# Emergency Action Plan (EAP)

for

# Senior Canyon Dam

## HIGH HAZARD CLASSIFICATION

Senior Canyon Reservoir

*Ventura County, California*

**Latitude:** 34.4723 **N**
**Longitude:** 119.1958 **W**

**Dam Owner: Senior Canyon Mutual Water Company**

DSOD South Region

DSOD Dam No. 1761

National Inventory of Dams (NID) No. CA01019


**Owner / EAP Coordinator**

Peter Thielke
Email: peter@SeniorCanyonWater.com
Phone: (805) 798-2971

**DAM Operator / EMERGENCY CONTACT**

Reinaldo Cartagena
Email: rei@seniorcanyonwater.com
Cell: (805) 798-0267
24 Hour Emergency: (805) 535-9516


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Date Prepared: January 14, 2021
Updated: August 12, 2024

# Dam Contact Information

**Dam Name: Senior Canyon Dam**
Physical Address: APN 014-012-003, Ventura, CA
(no physical address available)
Nearest Address: 2560 Ladera Rd, Ojai CA, 93023

Dam Owner / EAP Coordinator:
Senior Canyon Mutual Water Company (SCMWC)
Peter Thielke
Phone: (805) 798-2971
Email: peter@SeniorCanyonWater.com
Mailing Address: 603 W Ojai Avenue
Ojai, CA 93023

Dam Operator / EMERGENCY CONTACT:
Reinaldo Cartagena
Email: rei@seniorcanyonwater.com
Operations Manager
Cell: (805) 798-0267
24 Hour Emergency: (805) 535-9516

Backup Operator:
Robert Cortes
Assistant Operations Manager
Cell: (805) 798-2463

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# PART 1: EAP INFORMATION

# 1 Introduction

## 1.1 Purpose

The purpose of this EAP is to reduce the risk of loss of human life or injury, and to minimize property damage in the event of a potential or actual emergency situation associated with Senior Canyon Dam (CA01019). These situations include, but are not limited to dam instability, sizable earthquakes, extreme storm events, major spillway releases, overtopping of the dam, outlet system failure, vandalism or sabotage, spillway failures, and failure of the dam.

This Emergency Action Plan defines responsibilities and provides procedures designed to identify unusual and unlikely conditions that may endanger Senior Canyon Dam in time to take mitigating action and to notify the appropriate emergency management authorities of possible, impending, or actual failure of the dam. The plan may also be used to provide notification when flood releases can create major flooding.

The Department of Water Resources (DWR), Division of Safety of Dams (DSOD) has rated Senior Canyon Dam as "High Hazard". Because of its hazard classification, Senior Canyon Mutual Water District (SCMWD) developed this EAP in accordance with the requirements listed in California Water Code Sections 6160 and 6161 and Government Code Section 8589.5, following FEMA's Federal Guidelines for Dam Safety: Emergency Action Planning for Dams (FEMA 64/July 2013).

## 1.2 Planning Team

The Senior Canyon Dam EAP Coordinator worked with a core planning team to develop this plan. Key participants include the Ventura County Sheriff's Office, Ventura County Fire Department, the California Department of Water Resources Flood Operations Center (FOC), and the California Department of Water Resources Division of Safety of Dams (DSOD). The National Weather Service was also contacted for their input. Other members that provided valuable input are mentioned on the Signature Page (see Appendix K). Coordination was completed primarily via email; documented correspondence has been submitted separately to Cal OES.

For more information, please contact the EAP Coordinator:
EAP Coordinator: Peter Thielke
Email: peter @SeniorCanyonWater.com
Phone: (805) 798-2971

### Potentially Affected Jurisdictions

The Unincorporated Areas of Ventura County are the only jurisdiction likely to be severely affected by a failure of Senior Canyon Dam. A failure of the dam has the potential to severely impact residences in the Unincorporated Areas of Ventura County, See Section 4.2 for details. Inundation extents may be viewed on the Inundation Maps, Part II of this EAP.

The City of Ojai contracts law enforcement and fire and rescue services from the County of Ventura. County law enforcement and fire and rescue services responsible for the City of Ojai participated in review of this EAP. The City of Ojai does not have a designated full time emergency manager.

**Summary of Coordination Outcome**

As a result of coordination efforts, responsibilities and contact information was updated for Ventura County Sheriff's Office of Emergency Services, Ventura County Fire & Rescue, DSOD, and the National Weather Service. The Ventura County Sheriff's Office (OES) was the principal agency contacted to acquire information on emergency response. Coordination with Ventura County Fire & Rescue was completed with Ventura County Sheriff's OES. It is also noted that the Ventura County Sheriff can leverage additional emergency assistance, as needed, from other local agencies based on mutual aid agreements. In conversations with City of Ojai staff, emergency services are contracted through the County of Ventura Sheriffs office and Ventura County Fire Department. The city of Ojai will not directly have any responsibilities in responding to an emergency resulting from a failure of Senior Canyon Dam.

# 2 Summary of EAP Responsibilities

## 2.1 Dam Owner Responsibilities

The dam owner's/operator's representative includes maintenance personnel, and executives, if applicable. Duties include the following:

**Dam Operator Responsibilities**

- Detect, verify, and assess emergency conditions.
- Activate and implement the Senior Canyon Dam EAP (including, but not limited to, determining the appropriate emergency level, taking corrective actions, etc.).
- Notify appropriate agencies of emergency conditions, emergency level, EAP activation, and other critical information in the priority order shown on the Emergency Notification Flowchart for the appropriate level.
- Taking corrective action at the dam.
- Notify public safety agencies of updates or changes during the incident, including termination of the emergency and the plan.
- Declaring Termination of the emergency at the dam
- Participate in after-action meetings
- Participate in annual update of EAP
- Coordinate with EOC or assign liaison to join EOC

**Owner Executives Responsibilities**

- Maintain the dam
- Participate in after-action evaluation meetings.

**EAP Coordinator Responsibilities**

- Conducting annual reviews of the EAP,
- Preparing revisions to the EAP,
- Training dam staff on EAP,
- Coordinating EAP exercises
- Serve as the point of contact for questions about the plan.

## 2.2 Local Public Safety Agencies

The local public safety agencies key responsibilities are the following. Each agency listed should participate in the After Action Evaluation. Potentially impacted communities/jurisdictions include the Unincorporated Areas of Ventura County.

*Table 1. Summary of Agency Responsibilities*

| Agency/Jurisdiction | Key Responsibilities |
|---|---|
| Senior Canyon Mutual Water Company | • Implementing public warning and notification<br>• Responding to emergencies at the Dam<br>• Sending a liaison to the Ventura County EOC<br>• Providing onsite resources and support, communicating with other agencies<br>• Facilitating the After Action Report / Improvement Plan Providing onsite resources and support, communicating with other agencies<br>• EAP termination at dam |
| Ventura County Office of Emergency Services (OES) | • Support the response of law, fire and other agencies to the emergency<br>• Provide Alert & Warning services to Ventura County Operational Area<br>• Coordinate emergency public information through County EOC JIC<br>• Assist in establishing shelters for evacuated individuals<br>• Support repopulation of evacuated areas with law enforcement |
| Ventura County Sheriff | • Establish evacuation routes, conduct evacuations, provide evacuation zone traffic control and security<br>• Coordinate emergency public information through County EOC JIC |
| Ventura County Fire & Rescue | • Conduct rescues and assist with evacuations.<br>• Provide status reports to Ventura County EOC<br>• Coordinate emergency public information with Ventura County EOC JIC |
| National Weather Service | • Issue public flood watches and warnings<br>• The NWS will activate the Emergency Alert System (EAS) and Wireless Emergency Alert (WEA) when issuing a flash flood warning.<br>• Providing timely updates of local weather forecast. |
| DWR Flood Operations Center (FOC) | • Receive condition status reports from Dam Owner<br>• Distribute river forecasts, make notification calls to appropriate local flood system maintaining and emergency response agencies, and activate FOC as appropriate.<br>• Coordinate with National Weather Service, US Army Corps of Engineers, California Governor's Office of Emergency Services, Counties, Local Maintaining Agencies, and other local, state, and federal agencies. |

# 3 Notification Flowcharts

The Senior Canyon Mutual Water Company produced Notification Flowcharts to appropriately identify who needs to be contacted and in what order, based on the appropriate emergency level. The top "row", the numbered phone calls, indicates those contacts Senior Canyon Mutual Water Company will make during each emergency level.

In Ventura County emergency response is initiated by contacting the VCSO, the Public Safety Answering Point (PSAP) for emergencies and the OES Duty officer for high flow or non-emergency events. The VCSO then leverages additional resources as needed to respond to the emergency. The flowcharts were reviewed and approved by VCSO and VCFPD. The VCSO may leverage any other local agencies on an as needed basis through mutual aid agreements.

The subsequent contacts in the flowcharts are those made by other contacts in the phone tree. Senior Canyon Mutual Water Company worked with our partners to extend our flowcharts to include these secondary contacts. These secondary calls have been agreed to by those organizations making the calls, and have been incorporated into those agencies' policies and procedures. These contacts are listed in the EAP for informational purposes only. The Notification Flowcharts do not supersede or affect these external organizations' notification procedures and requirements.

Positive contact is a requirement when making these calls. Every number listed can be used 24-hours a day, except for the DSOD contacts, which have several numbers covering the 24-hour period.

## 3.1 Notification Flowcharts

The following pages are the Notification Flowcharts for each emergency level. A separate contact sheet for EAP participants and stakeholders is provided in Appendix M. Reference Appendix J when contacting the CAL OES Warning Center.

# High Flow and Non-Failure Notifications

**CONFIDENTIAL INFORMATION – DESTROY BEFORE DISCARDING**

* It is understood federal EAP guidelines do not allow the operator more than 4 calls per person. The operator will utilize auxiliary staff available to complete notification without exceeding 4 calls per person.

**Dam Operator***
SCMWC
Reinaldo Cartagena
Cell: (805) 798-0267
(24 Hour) Emergency: (805) 535-9516
**Backup Operator***
Robert Cortes
(24 Hour) Cell: (805) 798-2463

**Note:**
Call the County Sheriff to inform them of the situation. Make it clear that the dam is currently safe.

**1) VCSO OES Duty Officer**
(805) 947-8210
(24 Hour)

**2) National Weather Service**
805-988-6619
(24 Hour)

**3) Cal OES Warning Center**
(916) 845-8911
(24 Hour)
**Reference Appendix J**

**4) DWR - Flood Operations Center**
(916) 574-2619
(24 Hour)

**5) DSOD**
**During business hours:**
Andrew Mangney,
Chief Field Engineering Branch
(916) 565-7800

**Outside of business hours:**
Cameron Lancaster
Area 9 Engineer
Cell: (916) 296-0187

**Outside of business hours:**
Brandon Cruz
Regional Engineer
Cell: (916) 698-5167

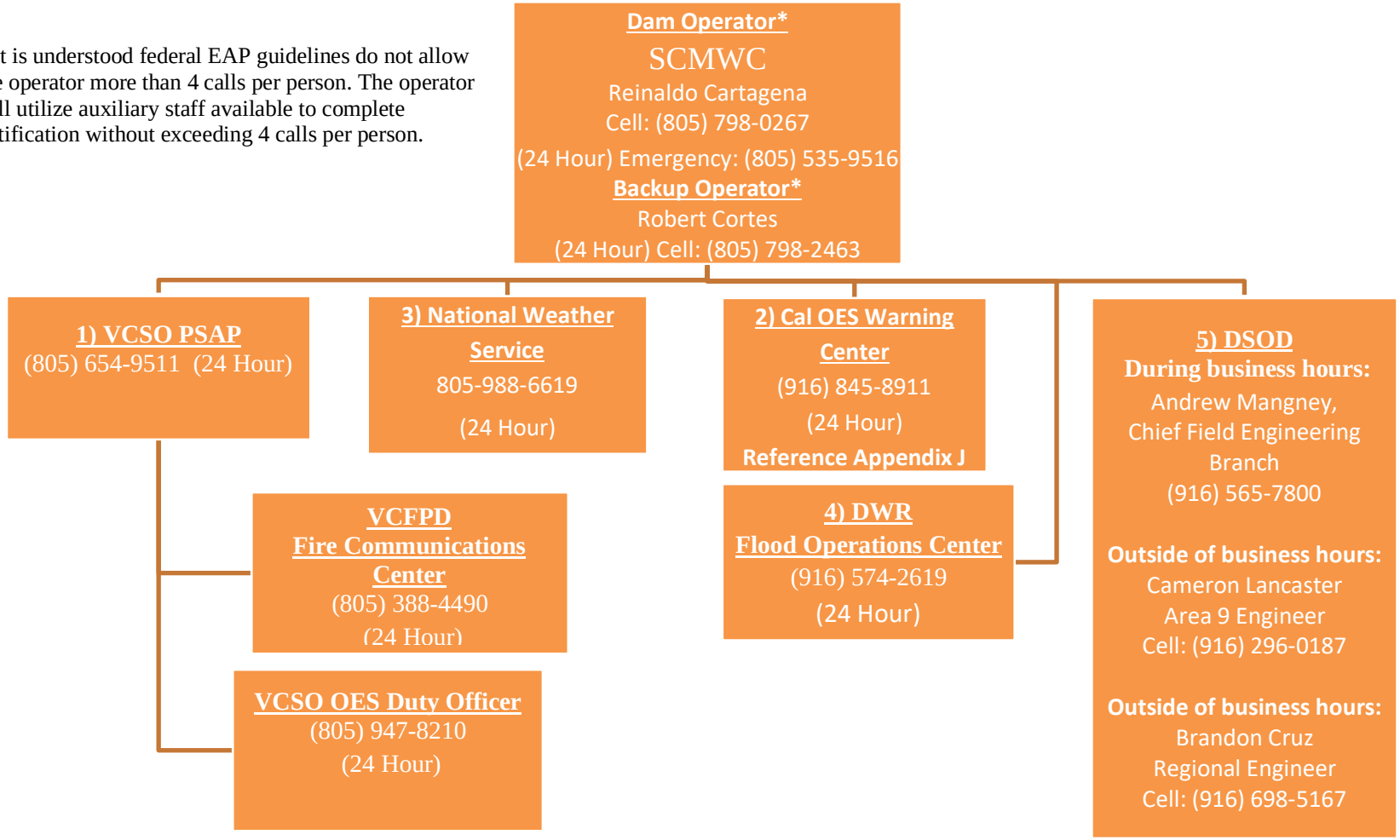
**Record each notification in Appendix D**

# Potential Failure Notifications

**Potential dam failure, rapidly developing**

**CONFIDENTIAL INFORMATION – DESTROY BEFORE DISCARDING**

* It is understood federal EAP guidelines do not allow the operator more than 4 calls per person. The operator will utilize auxiliary staff available to complete notification without exceeding 4 calls per person.




**Record each notification in Appendix D**

# Imminent Failure Notifications

**Dam failure appears imminent or is in progress**

**CONFIDENTIAL INFORMATION – DESTROY BEFORE DISCARDING**

* It is understood federal EAP guidelines do not allow the operator more than 4 calls per person. The operator will utilize auxiliary staff available to complete notification without exceeding 4 calls per person.

**Dam Operator***
SCMWC
Reinaldo Cartagena
Cell: (805) 798-0267
(24 Hour) Emergency: (805) 535-9516
**Backup Operator***
Robert Cortes
(24 Hour) Cell: (805) 798-2463

**1) VCSO PSAP**
(805) 654-9511 (24 Hour)

**2) National Weather Service**
805-988-6619
(24 Hour)

**3) Cal OES Warning Center**
(916) 845-8911
(24 Hour)
**Reference Appendix J**

**4) DWR**
**Flood Operations Center**
(916) 574-2619
(24 Hour)

**5) DSOD**
**During business hours:**
Andrew Mangney,
Chief Field Engineering Branch
(916) 565-7800

**Outside of business hours:**
Cameron Lancaster
Area 9 Engineer
Cell: (916) 296-0187

**Outside of business hours:**
Brandon Cruz
Regional Engineer
Cell: (916) 698-5167

**VCFPD**
**Fire Communications Center**
(805) 388-4490
(24 Hour)

**VCSO OES Duty Officer**
(805) 947-8210
(24 Hour)

**Record each notification in Appendix D**

# 4 Project Description

The Senior Canyon Mutual Water Company owns and operates Senior Canyon Dam, California Dam Number 1761, National Dam ID Number CA 01019. Constructed in 1964 as a water supply reservoir, Senior Canyon Dam is currently classified as a High Hazard Class Dam. The dam and downstream inundation areas are all located in the Unincorporated Areas of Ventura County. The location of the dam is illustrated in Figure 1.

Senior Canyon Reservoir is configured in two pools connected by a flow through channel. The Main Dam and Dam No. 3 create the south Reservoir, Reservoir 1. Dam No. 2 forms Reservoir 2 to the north. The Main Dam, Dam No.2 and Dam No.3 have all been identified by DSOD as Critical Appurtenant Structures (CAS). There are no dams upstream or downstream of Senior Canyon Dam.

*Table 2. Dam Attribute Summary*

| | **Main Dam** | **Dam No. 2** | **Dam No. 3** |
|---|---|---|---|
| Crest Elevation (NAVD 88) | 1313 | 1313 | 1313 |
| Crest Length (feet) | 344 | 496 | 136 |
| Downstream Toe Elevation (NAVD 88) | 1250 | 1255 | 1287 |
| Height of Dam (feet)[1] | 63 | 48 | 26 |
| Minimum Pool Elevation (NAVD 88) | 1276 | 1281 | 1276 |
| **Principal Spillway Works & Outlet** | 12-Inch Steel Pipe, Elevation (NAVD 88) = 1276 | | |
| **Emergency Spillway Works** | Earthen Broad Crested Weir, 8-ft long, Crest Elevation (NAVD 88) = 1308.8 | | |
| **Maximum Storage Capacity at Dam Crest (acre-ft)** | 103 | | |

