LOWER PENITENCIA CREEK
Emergency Action Plan – Quick Guide

Lower Penitencia Creek Watershed EAP dated: October 2024

This guide summarizes key information/guidelines as described in the Lower Penitencia Creek Watershed Emergency Action Plan and its Lower Penitencia Creek 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)

The Emergency Action Plan for Severe Storm and Flood Response in the Lower Peninsula Watershed (EAP) 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 Lower Peninsula Watershed. In addition to general guidance, specific guidance is included for Stevens Creek to facilitate Valley Water's activities within the following four areas:

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

LIMITATIONS OF EAP (p. 5)

The EAP shall not constrain the Incident Commander (IC) in the field or others when dealing with flooding on Lower Penitencia Creek. It does not replace or override existing plans, authorities, or responsibilities.

Instead, this EAP will provide oversight and guidance and will not 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. The conditions of the emergency dictate the response needs and availability of staff and resources as each emergency can be different and updates in stream management and control systems could vary the conditions.

LOWER PENITENCIA CREEK DESCRIPTION (pp. 67-89)

Lower Penitencia Creek Watershed is located in the City of Milpitas and runs on the valley floor about 4.1 miles in length originating near Montague Expressway. It discharges into Coyote Creek near Interstate 880 and Dixon Landing Road interchange about 8.3 miles upstream of San Francisco Bay.

The creek is mostly an earth channel with some concrete lining. There are levees or floodwalls from the confluence with Coyote Creek for about 2.6 miles to just upstream of Sylvia Avenue. There is maintenance access along most of its length. Valley Water owns most of the creek except under Interstate 880. The City operates 6 local drainage pump stations that discharge into Lower Penitencia Creek.

FLOOD THREATS
(p. 86 & Table 2A p. 88)

Flood protection projects have been completed on Lower Penitencia Creek in 1955, 1962, 1965, 1984 and most recently in 2023. Lower Penitencia Creek should convey the 1% flow with freeboard downstream of the Berryessa Creek confluence. Upstream flooding from near the Great Mall Parkway would flow westerly towards I-880 and possibly commingle with floodwaters from Berryessa Creek and Upper Penitencia Creek and result in ponding in the neighborhoods. Step 2 and Table 2A (p. 88) describe the flood threat.

EAP PERSONNEL (pp. 8-11)

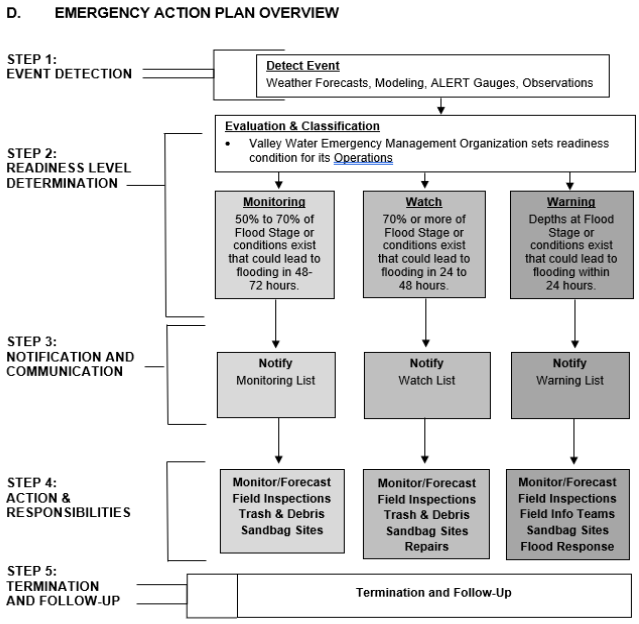
Four Emergency Management Organization (EMO) levels for Valley Water's Emergency Response are described in the Valley Water Emergency Operations Plan (EOP) and are shown below:

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 is 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. 16)

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. 17-19)

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 (p. 57)) that provide forecasts and will issue public notices of forecasted flood threats on local television and radio programming.
- **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. The Valley Water Surface Water Data Portal at https://alert.valleywater.org/map?p=map&disc=f has forecasts available for some creeks.

