management

Responsibility/activity	Stakeholder/Personnel/Unit
Provide forecast based input if possible.	H&SQ
Provide public facing and deeper information in multiple languages.	City is lead. County is key support.
Activate social media publication systems (e.g., Alert SC, Facebook, firstaidsc , door to doorbells for vaccination at age appropriate).	City Stakeholder EOC Management/PO is lead.
Activate Joint Information System (JIS) and, if necessary, Joint Active Center (JAC) as appropriate.	City Stakeholder or County is lead.
Participate in JAC/JIS if activated.	EOC Management/PO
Communicate with media as needed.	JIS/EOC or other Stakeholder is lead for own agency activities.
Provide information to and from respective EOC's, including status reports and briefings.	City Stakeholder is lead.
Verify one Stakeholder is named on appropriate	City Stakeholder is lead.
*Verify one Stakeholder is named on each other Stakeholder/Personnel/Unit entry support the effort.	

STEP 5 – VALLEY WATER TERMINATION & FOLLOW-UP (p. 27)

After this EAP has been activated at a level of Monitor, Watch or Warning and then returned to Preparedness, EAP operations must be terminated and follow-up procedures completed.

a. Termination Responsibilities

In a Watch or Warning, the EOC Director is responsible for terminating EAP operations and directing that this decision is relayed to each person notified during the original event.

EOC Management will ensure that all forms for Action Planning, Situational Reports, or others utilized during the event are collected and organized chronologically as determined appropriate. If electronic documentation was utilized, these could be saved on a storage device that could be retrievable or could be printed and saved as a hard copy in the file.

b. Follow-Up Responsibilities

The Operations & Maintenance Engineering Support Unit (if DOC is activated), or the Emergency Services & Security Unit (if EOC was activated), will prepare an After-Action Report (AAR) of the event and will track implementation of appropriate recommendations in the AAR.

The City or other stakeholders will be responsible for damage assessment to homes and businesses and any permit requirements required to reoccupy structures and to promote flood mitigations measures during any reconstruction.

MAINTENANCE OF EAP (p. 7)

O&M will work with Office of Emergency Services Unit, Hydrology Hydraulics & Geomorphology Unit and other appropriate stakeholders to review and, if needed, update the EAP at least once each year. The EAP annual review should include the following:

- Verify that the phone numbers and persons in the specified positions are current and revise if any of the contacts have changed,
- Verify and, if necessary, update flood maps and flood thresholds,
- Verify the locally available resources and equipment are current, and/or
- Incorporate appropriate recommendations from any AAR prepared after training or activation of the EAP.

ATTACHMENTS (pp. 29-66)

ATTACHMENT 1 - Guidance for Evaluating High Flow Condition Level
ATTACHMENT 2 - Emergency Remedial Actions
ATTACHMENT 3 - Management Action List
ATTACHMENT 4 - Planning/Intelligence Action List
ATTACHMENT 5 - Operations Action List
ATTACHMENT 6 - Field Information Team Action List
ATTACHMENT 7 - Public Information Officer Action List
ATTACHMENT 8 - Elected Officials Action List
ATTACHMENT 9 - Emergency Services Contact List
ATTACHMENT 10 - Valley Water Emergency Responders Contact List
ATTACHMENT 11 - Available Resources
ATTACHMENT 12 - Equipment List
ATTACHMENT 13 - Web-Based Data Sources
ATTACHMENT 14 - Field Information Team Hot Spots