1 DSOD dam height from crest of dam to downstream toe, differs from breach height for reservoir limited failures.

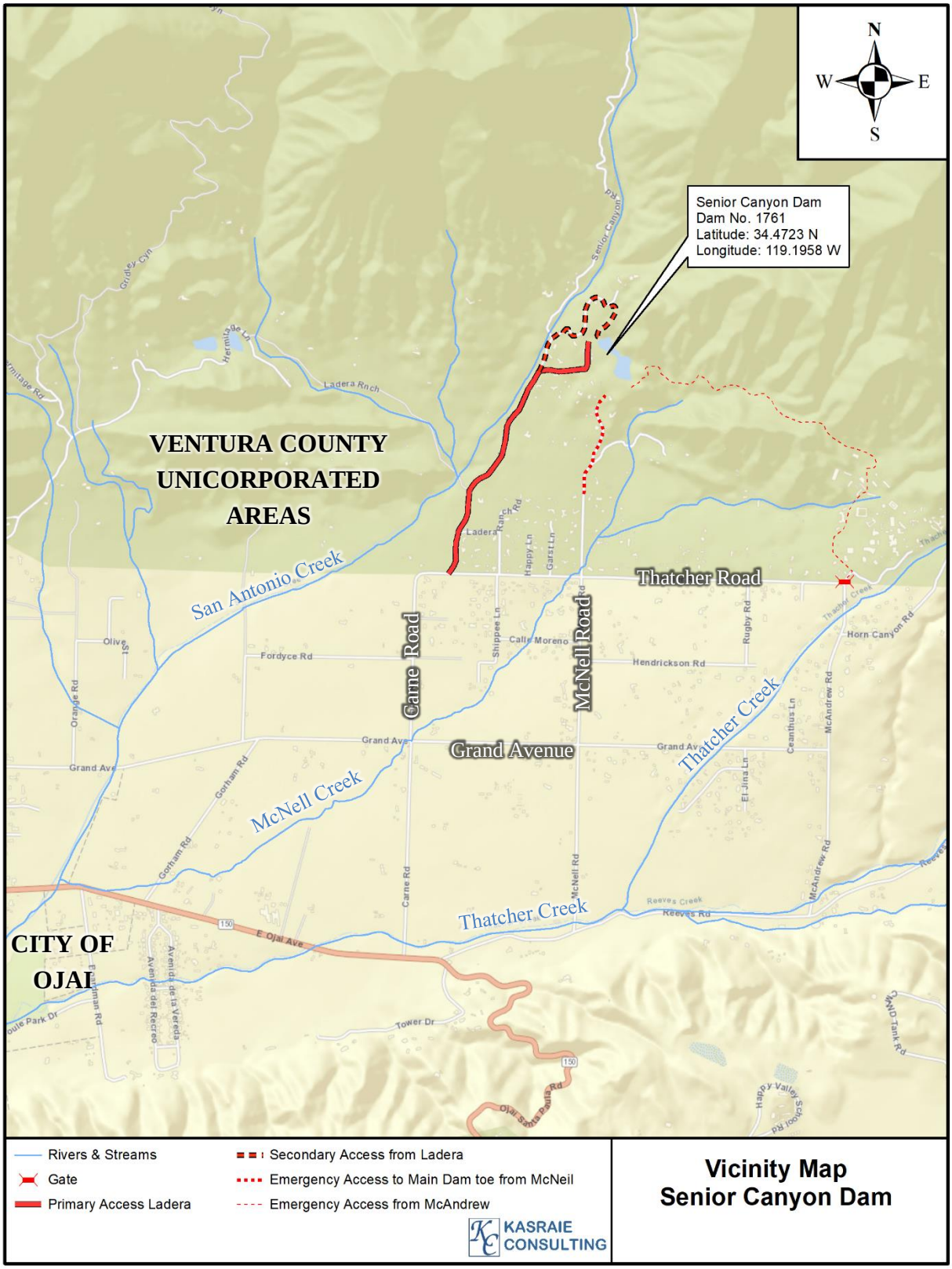



*Figure 1. Vicinity Map*

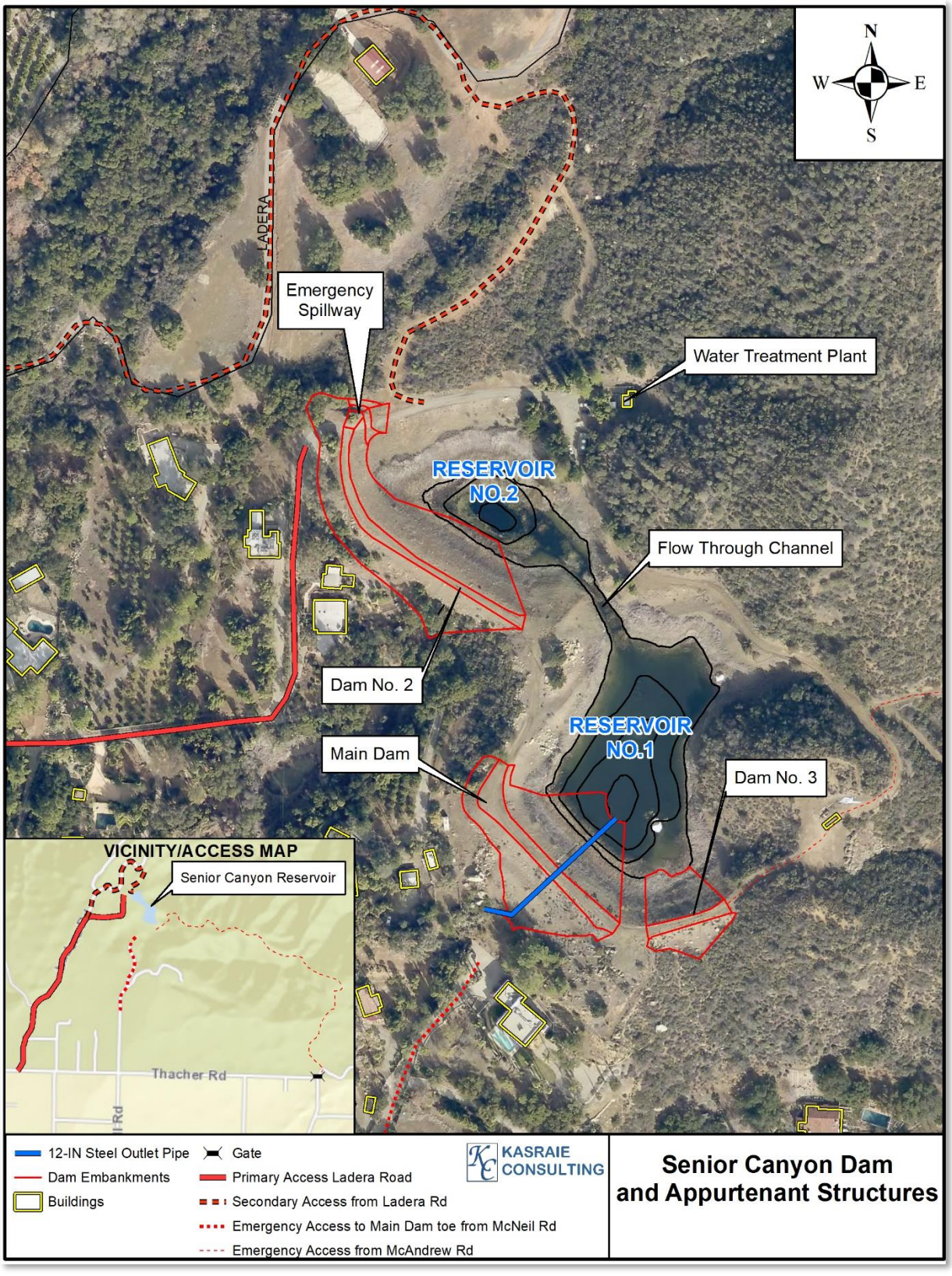



*Figure 2. Senior Canyon Dam and Appurtenant Structures*

## 4.1 Dam Operations

Senior Canyon Reservoir is unique as the reservoir is not principally supplied by a natural creek or stream. The reservoir has a small drainage area, approximately 25 acres, relative to the size of the reservoir which is approximately 80-acre feet at the emergency spillway. Most of the water entering the reservoir is brought in at the control of the operator from an intake located in neighboring Senior Canyon when producing water.

## 4.2 Potential Downstream Impacts

Potentially affected areas are all within the Unincorporated Areas of Ventura County. Inundation and Flood Hazard Maps are included in Part II of the EAP. A summary of potential impacts by Critical Appurtenant Structures (CAS) is included as Table 3.

*Table 3. Potential Inundation Summary by CAS*

| Breach Result | Main Dam | Dam No. 2 | Dam No. 3 |
|---|---|---|---|
| Acres Inundated | 383 | 436 | 380 |
| Parcels | 223 | 285 | 213 |
| Structures Total | 249 | 327 | 236 |
| Structures Total > 1,000 SF | 165 | 221 | 157 |
| Structures < 1000 SF | 84 | 106 | 79 |
| Structures (Low Risk) * | 121 | 180 | 117 |
| Structures (Moderate Risk) * | 29 | 69 | 36 |
| Structures (High Risk) * | 99 | 78 | 83 |
| Structures > 1,000 SF with Depth > 1ft | 79 | 91 | 70 |

*High Risk – Velocity*Depth $\geq$ 5.4 $ft^2$/sec
Moderate Risk – 5.4 $ft^2$/sec > Velocity*Depth $\geq$ 2.2 $ft^2$/sec
Low Risk – Velocity * Depth < 2.2 $ft^2$/sec

A failure of the Main Dam and a failure of Dam No.3 have the potential to result in severe flooding along McNell Creek until flood waters reach San Antonio Creek, approximately 2.5 miles downstream of Senior Canyon Dam. The structures most severely affected by a failure of the Main Dam or Dam Dam No.3 are located along Mc Nell Road and between McNell Road and Shipee Lane. A small portion of the City of Ojai east of Boardman road has the potential to be affected by flood depths of approximately one foot, loss of life because of a dam failure at Senior Canyon Dam is not expected in this area.

A failure of Dam No.2 has the potential to affect a broader area which also includes areas along Ladera Road, Thatcher Road and Carne Road in addition to areas along McNell Creek. The structures most severely affected by a failure of Dam No.2 are located between Senior Canyon Dam and Thatcher Road and along McNell Creek between Shipee Road and McNell Road. Potential flood affects dissipate approximately 2.5 miles downstream of Senior Canyon Dam when flood flows reach San Antonio Creek.

## 4.3 Hydrologic, Meteorologic, and Topographic Features

A local drainage area of approximately 25 acres (0.04 square mile) watershed is tributary to Senior Canyon Dam. The land use is entirely undeveloped and characterized by sparse trees and brush. The topography of the watershed includes steep slopes with up to a 60 percent grade. Additional inflows are received from an operationally controlled diversion system.

The area downstream of Senior Canyon Dam is comprised of the San Antonio Creek and the Thatcher Creek alluvial fan systems. The two alluvial fan systems are separated by McNell Creek. San Antonio Creek runs southward along the eastern edge of the City of Ojai. Figure 2 illustrates key features of the dam. Areas downstream of the dam may be viewed in Figure 3. The land use downstream of the dam is primarily agricultural with some residential areas.

The climate is normally warm and dry in the summer, and cool and wet in the winter months. The wet winter months generally range from October through April, with January and February typically bringing the largest amount of precipitation. The mean annual precipitation in the watershed is about 25.7 inches (USGS StreamStats).

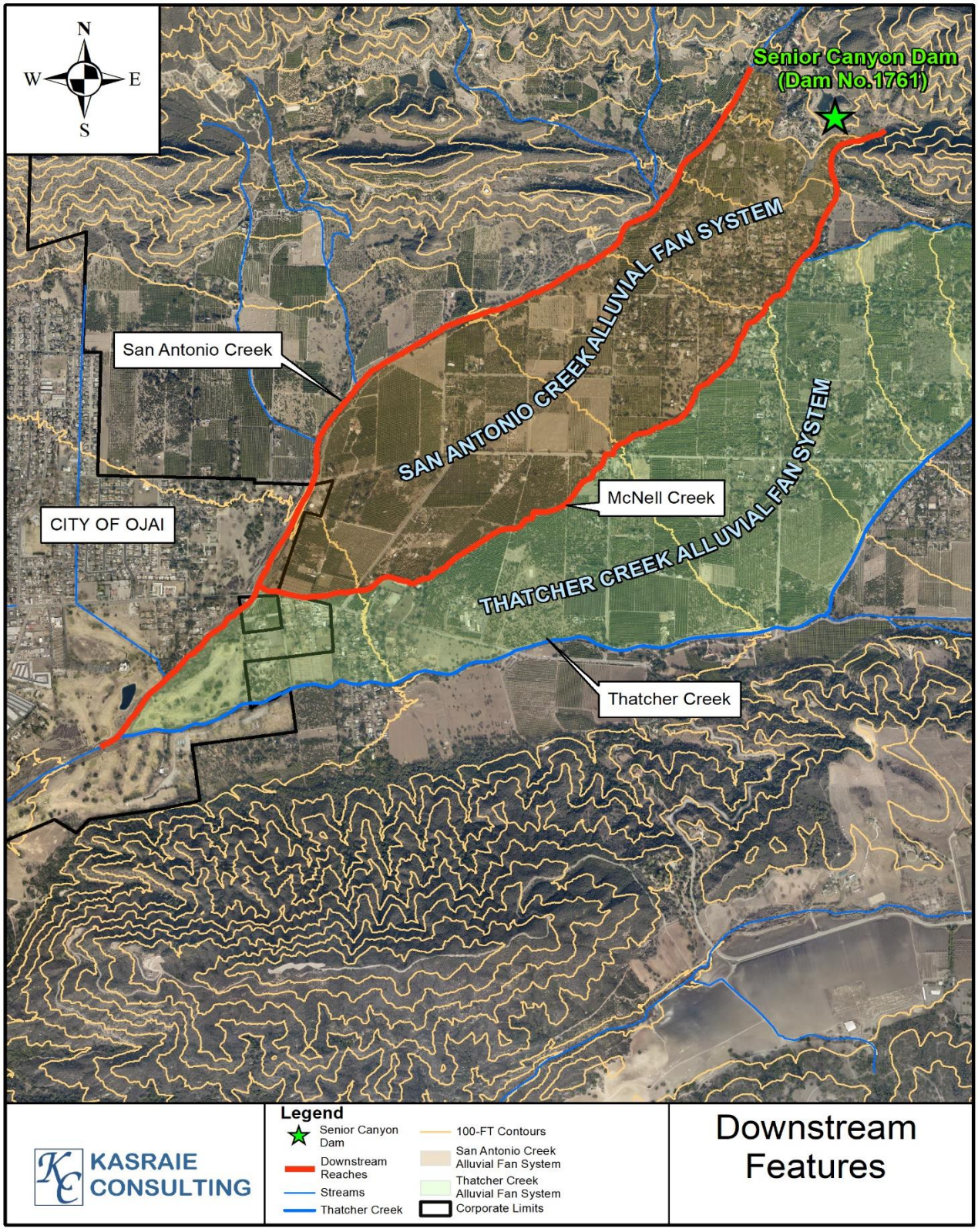



*Figure 3. Downstream Features*

## 4.4 Engineered Dam Features

An illustration of Senior Canyon Dam is provided as Figure 1. A stage-storage curve for the dam is included as Figure 4.

The dam outlet features include a principal spillway used to operationally control the pool of Senior Canyon Reservoir and an earthen emergency spillway. The principal spillway is a 12-inch steel pipe controlled by multiple gate valves. Discharges from the principal spillway are limited to a max of 9 cubic feet per second based on discharge velocity and the size of the pipe. Discharges from the principal spillway are operator controlled by gate valve, no rating curve is provided.

The emergency spillway, located in the northeast corner of Reservoir 2, is trapezoidal with an 8-foot base width and 1:1 side slopes. A stage-discharge curve for the emergency spillway is included as Figure 5. The capacity of the channel receiving flows from the emergency spillway is about 150 to 200 cfs which is more than the spillway capacity when the dam is full. Use of the emergency spillway should be avoided as the emergency spillway and receiving channel are earthen and high velocities in the emergency spillway may result in erosion and back cutting. A failure of the emergency spillway has similar potential consequences as a failure of Dam No.2.

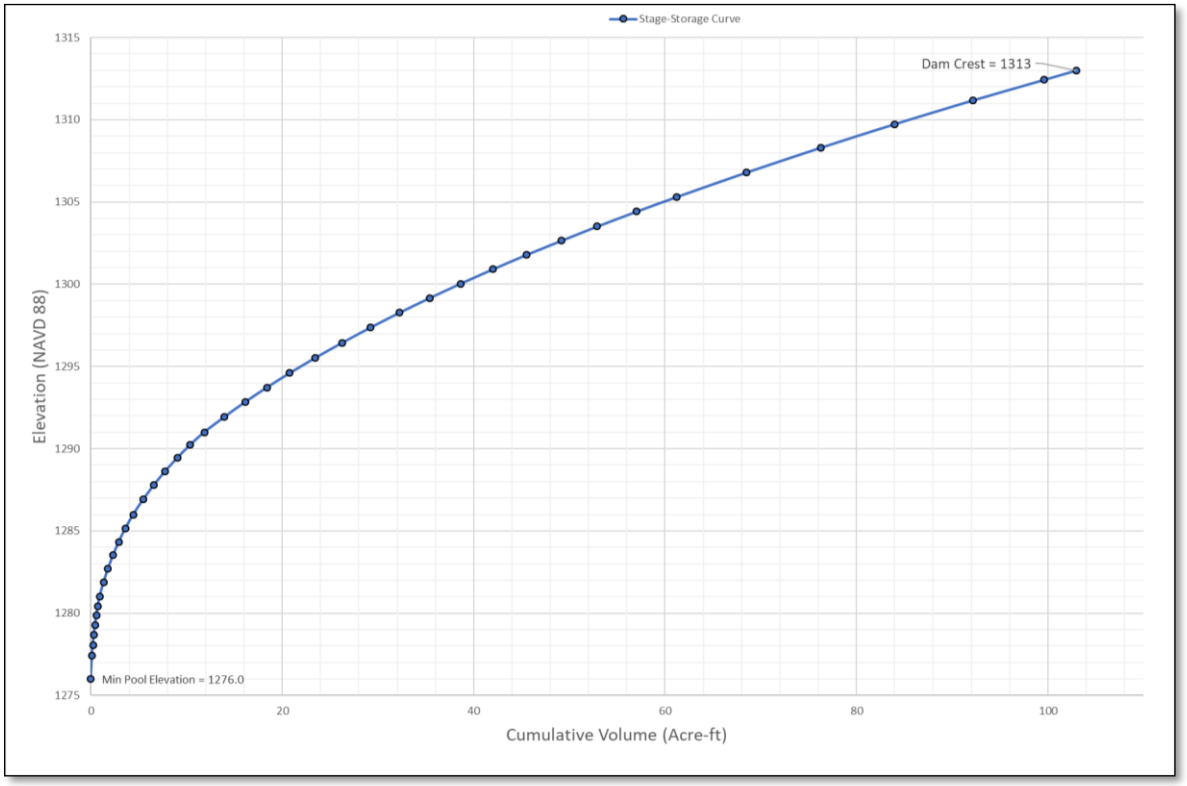



*Figure 4. Senior Canyon Stage-Storage Curve*

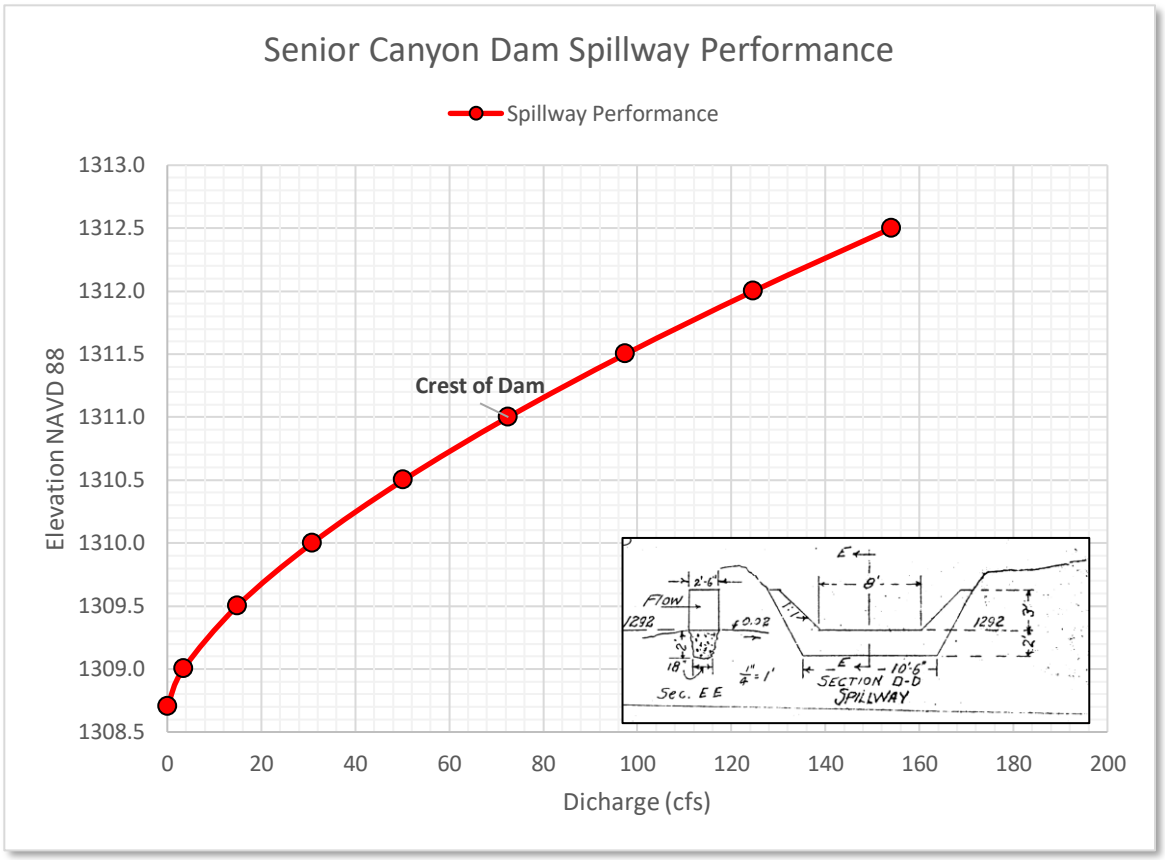



*Figure 5. Senior Canyon Dam Emergency Spillway Performance*

## 4.5 Dam Modifications and Prior Incidents

Prior incidents at the Dam have included:

1. Main Dam Toe Repair 2013. Adjacent property owner cut into the toe of the Main Dam with an excavator and damaged the toe drain system for the embankment. Toe and toe drain repairs were completed.
2. Thomas Fire December 2017, residents living adjacent to the dam were evacuated. Three homes were destroyed and two were others damaged. No damage was sustained by the Main Dam, Dam No. 2, or Dam No. 3.

The dam did not have an EAP at the time of the prior incidents. Repair of the Main Dam toe in 2013 was coordinated with DSOD.

# 5 EAP Response Process

## 5.1 Step 1: Incident Detection, Evaluation, and Emergency Level Determination

The Dam Operator is the first line of defense against a dam failure. The Dam Operator is charged with visually inspecting the dam daily for any anomalies. It is expected that the routine inspections would discover potentially dangerous conditions before any danger of a dam failure occurs. The Dam Operator will also respond to any observations made by the general public. The dam does not have instrumentation systems.

After identification of a dam threatening condition, the Dam Operator or a qualified engineer, will determine if there is sufficient time for additional investigation before declaring an emergency situation, assumes the responsibility to:

- Make an evaluation of the severity of the condition and the progressive nature of the failure; (i.e., how quickly will the dam be in danger of failing);
- Select an appropriate notification sequence based on the above decision.

Prior to activating the EAP, the Dam Operator will determine the Emergency Level. The following four Emergency Levels, named by the Federal Emergency Management Agency's (FEMA) Federal Guidelines for Dam Safety, have been adopted for this EAP and are listed in order of severity:


The Dam Operator will immediately attempt to classify the emergency according to the severity and urgency of the situation. Some of the factors to be considered when evaluating the emergency may include lake levels, weather conditions, location of the leak or seep, etc.

Guidance for determining the Emergency Level is provided in Appendix A.

**High Flow Operations**

A high flow condition exists when there is no danger of dam failure, but natural or man-made flows in the river system may cause flooding downstream of the dam. During flooding, flows may cause water to overflow riverbanks and may cause unusually large spillway releases. For this EAP operation of the principal spillway or controlled releases from the dam will be treated as a High Flow condition. The dam does not have an upstream river or creek, and a small drainage area. For this dam, a High Flow Operation shall be any large flow release from the principal or emergency spillway when no threat is posed to the dam.

**Non-Failure Emergency**

A non-failure or possible hazardous situation developing exists when there is time to correct or modify an observed dam safety condition, which could escalate into dam failure if left unattended, but does not pose immediate danger.

**Potential Failure**

This is a situation where a failure may eventually occur, but pre-planned actions taken during certain events (such as major floods, earthquakes, evidence of piping, etc.) may moderate or alleviate failure. The Plant Operator is responsible for maintaining close surveillance of a potential hazardous situation until a qualified engineer can be summoned to assist. The Emergency Level may be terminated if proactive measures and/or further evaluation lead to a determination that no further elevated risk exists. On the other hand, there should be a smooth transition from Potential Failure to Imminent Failure, if the situation appears to be developing and cannot be controlled. The Plant Operator is also responsible for notification of officials on the Notification Flowchart whenever the emergency classification changes.