- **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 map of all Valley Water gauges can be found at https://alert.valleywater.org/map?p=list&disc=f.
- **Visual Observations** - Visual monitoring and/or on-site observations are helpful in assessing current situations in the field. On-line ALERT Cameras are available at some locations (https://alert.valleywater.org/map?p=map) to remotely observe water levels (none are currently available in the Lower Penitencia Watershed) and as water levels increase in the creeks, rivers, and waterways, Valley Water Field Information Teams (FITs) are deployed to visually monitor and report back to an EMO the situation that may include rate of water surface elevation increases in areas of potential flooding. These field personnel can monitor facilities for potential damage, identify surface drainage issues, thoroughly document actual flooding, and report landslides/erosion affecting the adjacent land uses. Hotspots for FIT deployment in the Lower Penitencia Creek Watershed is shown in Attachment 14 (pp. 59-66) and Lower Penitencia Creek site upstream of the Great Mall Parkway is shown on page 63.

STEP 2 – EVALUATION & CLASSIFICATION (pp. 18-19)

- **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 SMEs that will generally include staff from O&M and HH&G. SMEs evaluation of intelligence information will be shared with appropriate management staff for decisions on actions and establishing readiness levels.
- **Classification**—Based on a technical evaluation of the intelligence detected by SMEs that a threat exists, they may recommend to 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 thresholds detailed in an Appendix of the EAP or situations as described in Attachment 1 (pp. 25-26). These thresholds are consistent with Flood Severity Levels used by the National Weather Service as shown in the table below.

  If the EOC is activated, the readiness level of either Watch or Warning would be set by the EMO, generally the EOC Director, 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, may take the lead to determine whether to set the readiness level at Watch or Warning.

Flood Readiness Levels

PREPAREDNESS	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. It is defined as: • 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	This condition is variable and requires more intense monitoring and a heightened level of alertness. An EMO may be minimally active to monitor for any developing flood concern. This condition is defined as: • 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 or near design stage within 24 hours.
WATCH	Flood level or a serious flood threat is expected to occur. An EMO may be activated at an appropriate level. This is generally defined as: • 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 or greater than design stage within 6-12 hours.

WARNING	This is a more urgent situation with flooding imminent or occurring. The EMO is generally active. This level is generally defined as: • 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.
Note: Flood stage is the depth of water at which a stream or facility begins flooding (see Glossary of Terms).	

Lower Penitencia Creek Flood Severity Levels

Action (Yellow)	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.
	• **Lower Penitencia Creek**
	  ○ The Machado Ave. stream gauge is near or expected to be at or near 5.5 feet.
	  ▪ Creek is flashy and fed primarily with storm drains and pump stations. Watch water level near Great Mall Parkway

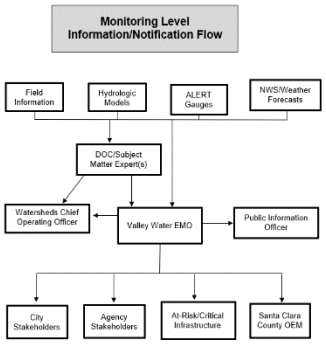
Minor Flooding (Orange)	Minimal or no property damage, but possibly some public threat (e.g., inundation of roads).
	• **Lower Penitencia Creek**
	  ○ The Machado Avenue stream gauge is near or expected to be 7.5'.
	  ▪ Overtopping just south of Great Mall Parkway on the east bank, flooding South Abel Street. Possible localized flooding from urban flooding.

Moderate Flooding (Red)	Some inundation of structures and roads near stream, evacuations of people and/or transfer of property to higher elevations.
	• **Lower Penitencia Creek**
	  ○ Machado Ave. stream gauge is near or expected to be at or greater than 8.0'.
	  ▪ Spills occur around S. Abel Street, flowing westward along West Capitol Avenue toward I-880 and ponding in the neighborhoods.