**Imminent Failure**

This emergency level signifies when no corrective action will stop the failure of the dam, that there is no longer any time available for corrective measures to prevent or mitigate the failure of the dam, or the dam has already failed. It is impossible to determine how long it will take for a failure to occur or for a complete breach to occur once failure begins. All emergency and evacuation measures will be initiated at once.

## 5.2 Step 2: Notification and Communication

Once a decision has been made to activate the EAP and the Emergency Level is defined, the EAP shall be activated and notifications made. Notifications shall be made in accordance with the Notification Flowcharts, Section 3.1.

Senior Canyon Mutual Water Company manually makes the phone calls to deliver the message. To assist in this step, this EAP includes pre-scripted messages to help the caller adequately describe the emergency situation to other personnel, emergency management agencies, and other notification recipients (see Appendix C.1-C.4).

After notifications are made, the Dam Operator, or someone designated by the operator, will complete the Contact Log (see Appendix D).

Regardless of the status, whether consistent or changing, the Dam Operator will make periodic status/incident updates to the contacts on the appropriate Notification Flowchart. If an Incident Commander (IC) has been identified for the incident, the IC, or Incident Command Post, will be added to the notification list.

## 5.3 Step 3: Emergency Actions

In the event of an emergency situation at the Senior Canyon Dam, Senior Canyon Mutual Water Company personnel will coordinate dam operations and involve outside agencies as necessary. Senior Canyon Mutual Water Company staff will work to mitigate the incident by determining what remediation actions to take (see Appendix F). Additionally, if needed, Senior Canyon Mutual Water Company will send a liaison to the appropriate emergency operations center and/or Incident Command Post(s).

## 5.4 Step 4: Termination and Follow-up

Senior Canyon Mutual Water Company, through the Dam Operator, will provide incident information to the responding federal, state, and local officials. Based on data received from the field, in conjunction with the conditions at the dam, the Dam Operator will determine when to terminate the EAP and convey that information to responding officials through the Notification Flowcharts. EAP Termination usually occurs once the dam incident has been resolved at the dam site – this does not signify termination of the incident or Incident Command.

The Dam Operator will follow the notification flowchart to alert all contacts of the plan's termination.

The Dam Operator will ensure that the Termination Log (see Appendix H) is completed, so that the conditions and decisions are documented.

Post incident, the EAP Coordinator at Senior Canyon Mutual Water Company will set up and facilitate a meeting to review the incident and EAP implementation activities. The dam personnel involved with the plan implementation, as well as the responding agencies and all agencies on the notification flowchart, should be present at the meeting. The following topics will be discussed and evaluated in an after action review:

- Events or conditions leading up to, during, and following the incident
- Significant actions taken by each participant and improvements for future emergencies
- All strengths and deficiencies found in the incident management process, materials, equipment, staffing levels, and leadership
- Corrective actions identified and a planned course of action to implement recommendations

The results of the after-action review should be documented in an After Action Report (AAR) and used to revise the EAP. A template for an AAR is found in Appendix I.

# 6 General Responsibilities

## 6.1 Dam Owner Responsibilities

As the owner of Senior Canyon Dam, Senior Canyon Mutual Water Company is responsible for detecting and evaluating dam safety incidents, classifying the incident, notifying emergency management authorities, taking appropriate response actions, and terminating the EAP.

**Operator Responsibilities**

The responsibilities of the Dam Operator include:

- Monitor the dam, detect/confirm incidents at dam
- Classifying incidents at the dam
- Notification and communication responsibilities outlined in Section 6.2.
- Management and coordination of security at dam with Ventura County Sheriff's Office
- Monitoring, detecting, and evaluating dam safety incidents
- Taking appropriate response actions to incidents at the dam, including but not limited to:
    - Shutting of inflow lines
    - Operation of principal spillway
    - Requesting professional resources to repair the dam
- Declaring a termination of incidents at the dam (see Section 6.4)
- Coordinate with EOC or assign liaison to join EOC

**Other Staff Responsibilities**

- At the direction of the Dam Operator, additional staff available will assist the Dam Operator in notification calls to accelerate notification and reduce the number of contacts per person.
- EAP coordinator responsibilities are defined in Section 6.5

## 6.2 Notification and Communication Responsibilities

Senior Canyon Mutual Water Company, through the Dam Operator, will use its Notification Flowcharts and procedures when an incident occurs (see Sections 3 and 5.2). While it is not directly responsible for public notifications or issuing evacuation orders, the Dam Operator and Senior Canyon Mutual Water Company will work with local authorities in providing them situational awareness and assistance if needed.

Senior Canyon Mutual Water Company, through the Dam Operator, will contact the National Weather Service (NWS) to coordinate issuance of flood warnings to be informed of impending weather conditions that may impact the incident response. Senior Canyon Mutual Water Company will coordinate with the Incident Command Post, which will serve as the central command and control center for making decisions regarding the protection of life and property. The Dam operator will also coordinate with Ventura County Sheriff's Office (OES) to provide

alert and warning services to Ventura County Operational Area. Senior Canyon Mutual Water Company operator or EOC liaison will work with the local EOC to organize messaging to the media, using the provided template in Appendix C.2, until termination of the event has been declared.

## 6.3 Evacuation Responsibilities

The Ventura County Sheriff's Office will issue any official evacuation notifications to the public. Senior Canyon Mutual Water Company, led by the Dam Operator, will evacuate its on-site personnel as needed, depending on the situation. Senior Canyon Mutual Water Company is not responsible for issuing evacuation orders or evacuating the public; however, Senior Canyon Mutual Water Company will contact emergency response agencies.

## 6.4 Monitoring, Security, Termination, and Follow-up Responsibilities

The Dam Operator and other staff will monitor the dam and incident information as needed. The Dam Operator also oversees the security onsite.

When an incident has been resolved, the Dam Operator will officially terminate the EAP, though the Ventura County Sheriff's Office will be responsible for terminating emergency response. The Dam Operator will ensure the Termination Log is completed (see Appendix H).

Post-incident, the EAP Coordinator will facilitate a meeting with Senior Canyon Mutual Water Company personnel involved with the EAP implementation, as well as the impacted jurisdictions. From this forum, the EAP Coordinator will consolidate the information and produce an After Action Report (AAR). The Coordinator will then use AAR to update/review the EAP.

## 6.5 EAP Coordinator Responsibilities

The EAP Coordinator's main responsibilities include:

- Conducting annual review of the EAP
- EAP revisions and distributions
- Establishing EAP training seminars
- Training staff on operation of dam works
- Coordinating EAP exercises
- Organizing and facilitating after action meeting
- Serving as point of contact for questions about EAP

## 6.6 Local Public Safety Agencies' Responsibilities

The EAP has summary information for those jurisdictions that have a prominent role in responding to an incident affecting the Senior Canyon Dam. These summaries have been reviewed by each respective organization, and will be reviewed on an annual basis, to ensure their accuracy.

## 6.7 Other Public Safety Agencies

The California Governor's Office of Emergency Services (Cal OES) and the Department of Water Resources (DWR), Division of Safety of Dams (DSOD) co-manage the state's dam safety program. DSOD is responsible for the review and approval of inundation maps while Cal OES is responsible for overseeing the review, approval, and ongoing activities associated with EAPs under California Government Code Section 8589.5.

## 6.8 California Governor's Office of Emergency Services (Cal OES)

The mission of Cal OES is to protect lives and property, build capabilities, and support our communities for a resilient California. Cal OES plays an assortment of roles in managing the dam safety program and related emergencies.

## 6.9 Dam Safety Planning Division

The division is responsible for reviewing and approving dam owners' Emergency Action Plans (EAP). This process includes division outreach and technical assistance to dam owners and local emergency management personnel. The Cal OES Dam Safety Planning Division may also provide guidance to local public safety agencies with regard to incorporating EAPs into their existing all-hazards key response and mitigation plans. The division will also participate in the annual review and update of the EAP.

## 6.10 California State Warning Center (CSWC)

The CSWC is staffed 24 hours per day, 365 days per year, to provide round-the-clock situational awareness. The mission of the CSWC is to be the central information hub for statewide emergency communications and notifications. It is equipped with a number of telephones, data, and radio systems. The majority of these systems are used on a day-to-day basis, while others are available for use in an emergency or as conditions require. The CSWC has the responsibility to receive, coordinate, verify, and disseminate information pertaining to events which occur within California or that could affect California.

The CSWC automatically makes verbal notification to the Downstream County Warning Point. Immediate notifications would be provided to:

- Department of Water Resources, Division of Safety of Dams;
- National Weather Service;
- Cal OES Dam Safety Planning Division
- Cal OES Duty Officers;
- Department of Water Resources Flood Operations Center;
- State Parks and Recreation; and/or
- Other agencies/departments as dictated by the event or required by law.

## 6.11 California Department of Water Resources (DWR), Division of Safety of Dams (DSOD)

The mission of DSOD is to protect people against the loss of life and property due to dam failure. The California Water Code entrusts this regulatory power to the Department of Water Resources, which delegates the responsibility to DSOD. Section 6110 of the Water Code directs the Department to immediately employ any remedial means necessary to protect life and property if either: (a) the condition of the dam is so dangerous to the safety of life or property as to not permit time for the issuance and enforcement of an order relative to maintenance or operation, or (b) passing or imminent floods threaten the safety of any dam or reservoir. Section 6111 of the Water Code states that in applying the remedial means "the department may, in emergency, do any of the following: (a) lower the reservoir; (b) completely empty the reservoir;

(c) take such other steps as may be essential to safeguard life and property." In the event of an emergency at the dam, DSOD actions could include, but are not limited to:

- Advising the dam owner's/operator's representative of remedial actions to take
- Ordering the dam owner's/operator's representative of remedial actions to take
- Assuming control of the dam if necessary, to safeguard life and property
- Advising the dam owner's/operator's representative of the emergency level determination
- Inspecting the dam during and after the emergency
- Design review and approval of emergency repairs
- Acting as a dam technical specialist in the State Operations Center (SOC), or other emergency operations center (EOC)

Additionally, per Water Code Sections 6160 and 6161, DSOD is responsible for the review and approval of inundation maps. The California Code of Regulations, Title 23, Division 2, Chapter 1, Article 6 defines the specific requirements of the inundation maps.

# 7 Preparedness

## 7.1 Surveillance and Monitoring

Surveillance at the Senior Canyon Dam is primarily performed by Senior Canyon Mutual Water Company personnel, with the Operator being responsible for monitoring the dam. The dam and access to the dam are also monitored by security camera. On site Senior Canyon Mutual Water Company personnel patrols the dam site daily. Water production equipment has its own fencing and the Dam Operator performs maintenance of security fencing, gates, and locks. The Dam Operator will immediately notify Senior Canyon Mutual Water Company Headquarters and the Ventura County Sheriff's Office if an unstable condition is detected.

Water levels in the dam are monitored visually, dam operations do not include electronic equipment or automated notification systems. The pools are not subject to a large tributary area and inflows into the dam are controlled by the operator, the operator is present while the pool is being operationally raised. Large rainfalls do not create abrupt surges in pool levels. If the water level is observed to be too low or too high for unknown reasons, onsite staff alert Senior Canyon Mutual Water Company Headquarters to work on mitigating any issues that may arise and can perform controlled releases using a six-inch outlet pipe with gate valve.

## 7.2 Evaluation of Detection and Response Timing

Senior Canyon Mutual Water Company Dam Operator is working on site 7am-4pm Monday-Friday and 7am-10 am Saturdays and Sundays. During normal work hours the operator would notify all required agencies and contacts immediately after detecting a problem with all contacts likely to be achieved in 30 minutes. Outside of working hours the operators are within a 30-minute drive of the Dam. From initiation to notification the response time is estimated to be one hour.

## 7.3 Access to the Site

From Highway 150 (W Ojai Ave) heading east out of the City of Ojai, turn left onto Carne Rd. Continue north on Carne Rd. approximately 1.1 miles until Carne Road ends into a right turn onto Thatcher Road. Take the first left onto Ladera Road. Continue 0.47 miles north on Ladera Road and take the 3rd right onto a private road leading to Senior Canyon Dam. No locked gates bar access to the dam, water production equipment is locked up separately.

If the main access to the dam is in the potential dam inundation area or the route is not useable, alternative access options to the site are illustrated in Figure 1 and Figure 2 found in Section 4. These options include:

**Secondary Access from Ladera:** From Highway 150 (W Ojai Ave) heading east out of the City of Ojai, turn left onto Carne Rd. Continue north on Carne Rd. approximately 1.1 miles until Carne Road ends into a right turn onto Thatcher Road. Take the first left onto Ladera Road. Continue north on Ladera Road about one mile to a fork, continue right at fork, in about 1,500 feet turn right onto private drive to access dam near the emergency spillway.

**Emergency Access to Main Dam Toe from McNell Rd:** From Highway 150 (W Ojai Ave) heading east out of the City of Ojai, turn left onto Carne Rd. Continue north on Carne Rd. approximately 1.1 miles until Carne Road ends into a right turn onto Thatcher Road. Continue turn left onto McNell Road in about half a mile. Head north on McNell road just over half a mile to toe of the Main Dam.

**Emergency Access from McAndrew Road (not suitable for all vehicles, includes locked gate):** From Highway 150 (W Ojai Ave) heading east out of the City of Ojai, turn left onto McAndrew Road. Head north half a mile to McAndrew and Thatcher Road, enter on the right through private locked gate into the Thatcher School then turn left onto private road, continue up private road to stables, go through stable areas north to fire access road. Continue east on fire access road to dam.

## 7.4 Response during Periods of Darkness

Senior Canyon Mutual Water Company personnel have lighting equipment and can detect issues at the dam during periods of darkness. If larger lighting and electrical equipment is needed for emergency repair work at the dam, additional lighting can be rented locally from the companies listed for Heavy Equipment Services and Rental, see Appendix G. From initiation to notification the response time is estimated to be one hour which includes a 30-minute travel time to the dam outside of normal operational hours.

## 7.5 Response during Weekends and Holidays

The Senior Canyon Dam is staffed on weekends 7am-10am Saturdays and Sundays. Outside of these hours delays in detection could be expected. Staffing during holidays is limited but the Dam Operators are local and capable of responding to emergency situations most weekends and holidays. Contact information for the backup operator is provided on page 2 of this EAP. From initiation to notification the response time is estimated to be one hour which includes a 30-minute travel time to the dam.

## 7.6 Response during Adverse Weather

There have been no prior issues accessing the dam in adverse weather or fire conditions, though it is acknowledged the severity of potential adverse weather or fire conditions could delay access to the dam, particularly fire conditions. From initiation to notification the response time is estimated to be two hours if adverse weather or fire delays access to the dam outside of normal operation hours.

## 7.7 Alternative Sources of Power

The dam has electricity for water production purposes with essential dam outlet works, the principal spillway and emergency spillway, operating without power. If electricity is needed for repair or additional lighting equipment, generators can be brought to the dam or rented form contractors, see Appendix G.

## 7.8 Emergency Supplies and Information

If Senior Canyon Mutual Water Company must order emergency supplies, the company purchases them from local vendors. For a list of these vendors and contact information, see Appendix G.

## 7.9 Stockpiling Materials and Equipment

Equipment and materials stockpile onsite for emergency response includes company vehicles, lighting, and hand tools. Heavy equipment and concrete/aggregate materials for emergency response are not stockpiled on site but are available from local vendors, see Appendix G. The site space and layout are not conducive to long term stockpiling of heavy equipment and concrete/aggregate.

## 7.10 Coordination of Information

The Dam Operator will work with emergency personnel to keep them up-to-date on any situation involving the Senior Canyon Dam. The Dam Operator may designate a staff member to take the role of liaison, so the Dam Operator may direct attention to the incident. If the incident is large enough, the Senior Canyon Mutual Water Company may send additional liaisons to the dam site, the Incident Command Post, or public safety unified command, depending on the circumstances.

Water diverted from Senior Canyon for water production, the main supply of water to the reservoir, will be shut off by the Dam Operator. Releases of water from the principal spillway will be controlled by the Dam Operator and coordinated with DSOD. No dams exist upstream or downstream of Senior Canyon Dam with which to coordinate additional flood control.

In accordance with the Notification Flow Charts, the Dam Operator will contact the National Weather Service and the Incident Command Post to issue flood warnings.

## 7.11 Training and Exercise

The EAP Coordinator manages the training and exercising of the EAP. Below some of the information for these activities are listed.

**EAP Training**

The EAP Coordinator gives an introductory training to new Senior Canyon Mutual Water Company dam personnel regarding the EAP and that staff person's role in an emergency. The Coordinator also facilitates an annual EAP upkeep for Senior Canyon Mutual Water Company staff and stakeholders to review the EAP.

**Exercise**

On an annual basis the EAP Coordinator organizes the notification call down drill, which is required by California Government Code Section 8589.5. During this exercise, the on-site personnel conduct a test of calling the numbers on the Notification Flowcharts to ensure their accuracy. The EAP Coordinator will then make sure that the EAP contact information is updated, and updated pages will be sent to Plan Holders (see Appendix M). The EAP Coordinator will then send an EAP Status Report (see Appendix L) to the Cal OES Dam Safety Planning Division to demonstrate that Senior Canyon Mutual Water Company has complied with the legislative mandate for an exercise.

Following the exercise, the EAP Coordinator will fill out an EAP Status Report (see Appendix L). This Report will then be sent to the Dam Safety Planning Division at Cal OES to verify the exercise occurred.

## 7.12 Alternative Systems of Communication

Forms of communication at the dam include internet, cell phones, and text messages. Email addressees have been included on the Contact Information Sheet located after the cover page of the EAP.

## 7.13 Public Awareness and Communication

In conjunction with its annual shareholder meeting in April of each year, Senior Canyon will remind shareholders to view the EAP Public Information Meeting video available online year-round at https://seniorcanyonwater.com/eap-annual-meeting/. The full EAP is also published on the Senior Canyon Mutual Water Company website at: https://seniorcanyonwater.com/emergency-action-plan/

During an emergency, flood warnings will be issued by the NWS and VCSO. The VCSO will produce evacuation plans specific to a given incident.

# 8 Plan Maintenance

## 8.1 Plan Review

The EAP Coordinator will review and update the EAP notification contacts on an annual basis or if notified of an update prior to the annual update, in accordance with California Government Code Section 8589.5(c). It is critical to maintain current contact information.

The EAP in its entirety will be reviewed annually. The plan may also be modified as a result of post-incident analyses and/or post-exercise critiques. Additionally, Senior Canyon Mutual Water Company will prepare updated inundation maps (if needed) in nine years (2030), to meet the 10-year update deadline, as stated in California Water Code Section 6161. The updates will identify new construction downstream of the dam.

To notify Senior Canyon Mutual Water Company of a revision to the Plan, please contact:

EAP Coordinator: Peter Thielke
Email: peter@SeniorCanyonWater.com
Phone: (805) 798-2971

## 8.2 Distribution

Copies of the EAP are distributed to local public safety agencies and those jurisdictions that may be impacted by an incident at Senior Canyon Dam. Please see Appendix M for a list of all Plan Holders. All agencies on the Notification Flowchart will receive a copy of the EAP.

To request a copy of the Emergency Action Plan for the Senior Canyon Dam, please contact:

EAP Coordinator: Peter Thielke
Email: peter@SeniorCanyonWater.com
Phone: (805) 798-2971

# PART II: Inundation Maps

DEC 03 2019

Mr. Peter Thielke, President
Senior Canyon Mutual Water Company
603 West Ojai Avenue, Suite A
Ojai, California 93023

FILE

Senior Canyon Dam, No. 1761
Ventura County

Dear Mr. Thielke:

The Division of Safety of Dams (DSOD) has reviewed the inundation maps submitted for Senior Canyon Dam. It was determined that the dam has two critical appurtenant structures and the maps listed below are in substantial compliance with the requirements of Title 23, Division 2, Chapter 1, Article 6 of the California Code of Regulations. Therefore, the following inundation maps are approved:

1. Main Dam (sunny day failure scenario) map dated October 25, 2019.
2. Dam No. 2 (sunny day failure scenario) map dated October 25, 2019.
3. Dam No. 3 (South Dike, sunny day failure scenario) map dated October 28, 2019.

The approved maps will be made publicly available as required by section 6161(c) of the California Water Code. An emergency action plan (EAP), based on the approved inundation maps, must now be submitted to the California Governor's Office of Emergency Services (Cal OES) for their review and approval. Upon Cal OES approval, please submit an electronic copy of the approved EAP with a hard copy of the transmittal letter to DSOD.

Pursuant to section 6161(e) of the CA Water Code, the EAP and inundation maps must be updated no less frequently than every 10 years, and sooner under conditions that include, but are not limited to, the following: (1) a significant modification to the dam or a critical appurtenant structure as determined by the department, or (2) a significant change to downstream development that involves people and property. Based on the requirement, the approved maps will expire on October 25, 2029. Please submit the updated maps at least six months prior to the expiration date for DSOD's review and approval.

If you have any questions or need additional information, you may contact Project Engineer Murari Paudel at (916) 565-7884 or Re-evaluation Engineering Branch Chief Ariya Balakrishnan at (916) 565-7870.

Sincerely,

ORIGINAL SIGNED BY S.O.J. for

Sharon K. Tapia, Chief
Division of Safety of Dams

| SURNAME DWR 155 (Rev 7/11) | | | | |
|---|---|---|---|---|
| | 11/21/2019 | 12/2/19 | | |

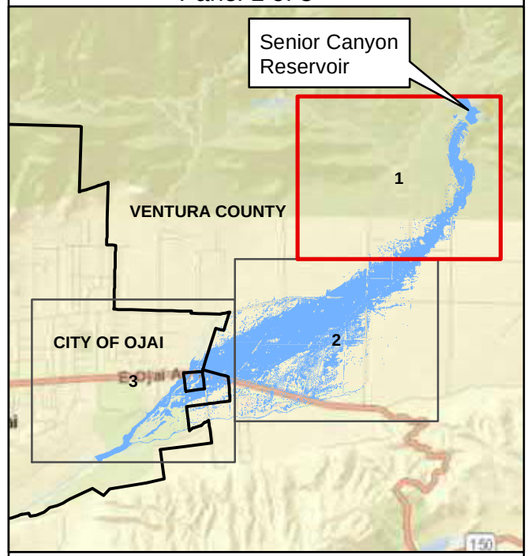
cc: Mr. José Lara, Chief
Dam Safety Planning Division
California Governor's Office of Emergency Services
3650 Schriever Avenue
Mather, California 95655

Mr. Hassan Kasraie, P.E., PH
Kasraie Consulting
4864 Market Street, Suite C
Ventura, California 93003

MPaudel:CLancaster
Senior Canyon.doc
Spell Check 11.18.19

# DAM No.1761-
# INUNDATION MAP
# MAIN DAM
# SUNNY DAY FAILURE

Panel 1 of 3






## EXPLANATION

- MileMarkers (1 miles)
- Dam
- Arrival Time Marker
- Stream Centerline
- Lake/Reservoir
- Inundated Structures
- Sunny Day Breach Inundation
- Corporate Limits

KASRAIE CONSULTING

REGISTERED PROFESSIONAL ENGINEER
HASSAN H. KASRAIE
EXP. 03/2020
C 42360
CIVIL
STATE OF CALIFORNIA

Date Prepared: 10/25/2019

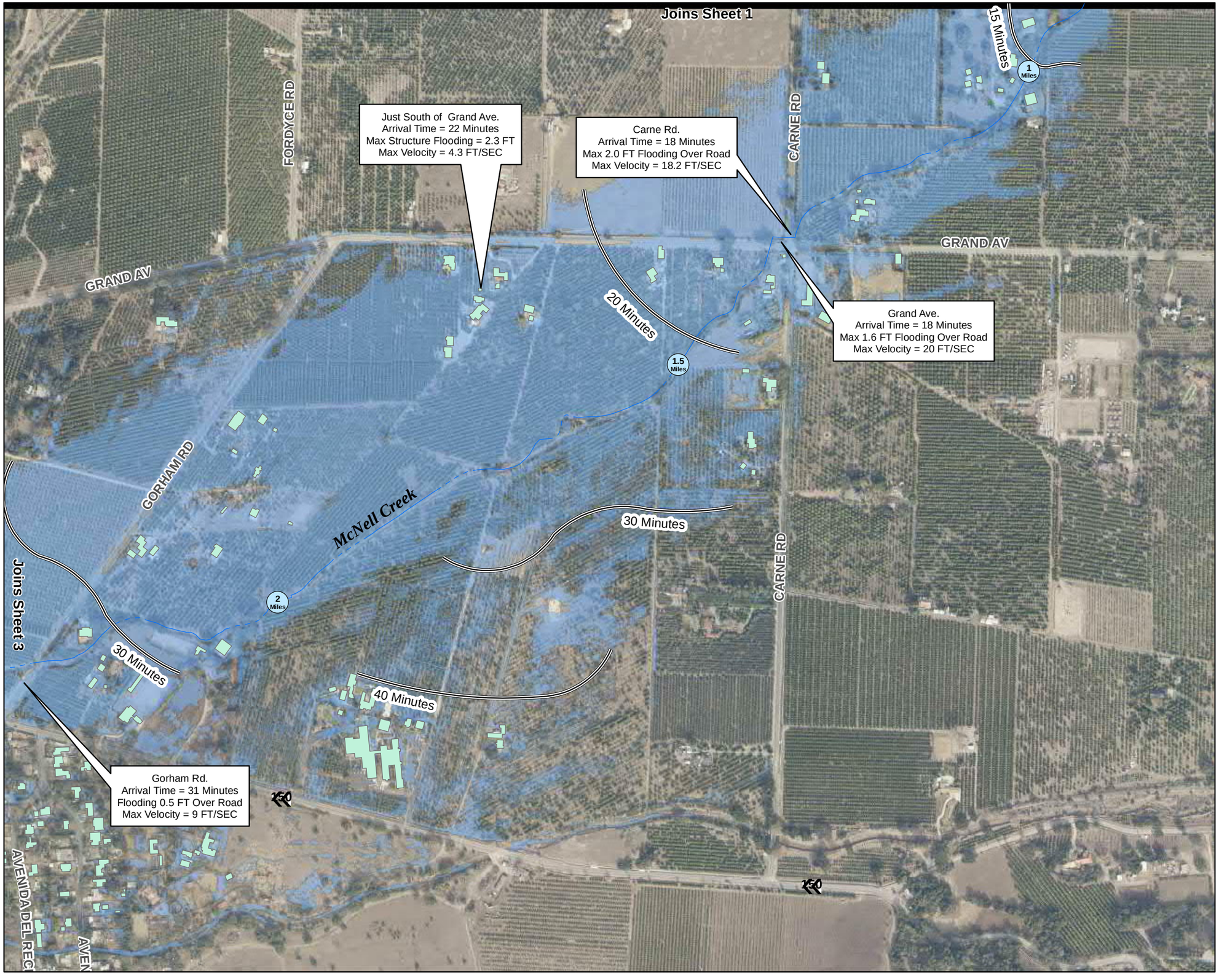
The methods used to develop inundation zones and flood wave arrival times are approximate and should only be used as guidance for establishing evacuation zones. Actual areas inundated will depend on actual failure and pre-failure conditions and may differ significantly from information shown on maps.

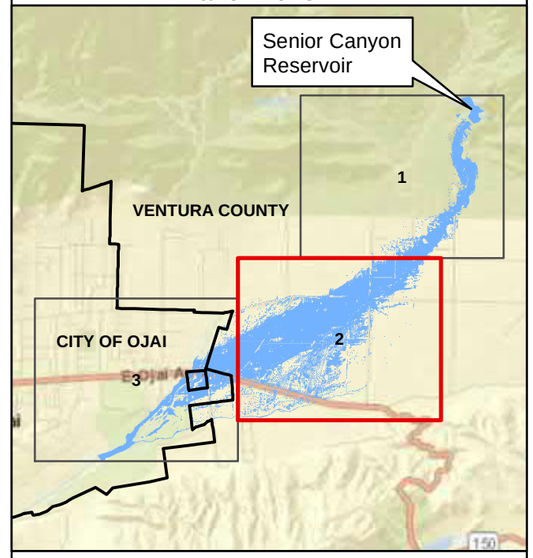
0 250 500 750 Feet

1 inch = 500 feet

# DAM No.1761-
# INUNDATION MAP
# MAIN DAM
# SUNNY DAY FAILURE

Panel 2 of 3




## EXPLANATION

- 1 miles — MileMarkers
- Dam
- Arrival Time Marker
- Stream Centerline
- Lake/Reservoir
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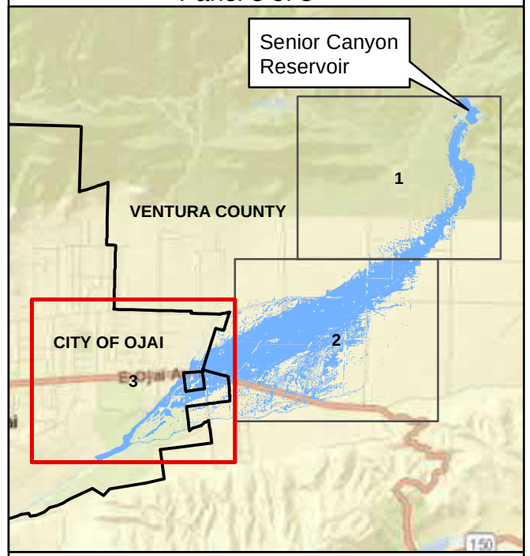
N

0 250 500 750 Feet

1 inch = 500 feet

# DAM No.1761-
# INUNDATION MAP
# MAIN DAM
# SUNNY DAY FAILURE

Panel 3 of 3

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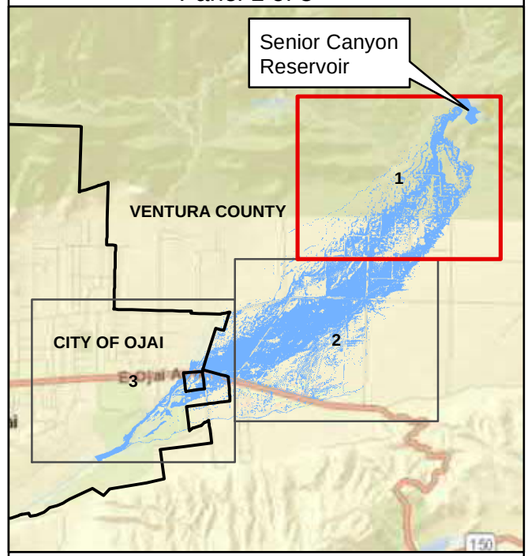
0 250 500 750 Feet

1 inch = 500 feet

Joins Sheet 2

# DAM No.1761-
# INUNDATION MAP
# DAM NO. 2
# SUNNY DAY FAILURE

Panel 1 of 3




SENIOR CANYON DAM (DAM NO.1761)

DAM NO. 2

MAIN DAM

DAM NO. 3

10 Minutes

Ladera Rd.
Arrival Time = 10 Minutes
Max Structure Flooding = 3.1 FT
Max Velocity = 11.9 FT/SEC

Ladera Ranch Rd.
Arrival Time = 12 Minutes
Max Structure Flooding = 2.5 FT
Max Velocity = 8 FT/SEC

Garst Ln.
Arrival Time = 12 Minutes
Max Structure Flooding = 5 FT
Max Velocity = 10.5 FT/SEC

Thatcher and Ladera
Arrival Time = 13 Minutes
Max Structure Flooding = 1.9 FT
Max Velocity = 6.8 FT / SEC

McNell Rd.
Arrival Time = 15 Minutes
Max 1.4 FT Flooding Over Road
Max Velocity = 9.7 FT/SEC

Thatcher Rd.
Arrival Time = 13 Minutes
Max 1.8 FT Flooding Over Road
Max Velocity = 3.6 FT/SEC

Carne and Thatcher
Arrival Time = 16 Minutes
Max Structure Flooding = 1.3 FT
Max Velocity = 4 FT / SEC

Arrival Time = 15 Minutes
Max Structure Flooding = 2.4 FT
Max Velocity = 8.7 FT/SEC

15 Minutes

20 Minutes

17 minutes

0.5 Miles

HERMITAGE RD

LADERA RD

LADERA RIDGE RD

LADERA RANCH RD

LADERA RANCH

CHAPARRAL RD

THACHER RD

KENNEDY LN

HAPPY LN

GARST LN

SHIPPEE LN

MC NELL RD

CARNE RD

FORDYCE RD

CALLE MORENO

McNell Creek

San Antonio Creek

Joins Sheet 2

## EXPLANATION

- 1 miles — Mile Markers
- Dam
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0 250 500 750 Feet

1 inch = 500 feet

# DAM No.1761-
# INUNDATION MAP
# DAM NO. 2
# SUNNY DAY FAILURE

Panel 2 of 3

Joins Sheet 1

Joins Sheet 3

FORDYCE RD

CARNE RD

GRAND AV

GRAND AV

GORHAM RD

McNell Creek

AVENIDA DEL REC

AVEN

30 Minutes

20 Minutes

30 Minutes

40 Minutes

1 Miles

1.5 Miles

2 Miles

150

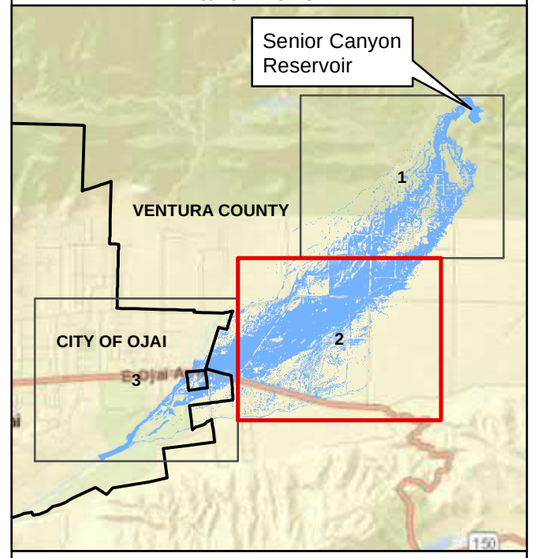
150

Just South of Grand Ave.
Arrival Time = 26 Minutes
Max Structure Flooding = 2 FT
Max Velocity = 4.5 FT/SEC

Carne Rd.
Arrival Time = 23 Minutes
Max 1.9 FT Flooding Over Road
Max Velocity = 11.6 FT/SEC

Grand Ave.
Arrival Time = 23 Minutes
Max 1 FT Flooding Over Road
Max Velocity = 10 FT/SEC

Gorham Rd.
Arrival Time = 40 Minutes
Flooding 0.4 FT Over Road
Max Velocity = 7 FT/SEC




## EXPLANATION

- 1 miles — Mile Markers
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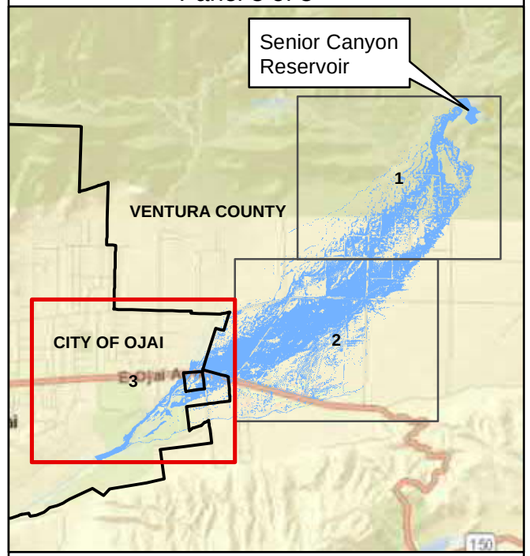
N

0 250 500 750 Feet

1 inch = 500 feet

# DAM No.1761-
# INUNDATION MAP
# DAM NO. 2
# SUNNY DAY FAILURE

Panel 3 of 3




## EXPLANATION

- Mile Markers
- Dam
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0 250 500 750 Feet

1 inch = 500 feet

VENTURA COUNTY UNICORPORATED AREAS

City of Ojai

GRAND AV

DEL PRADO CT

PASEO DEL ROBLES CT

WILLIAMS PL

PARK RD

DROWN AV

LOS ALAMOS DR

SAN GABRIEL ST

SAN RAFAEL ST

ORIOLE ST

GOLDEN WEST AV

ANITA A V

SHADY LN

ALISO ST

WAITE ST

E MATILIJA ST

N FULTON ST

ALLEY

SUNNYGLEN AV

GREGORY ST

San Antonio Creek

VENTURA COUNTY UNICORPORATED AREAS

40 Minutes

2.5 Miles

McNell Creek

OAK GLEN AV

S SHADY LN

FAIRWAY LN

E OJAI AV

BOARDMAN RD

Joins Sheet 2

FOX ST

BALD ST

OLIVE MILL LN

S FULTON ST

BRYANT PL

BRYANT ST

POPE LN

BRYANT CI

3 Miles

San Antonio Creek

E Ojai Rd
Arrival TIme = 41 Minutes
Max Structure Flooding = 0.7 FT
Max Velocity = 2.9 FT/SEC

DOWSTREAM LIMIT OF STUDY
FLOODING CONTAINED
IN SAN ANTONIO CREEK
Arrival Time = 60 Minutes
Max Depth = 4 FT
Max Velocity = 6 FT/SEC

60 Minutes

Thatcher Creek

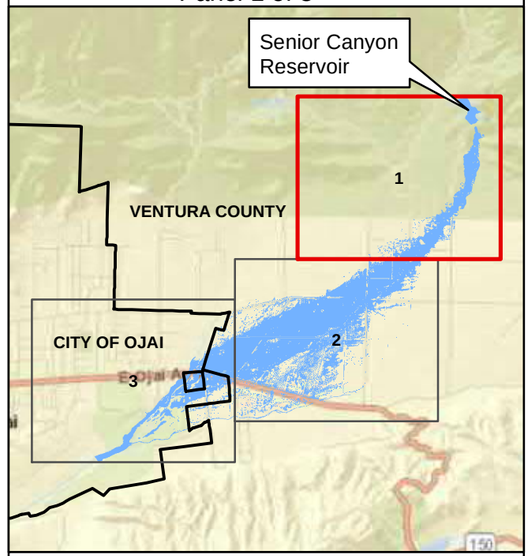
SOU LE PARK DR

City of Ojai

VENTURA COUNTY UNICORPORATED AREAS

# DAM No.1761-
# INUNDATION MAP
# DAM NO. 3
# SUNNY DAY FAILURE

Panel 1 of 3




DAM NO. 2

SENIOR CANYON DAM (DAM NO.1761)

MAIN DAM

DAM NO. 3

Just Downstream of Dam No. 3
Arrival Time < 10 Minutes
Max Structure Flooding = 6.4 FT
Max Velocity = 17.5 FT/SEC

< 10 Minutes

McNell Creek

10 Minutes

McNell Rd. North of Thatcher
Arrival Time = 11 Minutes
Max Structure Flooding = 5.2 FT
Max Velocity = 14.0 FT/SEC

McNell Rd.
Arrival Time = 12 Minutes
Max 4.9 FT Flooding Over Road
Max Velocity = 17.4 FT/SEC

0.5 Miles

Thatcher Rd.
Arrival Time = 12 Minutes
Max 3.3 FT Flooding Over Road
Max Velocity = 20 FT/SEC

Arrival Time = 13 Minutes
Max Structure Flooding = 4.1 FT
Max Velocity = 11.5 FT/SEC

15 Minutes

HERMITAGE RD

LADERA RD

LADERA RIDGE RD

LADERA RANCH RD

LADERA RANCH

San Antonio Creek

KENNEDY LN

HAPPY LN

GARST LN

CHAPARRAL RD

THACHER RD

SHIPPEE LN

CARNE RD

MC NELL RD

CALLE MORENO

FORDYCE RD

Joins Sheet 2

## EXPLANATION

- 1 miles — Mile Markers
- Dam
- Arrival Time Marker
- Stream Centerline
- Lake/Reservoir
- Inundated Structures
- Sunny Day Brea Inundation
- Corporate Limits

KASRAIE CONSULTING

REGISTERED PROFESSIONAL ENGINEER
HASSAN H. KASRAIE
EXP. 03/2020
C 42360
CIVIL
STATE OF CALIFORNIA

Date Prepared: 10/28/2019

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0 250 500 750 Feet

1 inch = 500 feet

# DAM No.1761-
# INUNDATION MAP
# DAM NO. 3
# SUNNY DAY FAILURE

Panel 2 of 3

Joins Sheet 1

FORDYCE RD

CARNE RD

GRAND AV

GRAND AV

GORHAM RD

McNell Creek

Joins Sheet 3

AVENIDA DEL REC

AVEN

150

150

Just South of Grand Ave.
Arrival Time = 22 Minutes
Max Structure Flooding = 2.2 FT
Max Velocity = 4.4 FT/SEC

Carne Rd.
Arrival Time = 18 Minutes
Max 2.2 FT Flooding Over Road
Max Velocity = 18.2 FT/SEC

Grand Ave.
Arrival Time = 18 Minutes
Max 1.6 FT Flooding Over Road
Max Velocity = 20 FT/SEC

Gorham Rd.
Arrival Time = 31 Minutes
Flooding 0.5 FT Over Road
Max Velocity = 9 FT/SEC

15 Minutes

20 Minutes

30 Minutes

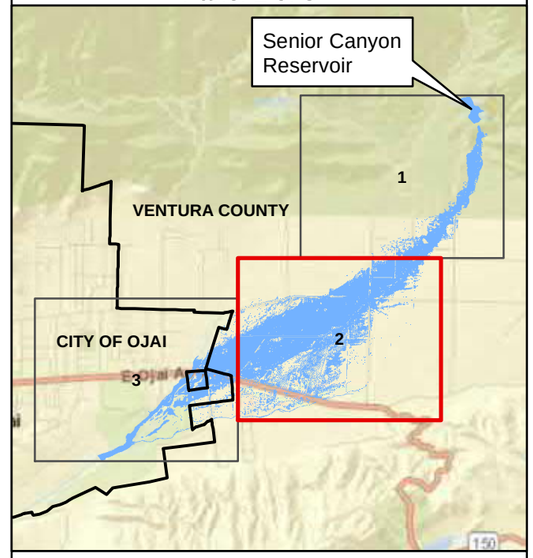
30 Minutes

40 Minutes

1 Miles

1.5 Miles

2 Miles




## EXPLANATION

- 1 miles — Mile Markers
- Dam
- Arrival Time Marker
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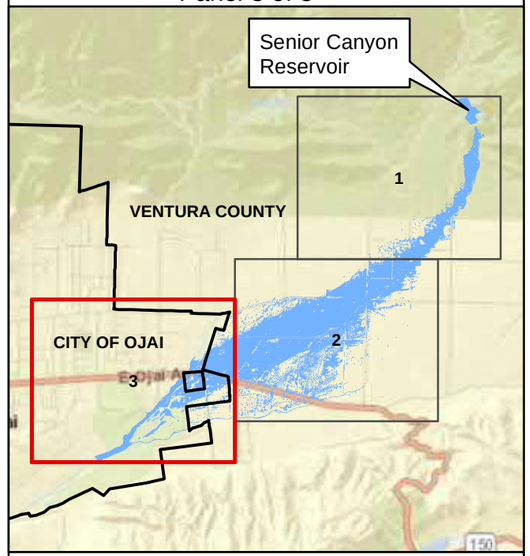
N