Disclaimer: This table is current as of the publishing of this document. The most current flood severity thresholds are at https://alert.valleywater.org/map?p=map.	

STEP 3 – NOTIFICATION & COMMUNICATION (pp. 19-23)

Notification: After the readiness 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 readiness level, responsibilities for notifications and who is notified would vary. The charts shown below show the flow of information for the three flood threat readiness levels and the contact list is Attachment 9 (pp. 49-50).



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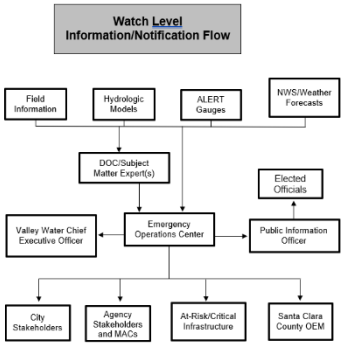

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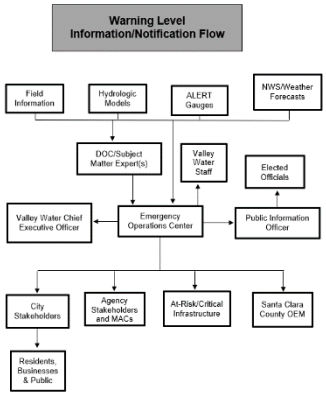

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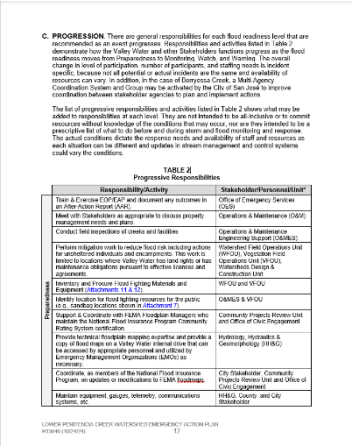
STEP 4 – ACTIONS & RESPONSIBILITIES (pp. 24 and 12-15)

After an unusual or emergency event is detected, the EMO may raise the readiness level, if the EOC has not been activated, the Valley Water leadership acting as the EMO will assess the situation and determine whether to activate the EOC. If activated the EOC Director decides on the readiness level. As the readiness level changes, the responsibilities of the City, District and other Stakeholders adjust. The list of responsibilities provided in Table 2 (pp. 12-15) 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. 29-47).

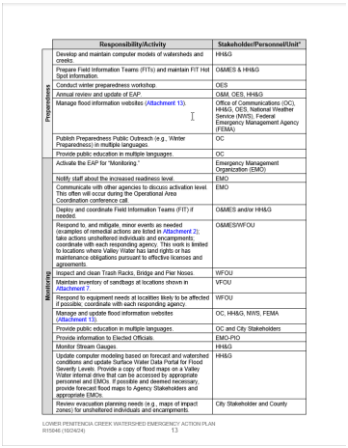


C. **PROGRESSION**. There are general responsibilities for each flood readiness level that are recommended as an event progresses. Responsibilities and activities listed in Table 2 demonstrate how the Valley Water and other Stakeholders functions progress as the flood readiness moves from Preparedness to Monitoring, Watch, and Warning. The overall change in level of participation, number of participants, and staffing needs is incident specific, because not all potential or actual incidents are the same and availability of resources can vary. In addition, in the case of Berryessa Creek, a Multi Agency Coordination System and Group may be activated by the City of San José to improve coordination between stakeholder agencies to plan and implement actions.

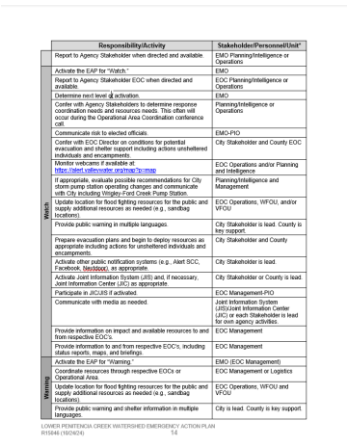
The list of progressive responsibilities and activities listed in Table 2 shows what may be added to responsibilities at each level. They are not intended to be all-inclusive or to commit resources without knowledge of the conditions that may occur, nor are they intended to be a prescriptive list of 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.