0 250 500 750 Feet

1 inch = 500 feet

# DAM No.1761-
# INUNDATION MAP
# DAM NO. 3
# SUNNY DAY FAILURE

Panel 3 of 3




VENTURA COUNTY UNICORPORATED AREAS
City of Ojai
GRAND AV
PARK RD
DEL PRADO CT
PASEO DEL ROBLES CT
LOS ALAMOS DR
WILLIAMS PL
DROWN AV
SAN GABRIEL ST
SAN RAFAEL ST
ORIOLE ST
GOLDEN WEST AV
ANITA A V
SHADY LN
SUNNYGLEN AV
GREGORY ST
ALLEY
ALISO ST
E WAITE ST
E MATILIJA ST
N FULTON ST
San Antonio Creek
30 Minutes
2.5 Miles
McNell Creek
OAK GLEN AV
S SHADY LN
FAIRWAY LN
40 Minutes
E OJAI AV
BOARDMAN RD
Joins Sheet 2
FOX ST
BALD ST
OLIVE MILL LN
S FULTON ST
BRYANT PL
BRYANT ST
POPE LN
BRYANT CI
3 Miles
San Antonio Creek
E Ojai Rd
Arrival TIme = 33 Minutes
Max Structure Flooding = 1.1 FT
Max Velocity = 4.9 FT/SEC
DOWSTREAM LIMIT OF STUDY
FLOODING CONTAINED
IN SAN ANTONIO CREEK
Arrival Time = 50 Minutes
Max Depth = 5 FT
Max Velocity = 7 FT/SEC
50 Minutes
Thatcher Creek
SOU LE PARK DR
City of Ojai
VENTURA COUNTY
UNICORPORATED AREAS

## EXPLANATION

- Mile Markers
- Dam
- Arrival Time Marker
- Stream Centerline
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- Inundated Structures
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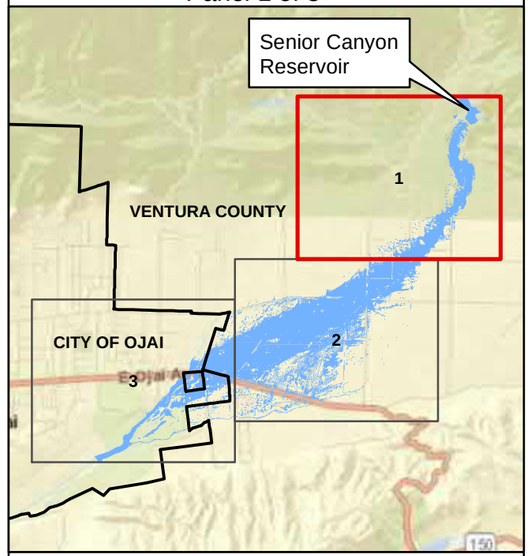
N

0 250 500 750 Feet

1 inch = 500 feet

# DAM No.1761-
# FLOOD DEPTH MAP
# MAIN DAM
# SUNNY DAY FAILURE

Panel 1 of 3




DAM NO. 2

SENIOR CANYON DAM (DAM NO.1761)

MAIN DAM

DAM NO. 3

< 10 Minutes

Ladera Rd.
Arrival Time < 10 Minutes
Max Structure Flooding = 5 FT
Max Velocity = 13.3 FT/SEC

10 Minutes

McNell Creek

McNell Rd. North of Thatcher
Arrival Time = 11 Minutes
Max Structure Flooding = 4.8 FT
Max Velocity = 13.8 FT/SEC

McNell Rd.
Arrival Time = 12 Minutes
Max 4.5 FT Flooding Over Road
Max Velocity = 17.5 FT/SEC

Thatcher Rd.
Arrival Time = 12 Minutes
Max 3.0 FT Flooding Over Road
Max Velocity = 18 FT/SEC

Arrival Time = 13 Minutes
Max Structure Flooding = 4.1 FT
Max Velocity = 11.4 FT/SEC

15 Minutes

0.5 Miles

HERMITAGE RD

LADERA RD

LADERA RIDGE RD

LADERA RANCH RD

LADERA RANCH

San Antonio Creek

KENNEDY LN

HAPPY LN

CARST LN

CHAPARRAL RD

THACHER RD

SHIPPEE LN

MC NELL RD

CARNE RD

CALLE MORENO

FORDYCE RD

Joins Sheet 2

## EXPLANATION

- Mile Markers (1 miles)
- Dam
- Arrival Time Marker
- Stream Centerline
- Lake / Reservoir
- Inundated Structures
- Corporate Limits

**Sunny Day Failure Max Depth (feet)**

| | |
|---|---|
| < 0.5 | 3 - 5 |
| 0.5 - 1 | 5 - 8 |
| 1 - 2 | 8 - 10 |
| 2 - 3 | > 10 |

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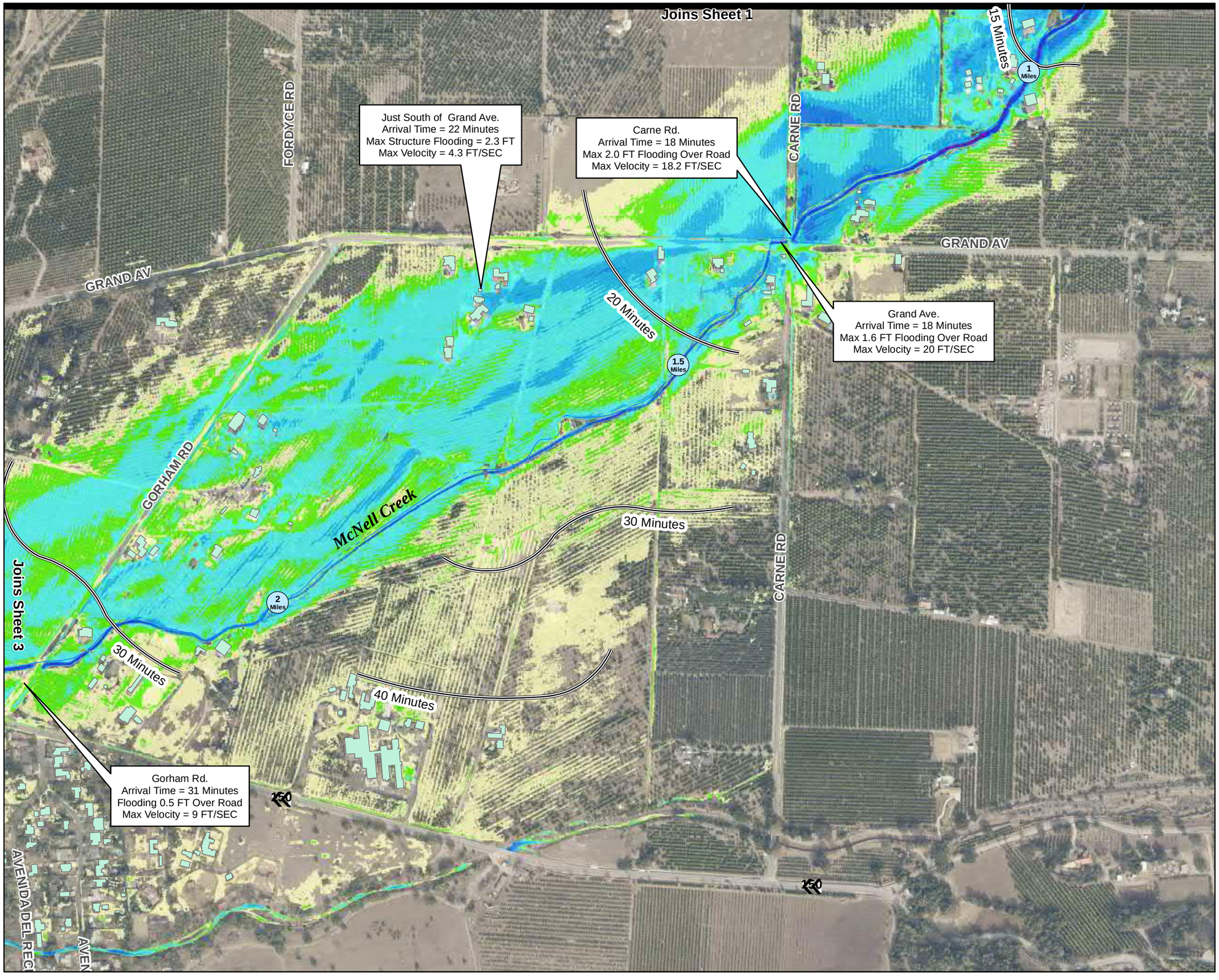
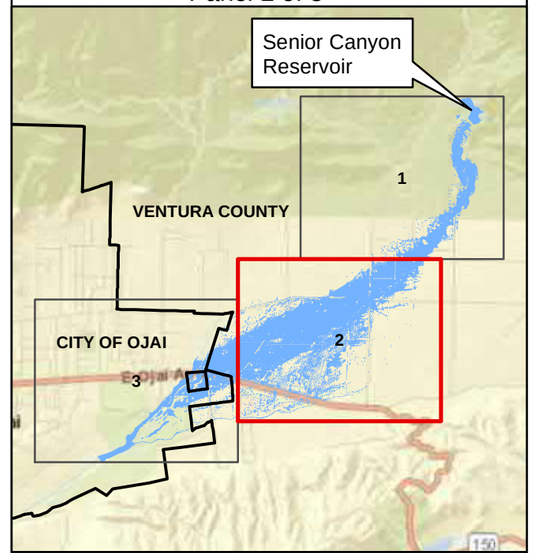
1 inch = 500 feet

# DAM No.1761-
# FLOOD DEPTH MAP
# MAIN DAM
# SUNNY DAY FAILURE

Panel 2 of 3




## EXPLANATION

- 1 miles — Mile Markers
- Dam
- Arrival Time Marker
- Stream Centerline
- Lake / Reservoir
- Inundated Structures
- Corporate Limits

**Sunny Day Failure Max Depth (feet)**

| | |
|---|---|
| < 0.5 | 3 - 5 |
| 0.5 - 1 | 5 - 8 |
| 1 - 2 | 8 - 10 |
| 2 - 3 | > 10 |

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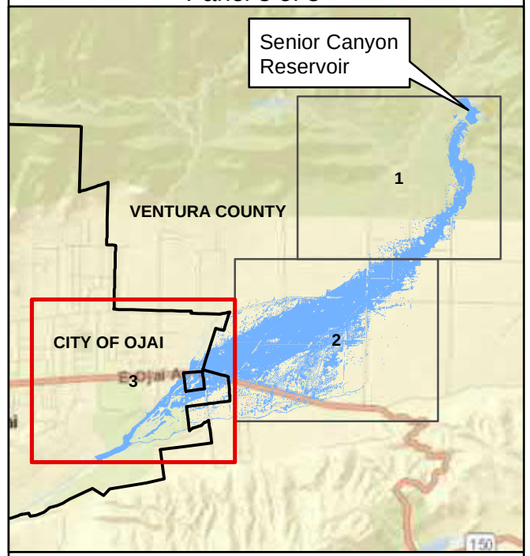
N

0 250 500 750 Feet

1 inch = 500 feet

# DAM No.1761-
# FLOOD DEPTH MAP
# MAIN DAM
# SUNNY DAY FAILURE

Panel 3 of 3




VENTURA COUNTY UNICORPORATED AREAS

City of Ojai

VENTURA COUNTY UNICORPORATED AREAS

GRAND AV

DEL PRADO CT

PASEO DEL ROBLES CT

WILLIAMS PL

PARK RD

DROWN AV

SHADY LN

ORIOLE ST

GOLDEN WEST AV

ANITA A V

LOS ALAMOS DR

SAN GABRIEL ST

SAN RAFAEL ST

SUNNYGLEN AV

GREGORY ST

ALLEY

ALISO ST

E MATILIJA ST

WAITE ST

N FULTON ST

San Antonio Creek

30 Minutes

2.5 Miles

McNell Creek

150

OAK GLEN AV

S SHADY LN

FAIRWAY LN

40 Minutes

E OJAI AV

BOARDMAN RD

Joins Sheet 2

FOX ST

BALD ST

OLIVE MILL LN

S FULTON ST

BRYANT PL

BRYANT ST

POPE LN

BRYANT CI

3 Miles

San Antonio Creek

E Ojai Rd
Arrival TIme = 33 Minutes
Max Structure Flooding = 1.1 FT
Max Velocity = 4.8 FT/SEC

DOWSTREAM LIMIT OF STUDY
FLOODING CONTAINED
IN SAN ANTONIO CREEK
Arrival Time = 50 Minutes
Max Depth = 5 FT
Max Velocity = 6.9 FT/SEC

50 Minutes

Thatcher Creek

SOU LE PARK DR

City of Ojai

VENTURA COUNTY UNICORPORATED AREAS

## EXPLANATION

- 1 miles — Mile Markers
- Dam
- Arrival Time Marker
- Stream Centerline
- Lake / Reservoir
- Inundated Structures
- Corporate Limits

**Sunny Day Failure Max Depth (feet)**

| | |
|---|---|
| < 0.5 | 3 - 5 |
| 0.5 - 1 | 5 - 8 |
| 1 - 2 | 8 - 10 |
| 2 - 3 | > 10 |

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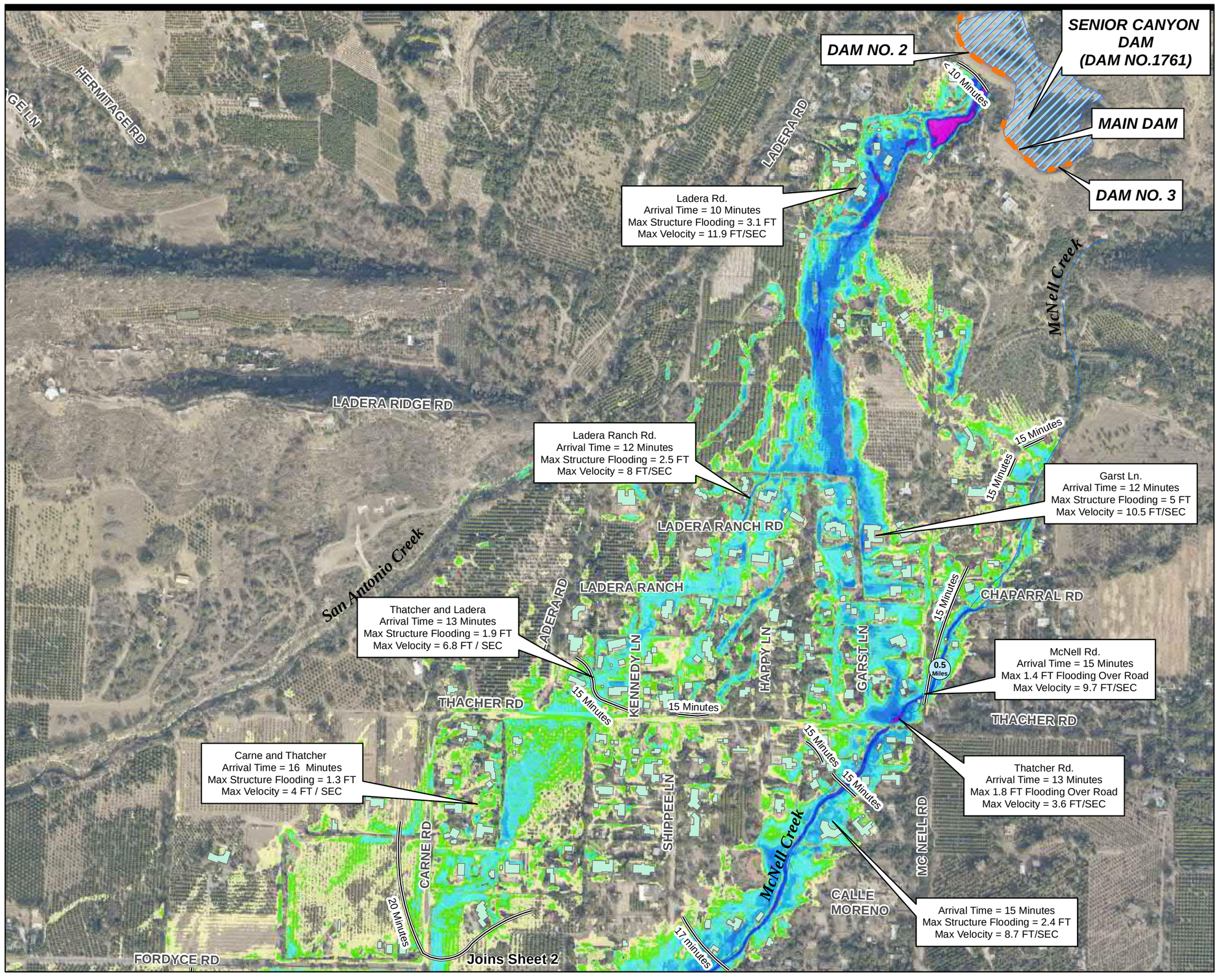
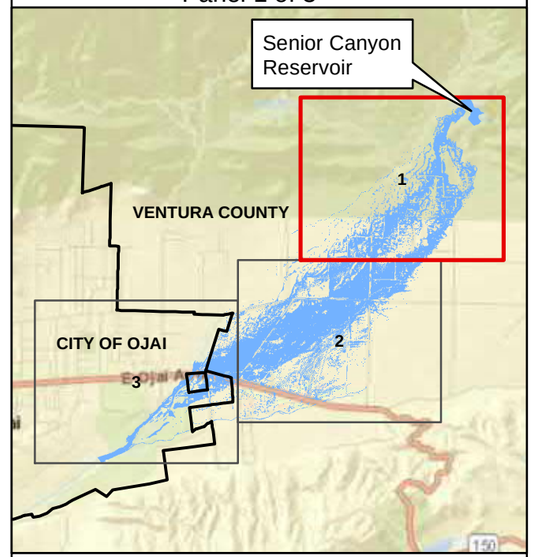
0 250 500 750 Feet

1 inch = 500 feet

# DAM No.1761-
# FLOOD DEPTH MAP
# DAM NO. 2
# SUNNY DAY FAILURE

Panel 1 of 3




## EXPLANATION

- 1 miles — Mile Markers
- Dam
- Arrival Time Marker
- Stream Centerline
- Lake / Reservoir
- Inundated Structures
- Corporate Limits

**Sunny Day Failure Max Depth (feet)**

| | |
|---|---|
| < 0.5 | 3 - 5 |
| 0.5 - 1 | 5 - 8 |
| 1 - 2 | 8 - 10 |
| 2 - 3 | > 10 |

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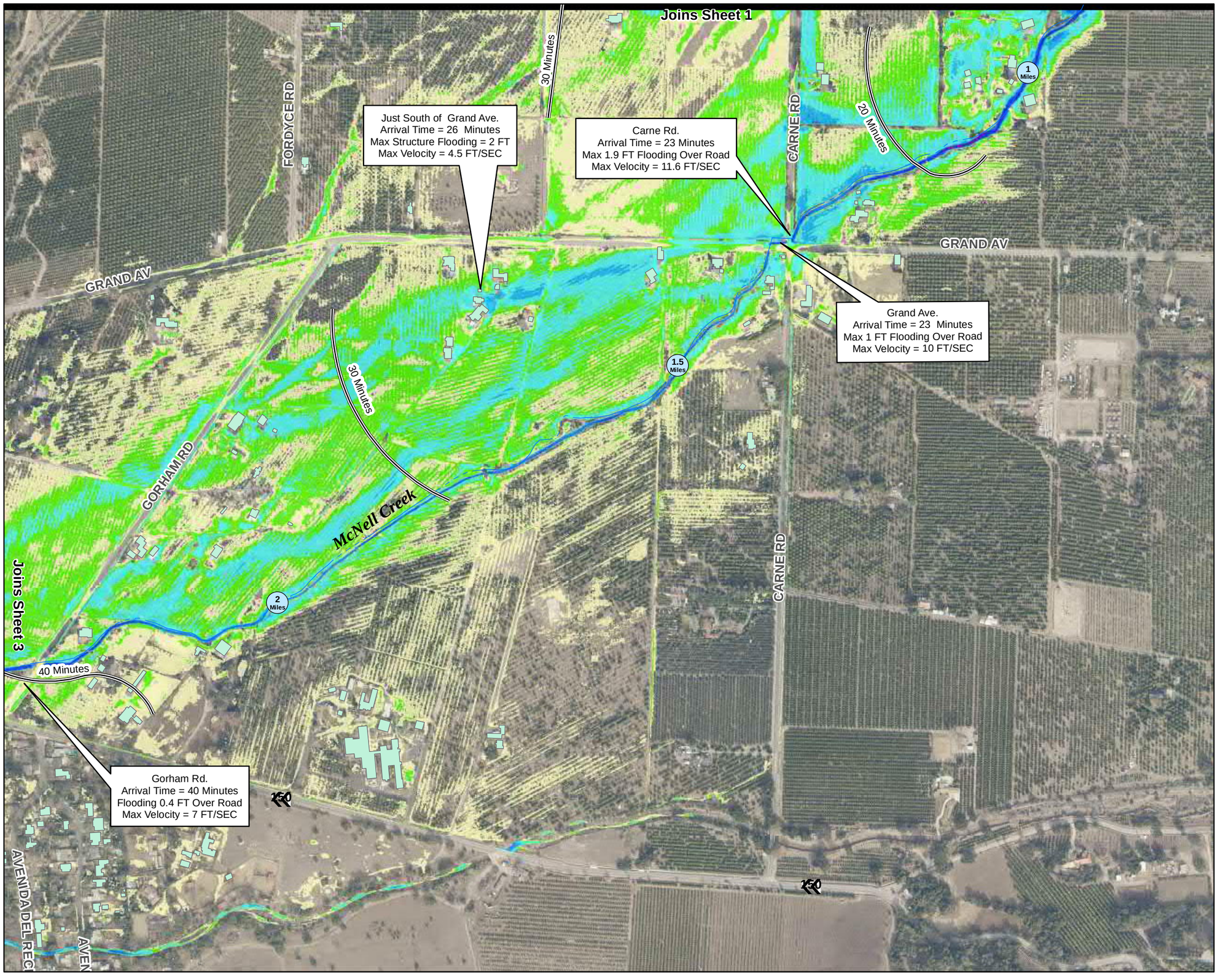
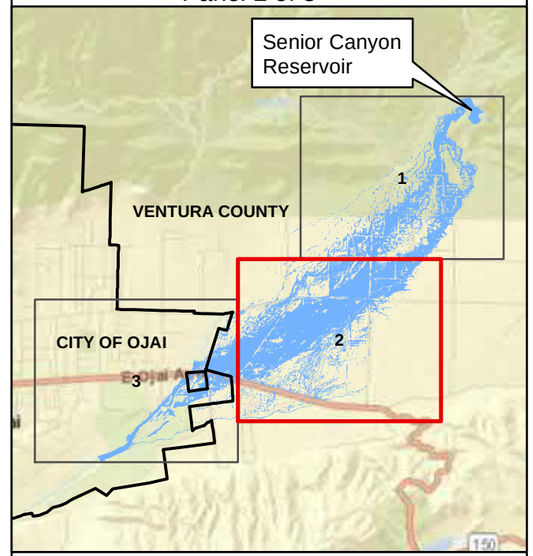
0 250 500 750 Feet