TABLE 2
Progressive Responsibilities

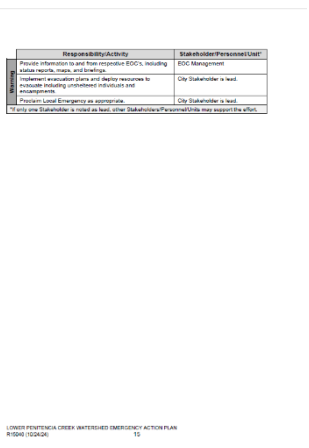
	Responsibility/Activity	Stakeholder/Personnel/Unit*
Preparedness	Train & Exercise COP/EAP and document any outcomes in an After Action Report (AAR).	Office of Emergency Services (OES)
	Meet with Stakeholders as appropriate to discuss property management needs and plans.	Operations & Maintenance (O&M)
	Conduct field inspections of creeks and facilities	Operations & Maintenance Engineering Support (O&M&E)
	Perform mitigation work to reduce flood risk including actions for unsheltered individuals and encampments. This work is limited to locations where Valley Water has land rights or has maintenance obligations pursuant to effective licenses and agreements.	Watershed Field Operations Unit (WFOU), Vegetation Field Operations Unit (VFOU), Watersheds Design & Construction Unit
	Inventory and Procure Flood Fighting Materials and Equipment (Attachments 11 & 12).	WFOU and VFOU
	Identify location for flood fighting resources for the public (e.g., sandbag locations shown in Attachment 7)	O&M&E & VFOU
	Support & Coordinate with FEMA Floodplain Managers who maintain the National Flood Insurance Program Community Rating System certification.	Community Projects Review Unit and Office of Civic Engagement
	Provide technical floodplain mapping expertise and provide a copy of flood maps on a Valley Water internal drive that can be accessed by appropriate personnel and utilized by Emergency Management Organizations (EMOs) as necessary.	Hydrology, Hydraulics & Geomorphology (HH&G)
	Coordinate, as members of the National Flood Insurance Program, on updates or modifications to FEMA floodmaps.	City Stakeholder, Community Projects Review Unit and Office of Civic Engagement
	Maintain equipment, gauges, telemetry, communications systems, etc.	HH&G, County, and City Stakeholder



	Responsibility/Activity	Stakeholder/Personnel/Unit*
Preparedness	Develop and maintain computer models of watersheds and creeks.	HH&G
	Prepare Field Information Teams (FITs) and maintain FIT Hot Spot information.	O&M/ES & HH&G
	Conduct winter preparedness workshop.	OES
	Annual review and update of EAP.	O&M, OES, HH&G
	Manage flood information websites (Attachment 13).	Office of Communications (OC), HH&G, OES, National Weather Service (NWS), Federal Emergency Management Agency (FEMA)
	Publish Preparedness Public Outreach (e.g., Winter Preparedness) in multiple languages.	OC
	Provide public education in multiple languages.	OC
Monitoring	Activate the EAP for "Monitoring."	Emergency Management Organization (EMO)
	Notify staff about the increased readiness level.	EMO
	Communicate with other agencies to discuss activation level. This often will occur during the Operational Area Coordination conference call.	EMO
	Deploy and coordinate Field Information Teams (FIT) if needed.	O&M/ES and/or HH&G
	Respond to, and mitigate, minor events as needed (examples of remedial actions are listed in Attachment 2); take actions unsheltered individuals and encampments; coordinate with each responding agency. This work is limited to locations where Valley Water has land rights or has maintenance obligations pursuant to effective licenses and agreements.	O&M/ES/WFOU
	Inspect and clean Trash Racks, Bridge and Pier Noses.	WFOU
	Maintain inventory of sandbags at locations shown in Attachment 7.	VFOU
	Respond to equipment needs at localities likely to be affected if possible, coordinate with each responding agency.	WFOU
	Manage and update flood information websites (Attachment 13).	OC, HH&G, NWS, FEMA
	Provide public education in multiple languages.	OC and City Stakeholders
	Provide information to Elected Officials.	EMO-PIO
	Monitor Stream Gauges.	HH&G
	Update computer modeling based on forecast and watershed conditions and update Surface Water Data Portal for Flood Severity Levels. Provide a copy of flood maps on a Valley Water internal drive that can be accessed by appropriate personnel and EMOs. If possible and deemed necessary, provide forecast flood maps to Agency Stakeholders and appropriate EMOs.	HH&G
	Review evacuation planning needs (e.g., maps of impact zones) for unsheltered individuals and encampments.	City Stakeholder and County