1 inch = 500 feet

# DAM No.1761-
# FLOOD DEPTH MAP
# DAM NO. 2
# SUNNY DAY FAILURE

Panel 2 of 3




## EXPLANATION

- Mile Markers (1 miles)
- Dam
- Arrival Time Marker
- Stream Centerline
- Lake / Reservoir
- Inundated Structures
- Corporate Limits

**Sunny Day Failure Max Depth (feet)**

| | |
|---|---|
| < 0.5 | 3 - 5 |
| 0.5 - 1 | 5 - 8 |
| 1 - 2 | 8 - 10 |
| 2 - 3 | > 10 |

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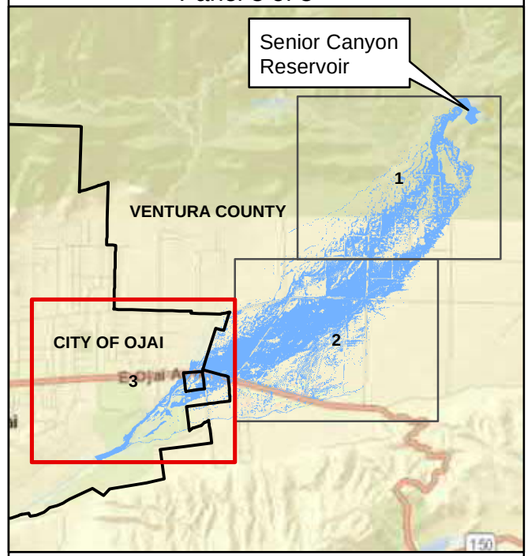
N

0 250 500 750 Feet

1 inch = 500 feet

# DAM No.1761-
# FLOOD DEPTH MAP
# DAM NO. 2
# SUNNY DAY FAILURE

Panel 3 of 3




VENTURA COUNTY UNICORPORATED AREAS
City of Ojai
GRAND AV
DEL PRADO CT
PASEO DEL ROBLES CT
WILLIAMS PL
PARK RD
DROWN AV
LOS ALAMOS DR
SAN GABRIEL ST
SAN RAFAEL ST
ORIOLE ST
GOLDEN WEST AV
ANITA A V
SHADY LN
ALISO ST
WAITE ST
N FULTON ST
E MATILIJA ST
SUNNYGLEN AV
GREGORY ST
ALLEY
San Antonio Creek
City of Ojai
VENTURA COUNTY UNICORPORATED AREAS
40 Minutes
2.5 Miles
McNell Creek
150
OAK GLEN AV
S SHADY LN
FAIRWAY LN
E OJAI AV
BOARDMAN RD
Joins Sheet 2
BALD ST
OLIVE MILL LN
S FULTON ST
FOX ST
BRYANT PL
BRYANT ST
POPE LN
BRYANT CI
San Antonio Creek
3 Miles
Thatcher Creek
SOU LE PARK DR
City of Ojai
VENTURA COUNTY UNICORPORATED AREAS
60 Minutes

E Ojai Rd
Arrival TIme = 41 Minutes
Max Structure Flooding = 0.7 FT
Max Velocity = 2.9 FT/SEC

DOWSTREAM LIMIT OF STUDY
FLOODING CONTAINED
IN SAN ANTONIO CREEK
Arrival Time = 60 Minutes
Max Depth = 4 FT
Max Velocity = 6 FT/SEC

## EXPLANATION

- 1 miles — Mile Markers
- Dam
- Arrival Time Marker
- Stream Centerline
- Lake / Reservoir
- Inundated Structures
- Corporate Limits

**Sunny Day Failure Max Depth (feet)**

| | |
|---|---|
| < 0.5 | 3 - 5 |
| 0.5 - 1 | 5 - 8 |
| 1 - 2 | 8 - 10 |
| 2 - 3 | > 10 |

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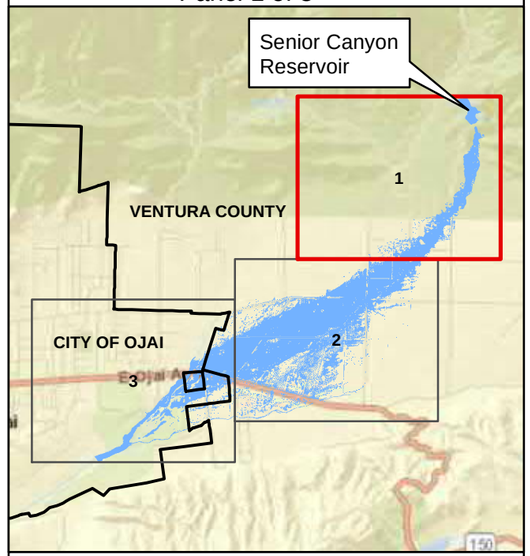
0 250 500 750 Feet

1 inch = 500 feet

# DAM No.1761-
# FLOOD DEPTH MAP
# DAM NO. 3
# SUNNY DAY FAILURE

Panel 1 of 3




DAM NO. 2

SENIOR CANYON DAM (DAM NO.1761)

MAIN DAM

DAM NO. 3

Just Downstream of Dam No. 3
Arrival Time < 10 Minutes
Max Structure Flooding = 6.4 FT
Max Velocity = 17.5 FT/SEC

McNell Rd. North of Thatcher
Arrival Time = 11 Minutes
Max Structure Flooding = 5.2 FT
Max Velocity = 14.0 FT/SEC

McNell Rd.
Arrival Time = 12 Minutes
Max 4.9 FT Flooding Over Road
Max Velocity = 17.4 FT/SEC

Thatcher Rd.
Arrival Time = 12 Minutes
Max 3.3 FT Flooding Over Road
Max Velocity = 20 FT/SEC

Arrival Time = 13 Minutes
Max Structure Flooding = 4.1 FT
Max Velocity = 11.5 FT/SEC

HERMITAGE RD

LADERA RD

LADERA RIDGE RD

LADERA RANCH RD

LADERA RANCH

CHAPARRAL RD

THACHER RD

KENNEDY LN

HAPPY LN

CARST LN

SHIPPEE LN

MC NELL RD

CARNE RD

CALLE MORENO

FORDYCE RD

McNell Creek

San Antonio Creek

0.5 Miles

Joins Sheet 2

## EXPLANATION

- 1 miles — Mile Markers
- Dam
- Arrival Time Marker
- Stream Centerline
- Lake / Reservoir
- Inundated Structures
- Corporate Limits

**Sunny Day Failure Max Depth (feet)**

| | |
|---|---|
| < 0.5 | 3 - 5 |
| 0.5 - 1 | 5 - 8 |
| 1 - 2 | 8 - 10 |
| 2 - 3 | > 10 |

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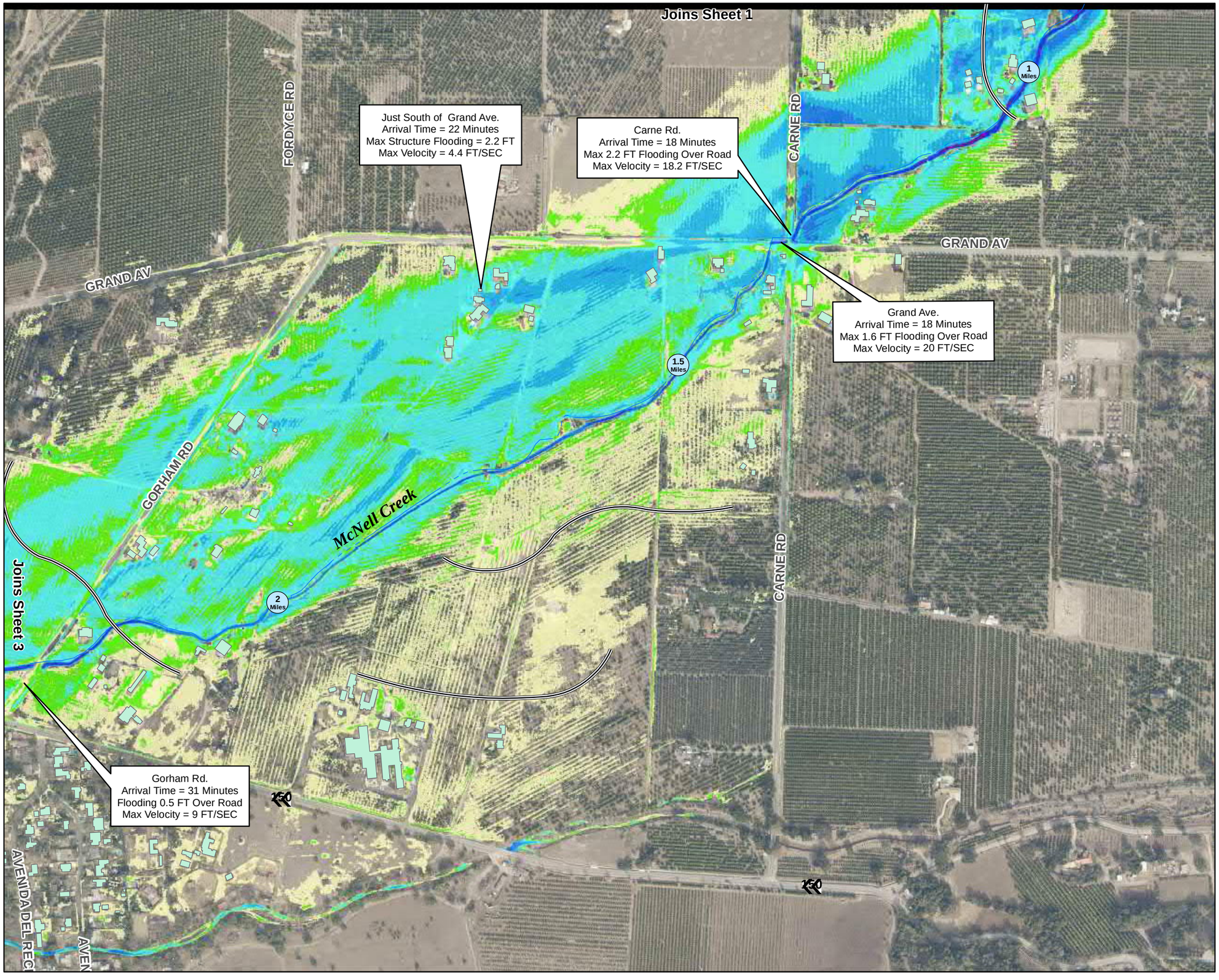
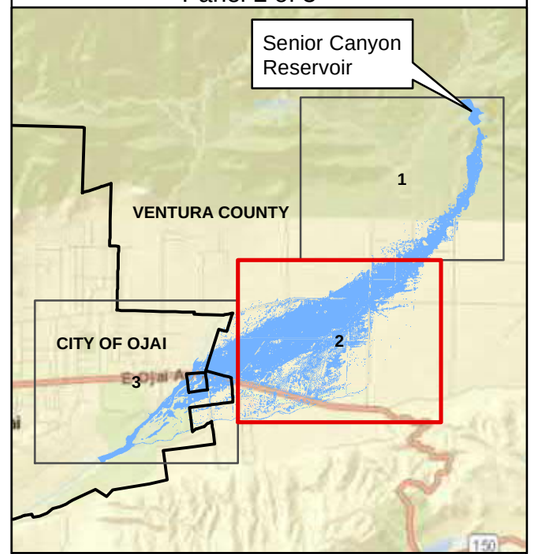
0 250 500 750 Feet

1 inch = 500 feet

# DAM No.1761-
# FLOOD DEPTH MAP
# DAM NO. 3
# SUNNY DAY FAILURE

Panel 2 of 3




## EXPLANATION

- 1 miles — Mile Markers
- Dam
- Arrival Time Marker
- Stream Centerline
- Lake / Reservoir
- Inundated Structures
- Corporate Limits

**Sunny Day Failure Max Depth (feet)**

| | |
|---|---|
| < 0.5 | 3 - 5 |
| 0.5 - 1 | 5 - 8 |
| 1 - 2 | 8 - 10 |
| 2 - 3 | > 10 |

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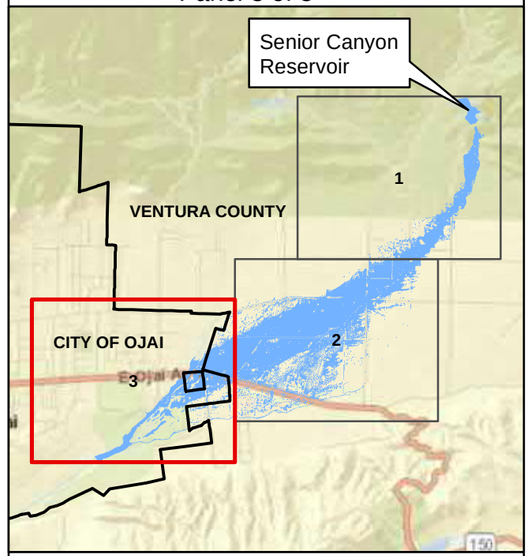
N

0 250 500 750 Feet

1 inch = 500 feet

# DAM No.1761-
# FLOOD DEPTH MAP
# DAM NO. 3
# SUNNY DAY FAILURE

Panel 3 of 3

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City of Ojai
GRAND AV
PARK RD
DEL PRADO CT
PASEO DEL ROBLES CT
LOS ALAMOS DR
SAN GABRIEL ST
SAN RAFAEL ST
WILLIAMS PL
DROWN AV
SHADY LN
ORIOLE ST
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GREGORY ST
ALLEY
ALISO ST
E WAITE ST
E MATILIJA ST
N FULTON ST
San Antonio Creek
VENTURA COUNTY UNICORPORATED AREAS
City of Ojai
2.5 Miles
McNell Creek
150
OAK GLEN AV
S SHADY LN
FAIRWAY LN
E OJAI AV
BOARDMAN RD
Joins Sheet 2
FOX ST
BALD ST
OLIVE MILL LN
S FULTON ST
BRYANT PL
BRYANT ST
POPE LN
BRYANT CI
San Antonio Creek
3 Miles
Thatcher Creek
SOU LE PARK DR
City of Ojai
VENTURA COUNTY UNICORPORATED AREAS

E Ojai Rd
Arrival TIme = 33 Minutes
Max Structure Flooding = 1.1 FT
Max Velocity = 4.9 FT/SEC

DOWSTREAM LIMIT OF STUDY
FLOODING CONTAINED
IN SAN ANTONIO CREEK
Arrival Time = 50 Minutes
Max Depth = 5 FT
Max Velocity = 7 FT/SEC

## EXPLANATION

- 1 miles — Mile Markers
- Dam
- Arrival Time Marker
- Stream Centerline
- Lake / Reservoir
- Inundated Structures
- Corporate Limits

**Sunny Day Failure Max Depth (feet)**

| | |
|---|---|
| < 0.5 | 3 - 5 |
| 0.5 - 1 | 5 - 8 |
| 1 - 2 | 8 - 10 |
| 2 - 3 | > 10 |

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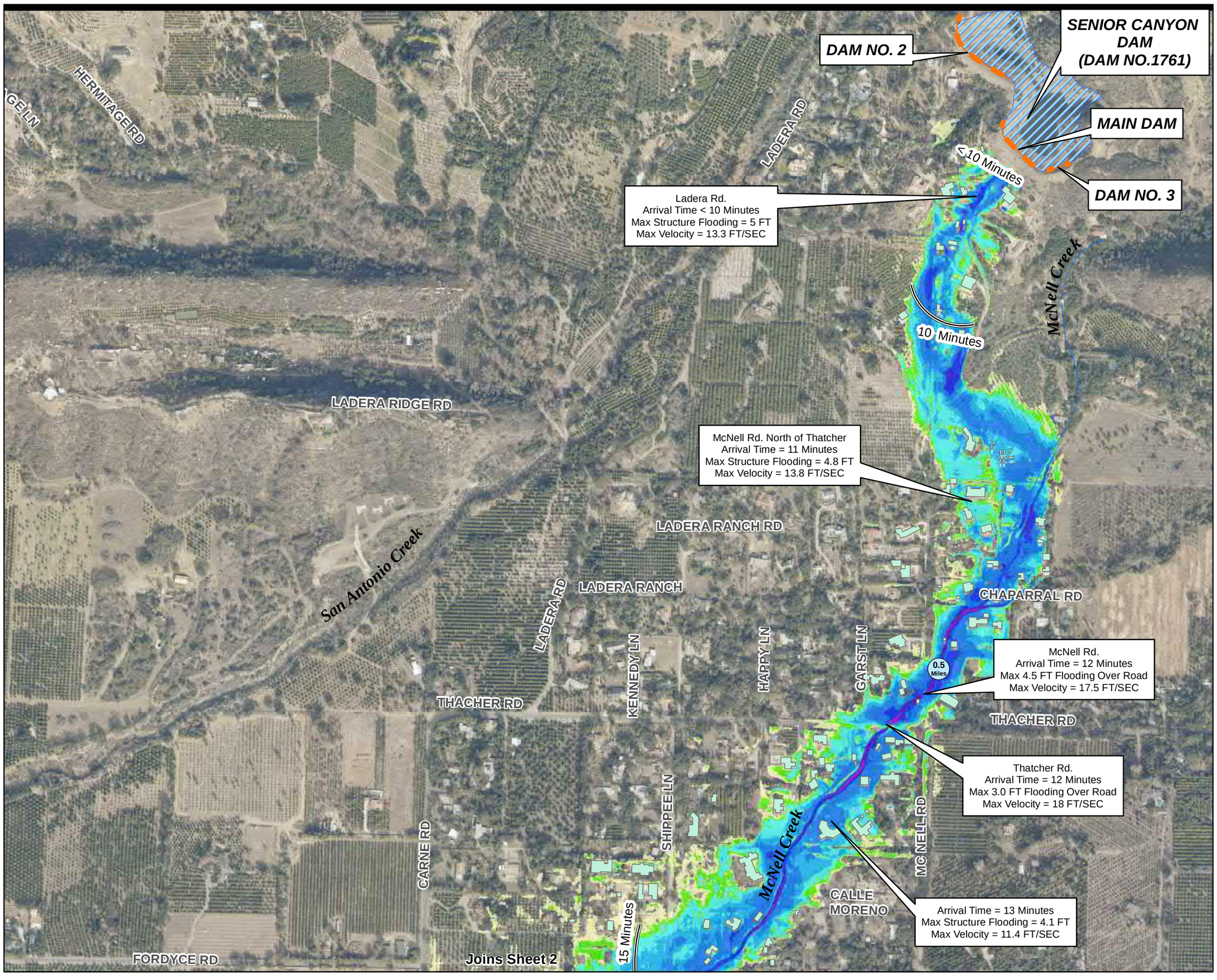
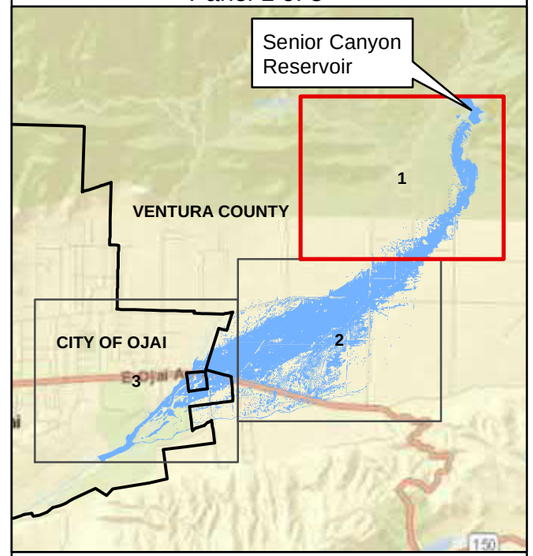
0 250 500 750 Feet

1 inch = 500 feet

# DAM No.1761-
# FLOOD DEPTH MAP
# MAIN DAM
# SUNNY DAY FAILURE

Panel 1 of 3




## EXPLANATION

- Mile Markers
- Dam
- Arrival Time Marker
- Stream Centerline
- Lake / Reservoir
- Inundated Structures
- Corporate Limits

**Sunny Day Failure Max Depth (feet)**

| | |
|---|---|
| < 0.5 | 3 - 5 |
| 0.5 - 1 | 5 - 8 |
| 1 - 2 | 8 - 10 |
| 2 - 3 | > 10 |