	Responsibility/Activity	Stakeholder/Personnel/Unit*
Watch	Report to Agency Stakeholder when directed and available.	EMO Planning/Intelligence or Operations
	Activate the EAP for "Watch."	EMO
	Report to Agency Stakeholder EOC when directed and available.	EOC Planning/Intelligence or Operations
	Determine next level of activation.	EMO
	Confer with Agency Stakeholders to determine response coordination needs and resources needs. This often will occur during the Operational Area Coordination conference call.	Planning/Intelligence or Operations
	Communicate risk to elected officials.	EMO-PIO
	Confer with EOC Director on conditions for potential evacuation and shelter support including actions unsheltered individuals and encampments.	City Stakeholder and County EOC
	Monitor webcams if available at https://alert.valleywater.org/map?p=map	EOC Operations and/or Planning and Intelligence
	If appropriate, evaluate possible recommendations for City storm pump station operating changes and communicate with City including Wrigley-Ford Creek Pump Station.	Planning/Intelligence and Management
	Update location for flood fighting resources for the public and supply additional resources as needed (e.g., sandbag locations)	EOC Operations, WFOU, and/or VFOU
	Provide public warning in multiple languages.	City Stakeholder is lead. County is key support.
	Prepare evacuation plans and begin to deploy resources as appropriate including actions for unsheltered individuals and encampments.	City Stakeholder and County
	Activate other public notification systems (e.g., Alert SCC, Facebook, Nextdoor), as appropriate.	City Stakeholder is lead.
	Activate Joint Information System (JIS) and, if necessary, Joint Information Center (JIC) as appropriate.	City Stakeholder or County is lead
	Participate in JIC/JIS if activated.	EOC Management-PIO
	Communicate with media as needed.	Joint Information System (JIS)/Joint Information Center (JIC) or each Stakeholder is lead for own agency activities
	Provide information on impact and available resources to and from respective EOC's.	EOC Management
	Provide information to and from respective EOC's, including status reports, maps, and briefings.	EOC Management
	Activate the EAP for "Warning."	EMO (EOC Management)
Warning	Coordinate resources through respective EOCs or Operational Area.	EOC Management or Logistics
	Update location for flood fighting resources for the public and supply additional resources as needed (e.g., sandbag locations)	EOC Operations, WFOU and VFOU
	Provide public warning and shelter information in multiple languages.	City is lead. County is key support.



	Responsibility/Activity	Stakeholder/Personnel/Unit*
Preparedness	Provide information to and from respective EOC's, including status reports, maps, and briefings.	EOC Management
Monitoring	Implement evacuation plans and deploy resources to include including unsheltered individuals and encampments	City Stakeholder is lead.
Warning	Proclaim Local Emergency as appropriate.	City Stakeholder is lead.

* If only one Stakeholder is noted as lead, other Stakeholders/Personnel/Units may support the effort.

STEP 5 – VALLEY WATER TERMINATION & FOLLOW-UP (p. 24)

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

DOC or 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. 6)

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. 25-66)

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