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Date Prepared: 10/25/201

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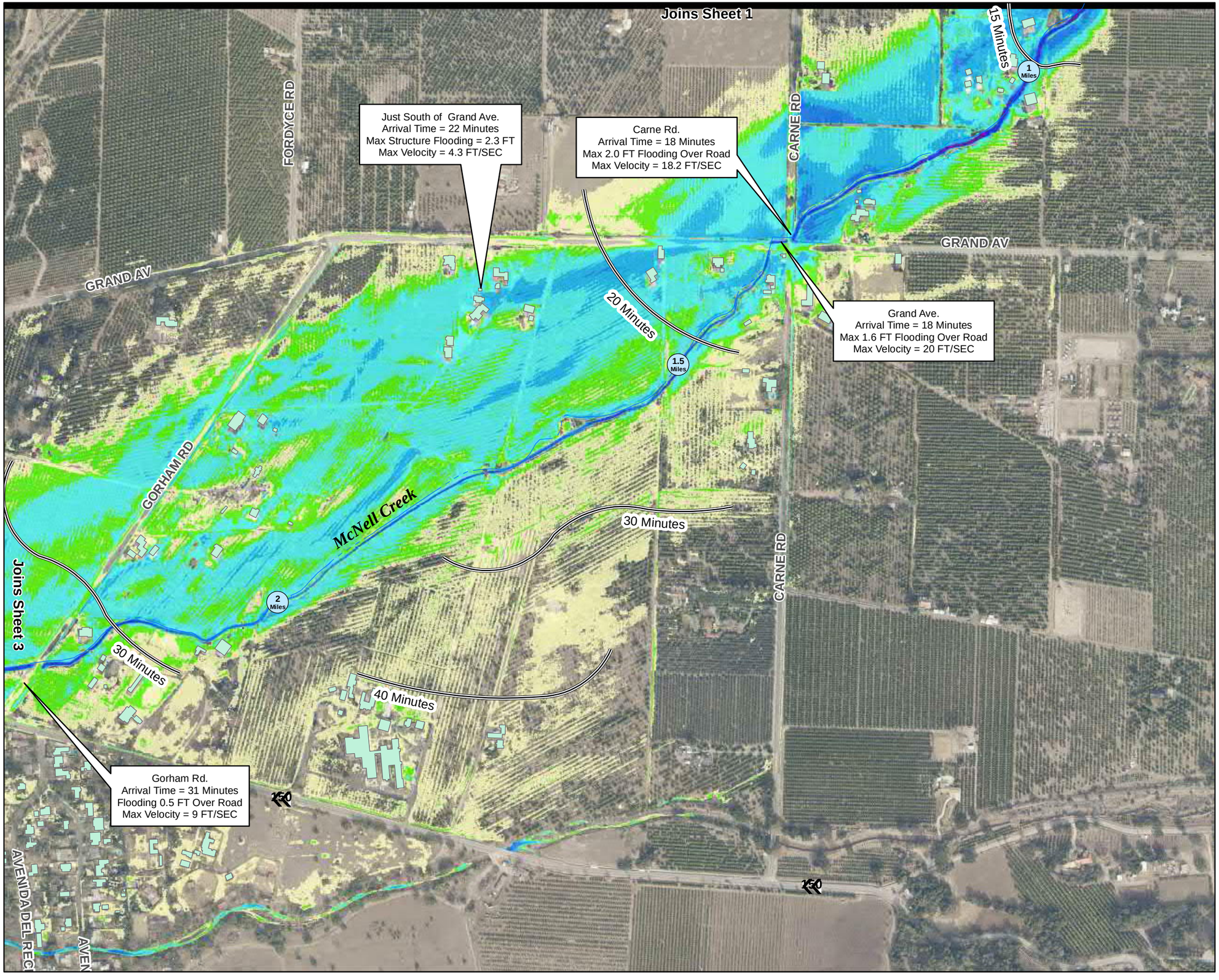
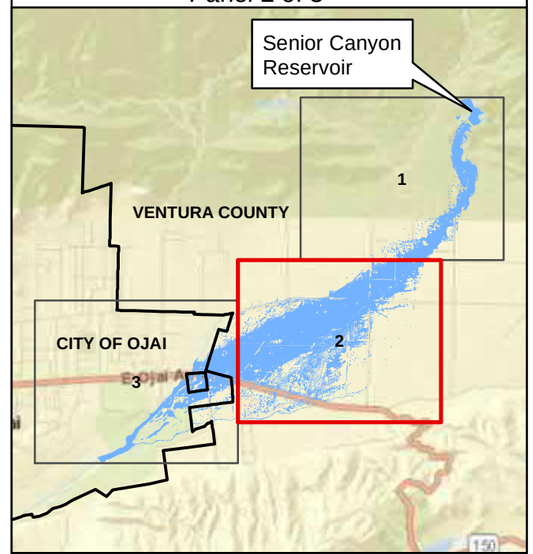
0 250 500 750 Feet

1 inch = 500 feet

# DAM No.1761-
# FLOOD DEPTH MAP
# MAIN DAM
# SUNNY DAY FAILURE

Panel 2 of 3




## EXPLANATION

- 1 miles — Mile Markers
- Dam
- Arrival Time Marker
- Stream Centerline
- Lake / Reservoir
- Inundated Structures
- Corporate Limits

**Sunny Day Failure Max Depth (feet)**

| | |
|---|---|
| < 0.5 | 3 - 5 |
| 0.5 - 1 | 5 - 8 |
| 1 - 2 | 8 - 10 |
| 2 - 3 | > 10 |

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N

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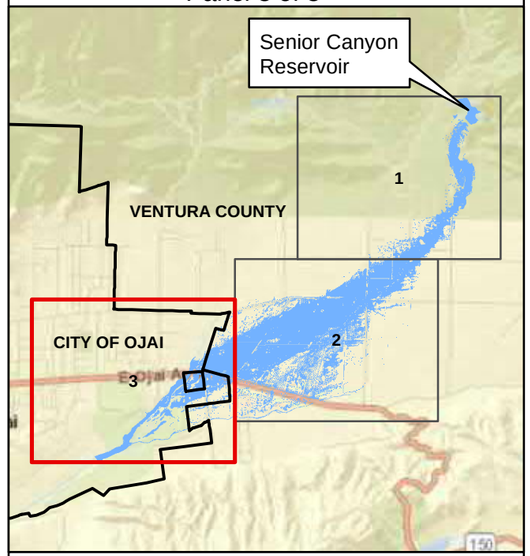
1 inch = 500 feet

# DAM No.1761-
# FLOOD DEPTH MAP
# MAIN DAM
# SUNNY DAY FAILURE

Panel 3 of 3




VENTURA COUNTY UNICORPORATED AREAS

City of Ojai

GRAND AV

PARK RD

DEL PRADO CT

PASEO DEL ROBLES CT

WILLIAMS PL

LOS ALAMOS DR

SAN GABRIEL ST

SAN RAFAEL ST

DROWN AV

SHADY LN

ORIOLE ST

GOLDEN WEST AV

ANITA A V

SUNNYGLEN AV

GREGORY ST

ALLEY

ALISO ST

E MATILIJA ST

WAITE ST

N FULTON ST

San Antonio Creek

30 Minutes

2.5 Miles

McNell Creek

OAK GLEN AV

S SHADY LN

FAIRWAY LN

40 Minutes

E OJAI AV

BOARDMAN RD

Joins Sheet 2

FOX ST

BALD ST

OLIVE MILL LN

S FULTON ST

BRYANT PL

BRYANT ST

POPE LN

BRYANT CI

3 Miles

E Ojai Rd
Arrival TIme = 33 Minutes
Max Structure Flooding = 1.1 FT
Max Velocity = 4.8 FT/SEC

DOWSTREAM LIMIT OF STUDY
FLOODING CONTAINED
IN SAN ANTONIO CREEK
Arrival Time = 50 Minutes
Max Depth = 5 FT
Max Velocity = 6.9 FT/SEC

50 Minutes

Thatcher Creek

SOU LE PARK DR

City of Ojai

VENTURA COUNTY
UNICORPORATED AREAS

## EXPLANATION

- Mile Markers (1 miles)
- Dam
- Arrival Time Marker
- Stream Centerline
- Lake / Reservoir
- Inundated Structures
- Corporate Limits

**Sunny Day Failure Max Depth (feet)**

| | |
|---|---|
| < 0.5 | 3 - 5 |
| 0.5 - 1 | 5 - 8 |
| 1 - 2 | 8 - 10 |
| 2 - 3 | > 10 |

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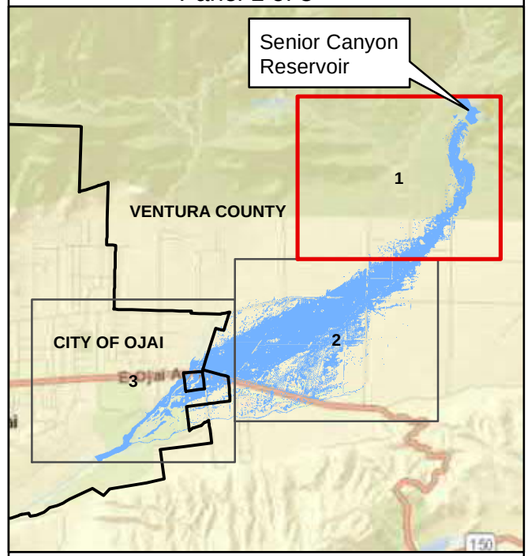
0 250 500 750 Feet

1 inch = 500 feet

# DAM No.1761- HAZARD MAP MAIN DAM SUNNY DAY FAILURE

Panel 1 of 3




DAM NO. 2

SENIOR CANYON DAM (DAM NO.1761)

MAIN DAM

DAM NO. 3

< 10 Minutes

Ladera Rd.
Arrival Time < 10 Minutes
Max Structure Flooding = 5 FT
Max Velocity = 13.3 FT/SEC

10 Minutes

McNell Creek

McNell Rd. North of Thatcher
Arrival Time = 11 Minutes
Max Structure Flooding = 4.8 FT
Max Velocity = 13.8 FT/SEC

McNell Rd.
Arrival Time = 12 Minutes
Max 4.5 FT Flooding Over Road
Max Velocity = 17.5 FT/SEC

0.5 Miles

Thatcher Rd.
Arrival Time = 12 Minutes
Max 3.0 FT Flooding Over Road
Max Velocity = 18 FT/SEC

Arrival Time = 13 Minutes
Max Structure Flooding = 4.1 FT
Max Velocity = 11.4 FT/SEC

15 Minutes

HERMITAGE RD

LADERA RD

LADERA RIDGE RD

LADERA RANCH RD

LADERA RANCH

San Antonio Creek

KENNEDY LN

HAPPY LN

CARST LN

CHAPARRAL RD

THACHER RD

SHIPPEE LN

MC NELL RD

CARNE RD

CALLE MORENO

FORDYCE RD

Joins Sheet 2

## EXPLANATION

- Mile Markers (1 miles)
- Dam
- Arrival Time Marker
- Stream Centerline
- Lake/Reservoir
- Inundated Structures
- Corporate Limits

**Flood Severity**

**Depth x Velocity (ft^2/sec)**

- Lowest Risk: 0 - 0.2
- Low: 0.2 - 2.2
- Moderate: 2.2 - 5.4
- High: > 5.4

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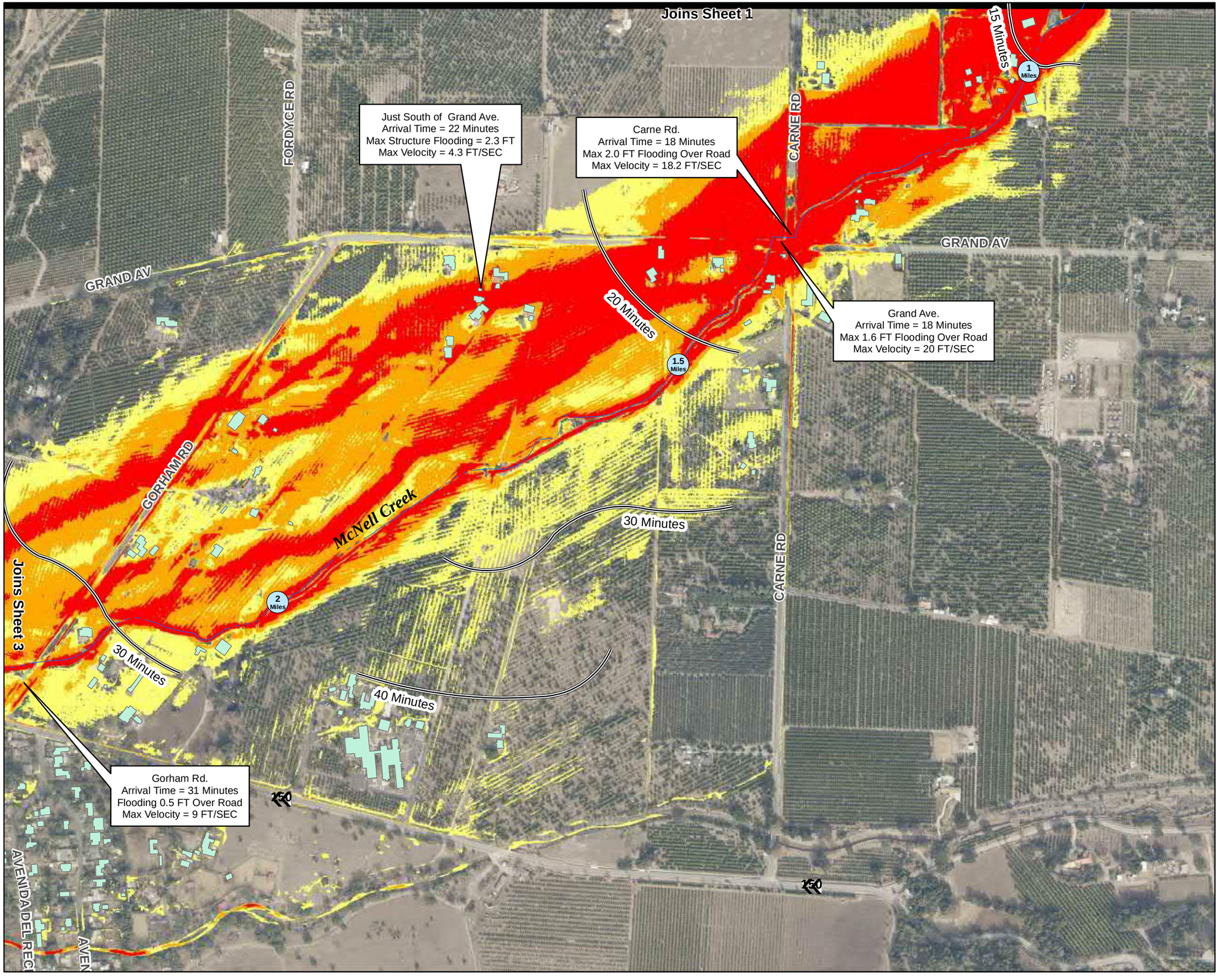
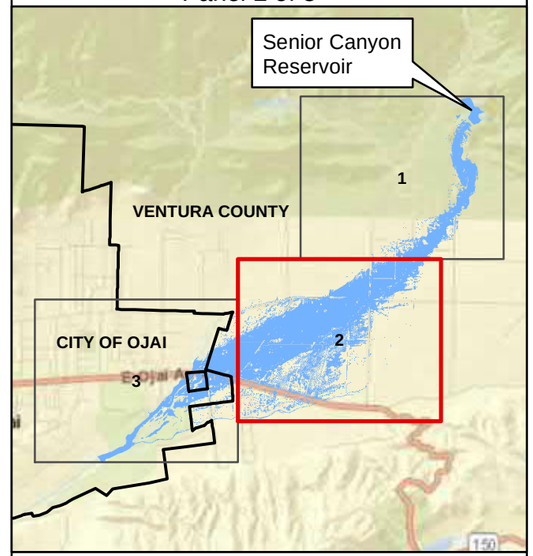
0 250 500 750 Feet

1 inch = 500 feet

# DAM No.1761-
# HAZARD MAP
# MAIN DAM
# SUNNY DAY FAILURE

Panel 2 of 3




## EXPLANATION

- Mile Markers (1 miles)
- Dam
- Arrival Time Marker
- Stream Centerline
- Lake/Reservoir
- Inundated Structures
- Corporate Limits

**Flood Severity**

**Depth x Velocity (ft^2/sec)**

- Lowest Risk: 0 - 0.2
- Low: 0.2 - 2.2
- Moderate: 2.2 - 5.4
- High: > 5.4

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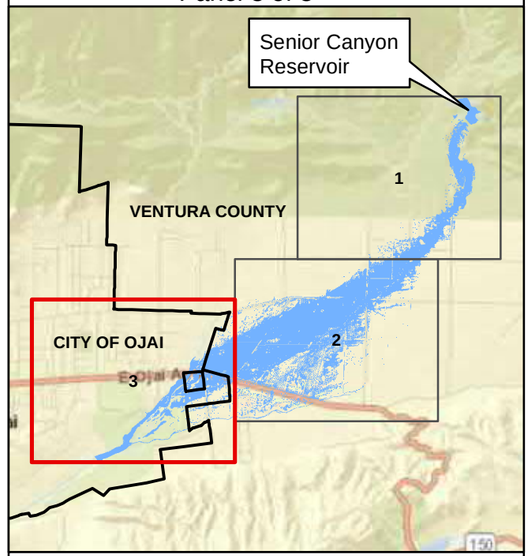
N

0 250 500 750 Feet

1 inch = 500 feet

# DAM No.1761-
# HAZARD MAP
# MAIN DAM
# SUNNY DAY FAILURE

Panel 3 of 3




## EXPLANATION

- Mile Markers
- Dam
- Arrival Time Marker
- Stream Centerline
- Lake/Reservoir
- Inundated Structures
- Corporate Limits

**Flood Severity**

**Depth x Velocity (ft^2/sec)**

- Lowest Risk: 0 - 0.2
- Low: 0.2 - 2.2
- Moderate: 2.2 - 5.4
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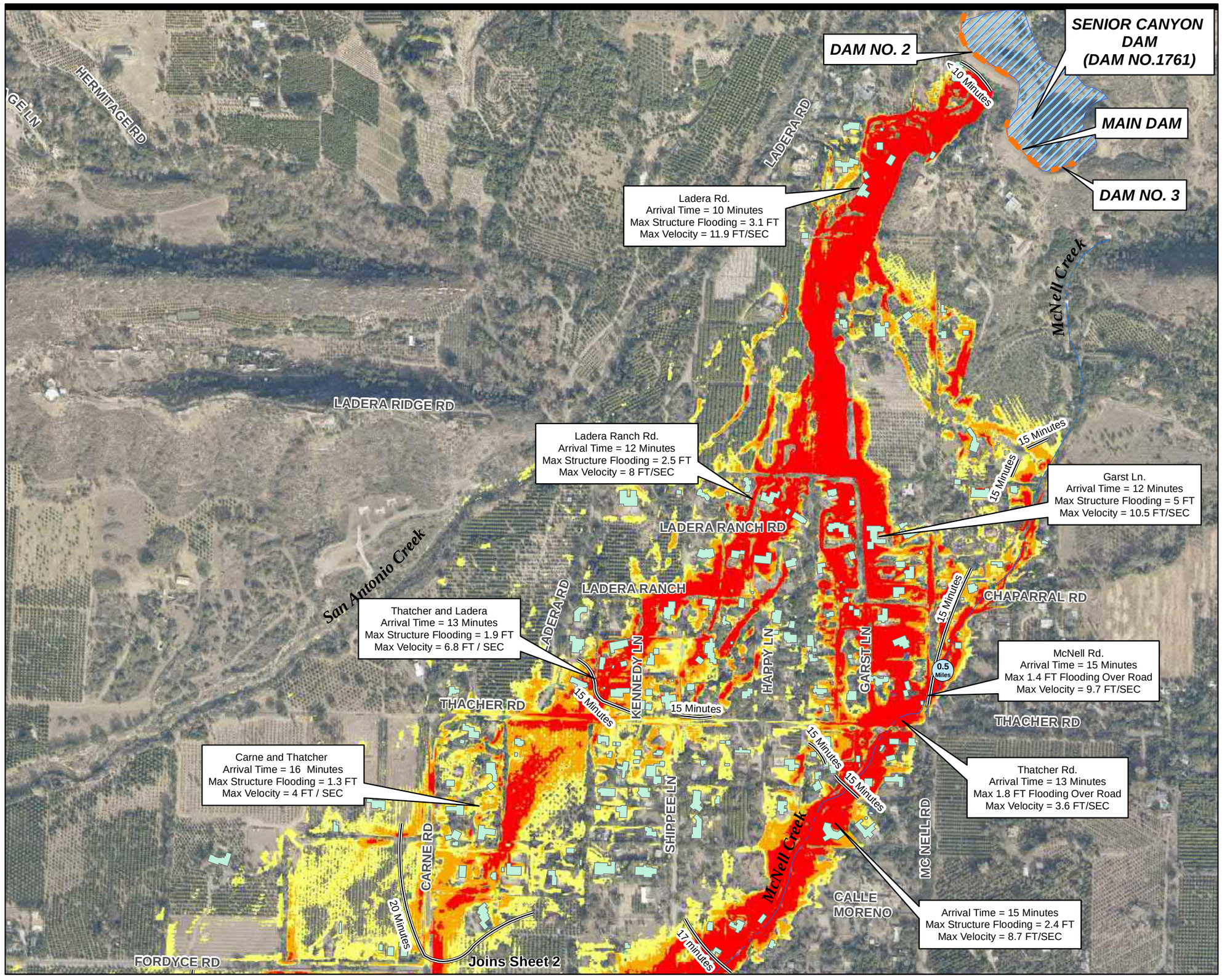
0 250 500 750 Feet

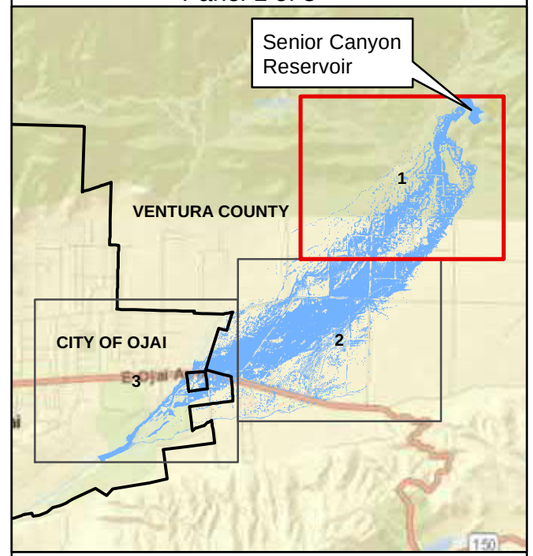
1 inch = 500 feet

VENTURA COUNTY UNICORPORATED AREAS
City of Ojai
GRAND AV
DEL PRADO CT
PASEO DEL ROBLES CT
WILLIAMS PL
PARK RD
DROWN AV
LOS ALAMOS DR
SAN GABRIEL ST
SAN RAFAEL ST
SHADY LN
ORIOLE ST
GOLDEN WEST AV
ANITA A V
SUNNYGLEN AV
GREGORY ST
ALLEY
ALISO ST
WAITE ST
E MATILIJA ST
N FULTON ST
San Antonio Creek
30 Minutes
2.5 Miles
McNell Creek
OAK GLEN AV
S SHADY LN
FAIRWAY LN
BOARDMAN RD
E OJAI AV
40 Minutes
Joins Sheet 2
BALD ST
OLIVE MILL LN
S FULTON ST
BRYANT PL
BRYANT ST
FOX ST
POPE LN
BRYANT CI
3 Miles
Thatcher Creek
SOU LE PARK DR
50 Minutes
DOWSTREAM LIMIT OF STUDY
FLOODING CONTAINED
IN SAN ANTONIO CREEK
Arrival Time = 50 Minutes
Max Depth = 5 FT
Max Velocity = 6.9 FT/SEC
E Ojai Rd
Arrival TIme = 33 Minutes
Max Structure Flooding = 1.1 FT
Max Velocity = 4.8 FT/SEC

# DAM No.1761- HAZARD MAP
# DAM NO. 2
# SUNNY DAY FAILURE

Panel 1 of 3




## EXPLANATION

- Mile Markers
- Dam
- Arrival Time Marker
- Stream Centerline
- Lake/Reservoir
- Inundated Structures
- Corporate Limits

**Flood Severity**

**Depth x Velocity (ft^2/sec)**

- Lowest Risk: 0 - 0.2
- Low: 0.2 - 2.2
- Moderate: 2.2 - 5.4
- High: > 5.4

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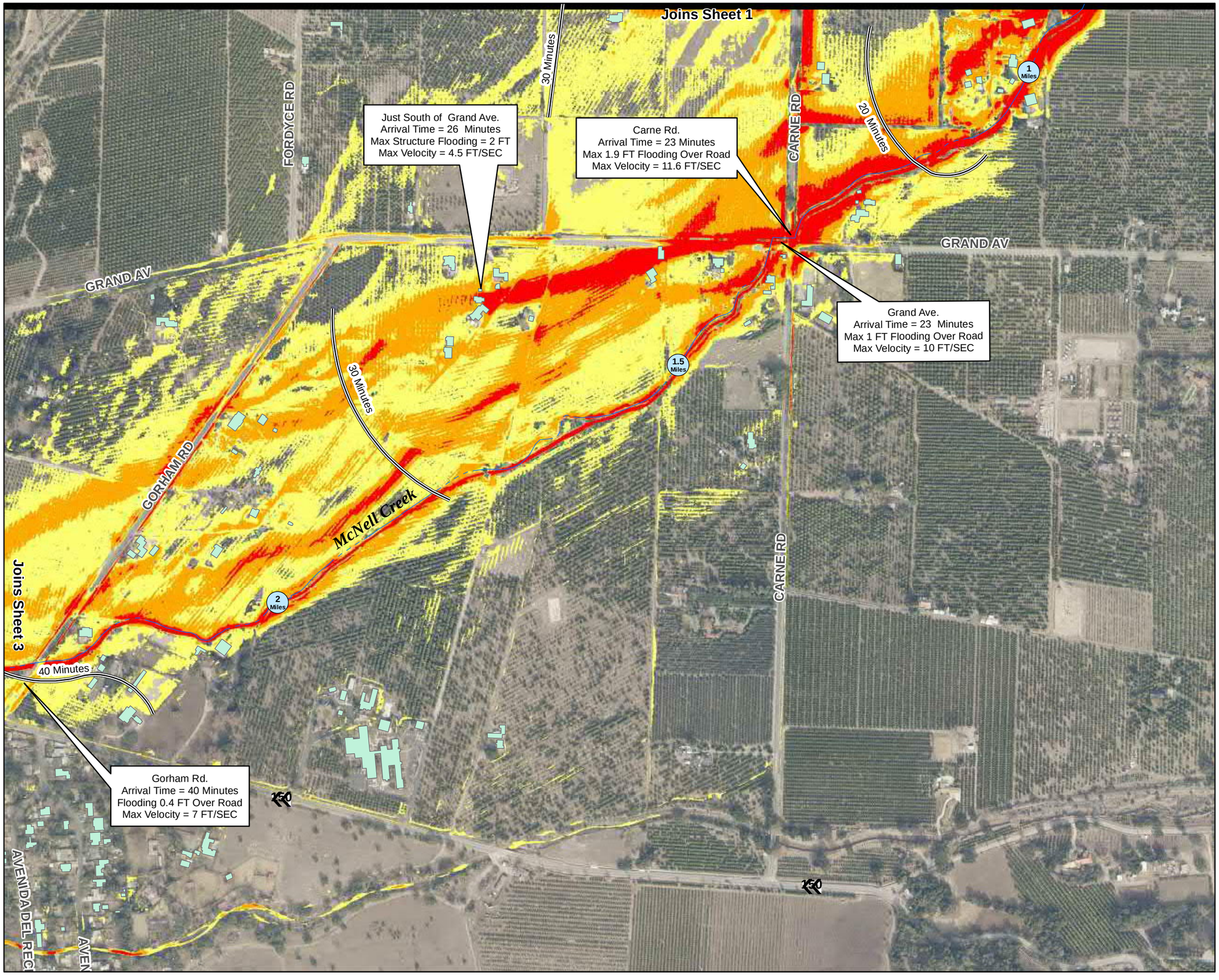
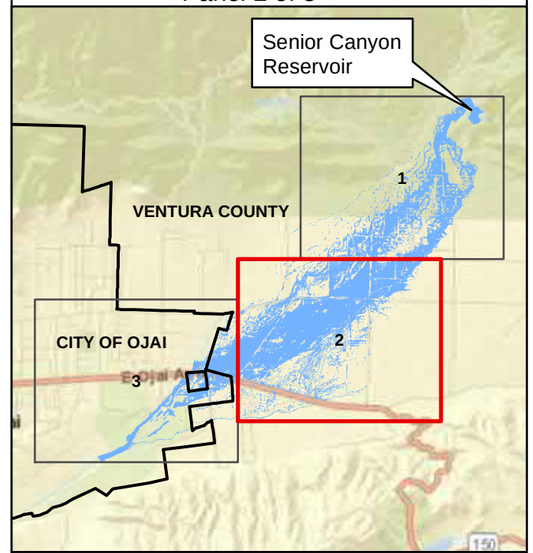
0 250 500 750 Feet

1 inch = 500 feet

# DAM No.1761-
# HAZARD MAP
# DAM NO. 2
# SUNNY DAY FAILURE

Panel 2 of 3




## EXPLANATION

- 1 miles — Mile Markers
- Dam
- Arrival Time Marker
- Stream Centerline
- Lake/Reservoir
- Inundated Structures
- Corporate Limits

**Flood Severity**

**Depth x Velocity (ft^2/sec)**

- Lowest Risk: 0 - 0.2
- Low: 0.2 - 2.2
- Moderate: 2.2 - 5.4
- High: > 5.4

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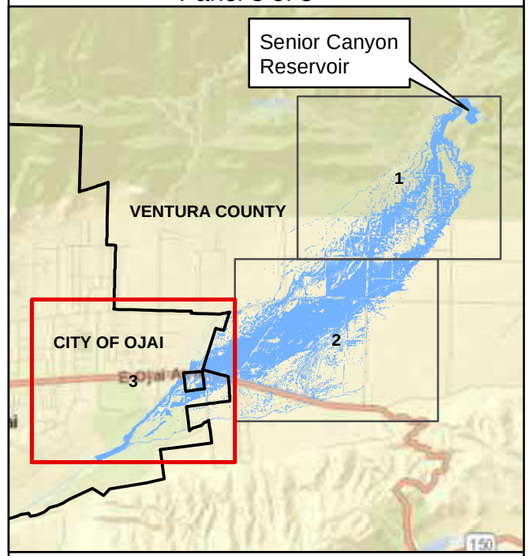
N

0 250 500 750 Feet

1 inch = 500 feet

# DAM No.1761-
# HAZARD MAP
# DAM NO. 2
# SUNNY DAY FAILURE

Panel 3 of 3




VENTURA COUNTY UNICORPORATED AREAS
City of Ojai
GRAND AV
DEL PRADO CT
PASEO DEL ROBLES CT
WILLIAMS PL
PARK RD
DROWN AV
LOS ALAMOS DR
SAN GABRIEL ST
SAN RAFAEL ST
ORIOLE ST
GOLDEN WEST AV
ANITA A V
SHADY LN
ALISO ST
WAITE ST
N FULTON ST
E MATILIJA ST
ALLEY
SUNNYGLEN AV
GREGORY ST
San Antonio Creek
City of Ojai
VENTURA COUNTY UNICORPORATED AREAS
40 Minutes
2.5 Miles
McNell Creek
OAK GLEN AV
S SHADY LN
FAIRWAY LN
BOARDMAN RD
E OJAI AV
Joins Sheet 2
FOX ST
BALD ST
OLIVE MILL LN
S FULTON ST
BRYANT PL
BRYANT ST
POPE LN
BRYANT CI
San Antonio Creek
3 Miles
Thatcher Creek
SOU LE PARK DR
City of Ojai
VENTURA COUNTY UNICORPORATED AREAS
60 Minutes

DOWSTREAM LIMIT OF STUDY
FLOODING CONTAINED
IN SAN ANTONIO CREEK
Arrival Time = 60 Minutes
Max Depth = 4 FT
Max Velocity = 6 FT/SEC

E Ojai Rd
Arrival TIme = 41 Minutes
Max Structure Flooding = 0.7 FT
Max Velocity = 2.9 FT/SEC

## EXPLANATION

- 1 miles — Mile Markers
- Dam
- Arrival Time Marker
- Stream Centerline
- Lake/Reservoir
- Inundated Structures
- Corporate Limits

**Flood Severity**

**Depth x Velocity (ft^2/sec)**

- Lowest Risk: 0 - 0.2
- Low: 0.2 - 2.2
- Moderate: 2.2 - 5.4
- High: > 5.4

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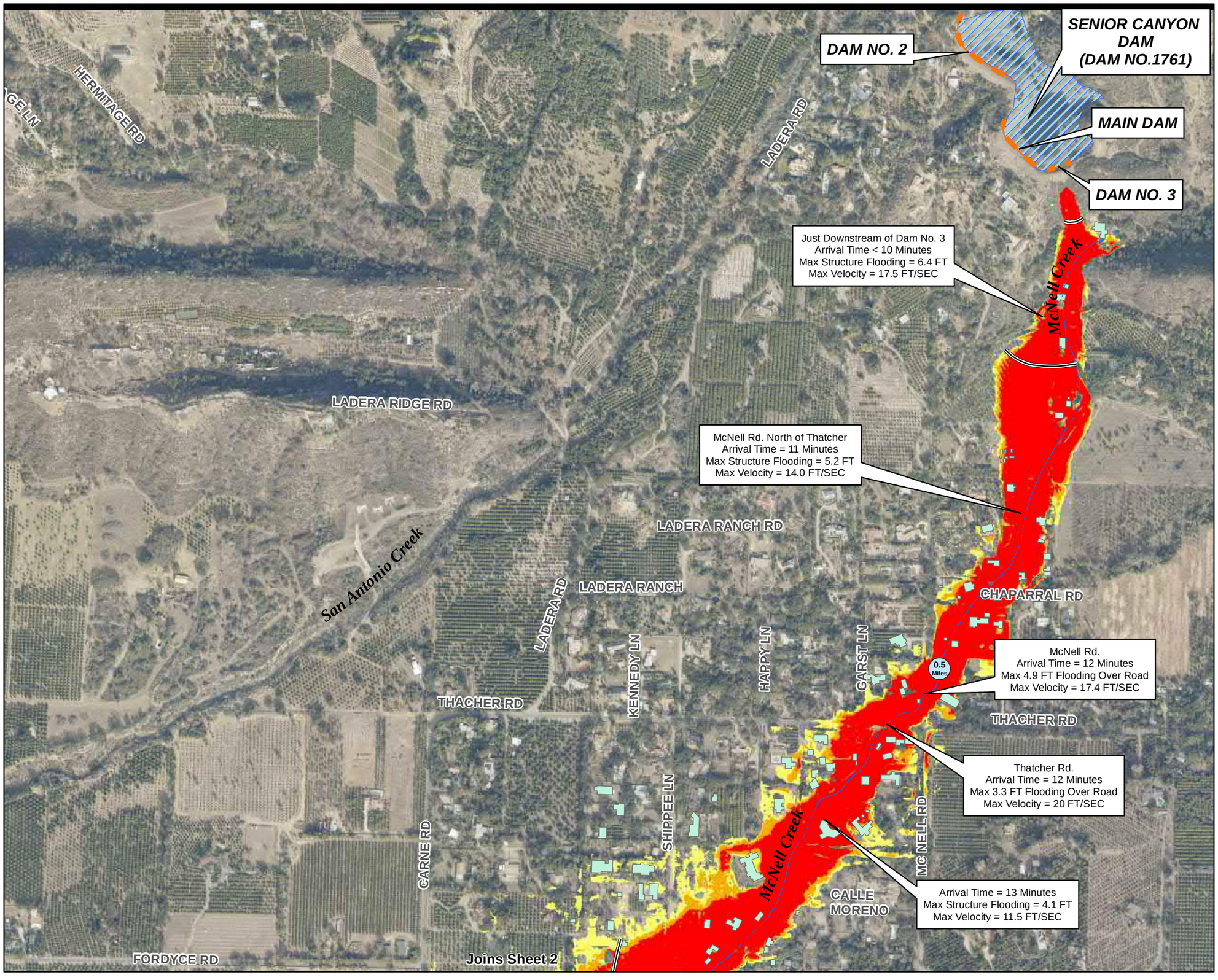
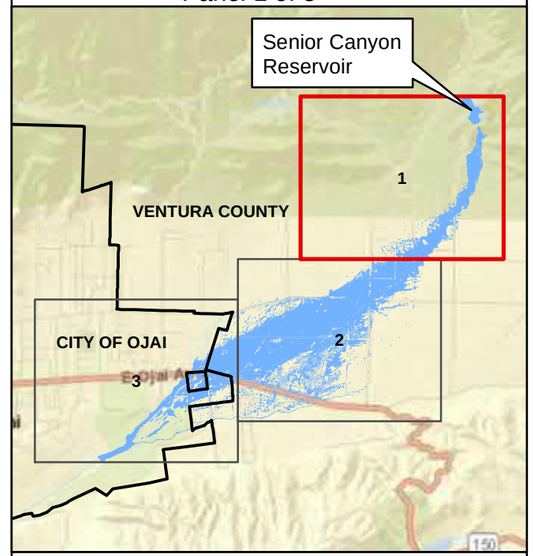
0 250 500 750 Feet

1 inch = 500 feet

# DAM No.1761-
# HAZARD MAP
# DAM NO. 3
# SUNNY DAY FAILURE

Panel 1 of 3




## EXPLANATION

- Mile Markers
- Dam
- Arrival Time Marker
- Stream Centerline
- Lake/Reservoir
- Inundated Structures
- Corporate Limits

**Flood Severity**

**Depth x Velocity (ft^2/sec)**

- Lowest Risk: 0 - 0.2
- Low: 0.2 - 2.2
- Moderate: 2.2 - 5.4
- High: > 5.4

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0 250 500 750 Feet

1 inch = 500 feet

# DAM No.1761-
# HAZARD MAP
# DAM NO. 3
# SUNNY DAY FAILURE

Panel 2 of 3

Joins Sheet 1

Joins Sheet 3

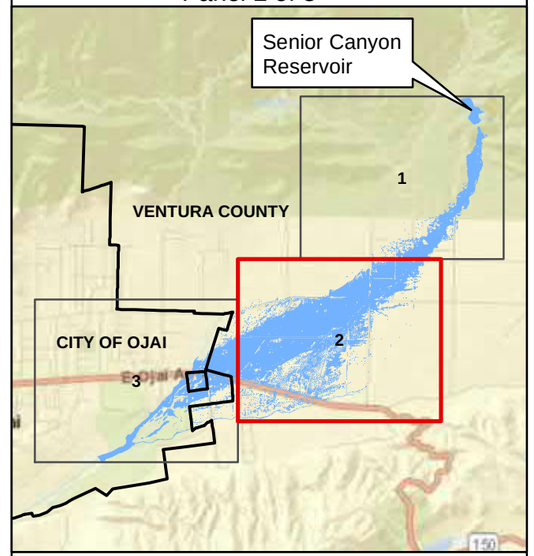
Just South of Grand Ave.
Arrival Time = 22 Minutes
Max Structure Flooding = 2.2 FT
Max Velocity = 4.4 FT/SEC

Carne Rd.
Arrival Time = 18 Minutes
Max 2.2 FT Flooding Over Road
Max Velocity = 18.2 FT/SEC

Grand Ave.
Arrival Time = 18 Minutes
Max 1.6 FT Flooding Over Road
Max Velocity = 20 FT/SEC

Gorham Rd.
Arrival Time = 31 Minutes
Flooding 0.5 FT Over Road
Max Velocity = 9 FT/SEC

FORDYCE RD
GRAND AV
CARNE RD
GORHAM RD
McNell Creek
AVENDA DEL RECO
AVEN
1 Miles
1.5 Miles
2 Miles
150




## EXPLANATION

- Mile Markers (1 miles)
- Dam
- Arrival Time Marker
- Stream Centerline
- Lake/Reservoir
- Inundated Structures
- Corporate Limits

**Flood Severity**

**Depth x Velocity (ft^2/sec)**

- Lowest Risk: 0 - 0.2
- Low: 0.2 - 2.2
- Moderate: 2.2 - 5.4
- High: > 5.4

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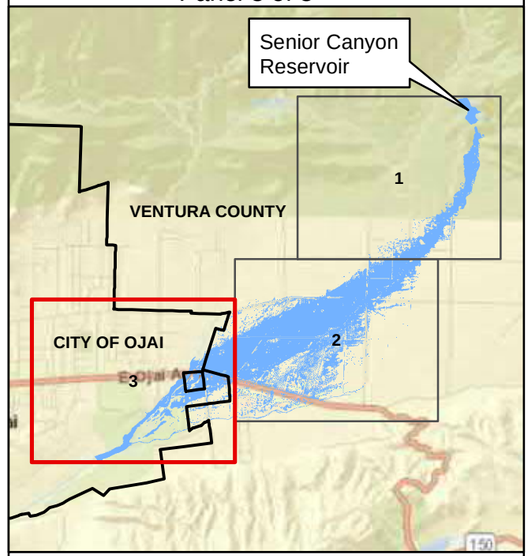
1 inch = 500 feet

# DAM No.1761-
# HAZARD MAP
# DAM NO. 3
# SUNNY DAY FAILURE

Panel 3 of 3




VENTURA COUNTY UNICORPORATED AREAS
City of Ojai
GRAND AV
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SAN GABRIEL ST
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SUNNYGLEN AV
GREGORY ST
2.5 Miles
McNell Creek
OAK GLEN AV
S SHADY LN
FAIRWAY LN
E OJAI AV
BOARDMAN RD
Joins Sheet 2
FOX ST
BALD ST
OLIVE MILL LN
S FULTON ST
BRYANT PL
BRYANT ST
POPE LN
BRYANT CI
3 Miles
San Antonio Creek
Thatcher Creek
SOU LE PARK DR
City of Ojai
VENTURA COUNTY UNICORPORATED AREAS

DOWSTREAM LIMIT OF STUDY
FLOODING CONTAINED
IN SAN ANTONIO CREEK
Arrival Time = 50 Minutes
Max Depth = 5 FT
Max Velocity = 7 FT/SEC

E Ojai Rd
Arrival TIme = 33 Minutes
Max Structure Flooding = 1.1 FT
Max Velocity = 4.9 FT/SEC

## EXPLANATION

- Mile Markers (1 miles)
- Dam
- Arrival Time Marker
- Stream Centerline
- Lake/Reservoir
- Inundated Structures
- Corporate Limits

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**Depth x Velocity (ft^2/sec)**

- Lowest Risk: 0 - 0.2
- Low: 0.2 - 2.2
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0 250 500 750 Feet

1 inch = 500 feet

# PART III: Appendices

# Appendix A: Emergency Level Determination Guidelines

This table provides example situations for different events and the emergency levels for those situations. Each dam and situation are unique, so good judgment is needed when making decisions based on the situation. For definitions of the emergency levels referenced here, see Section II (Step 2).

| Event | Example Situation | Emergency Level |
|---|---|---|
| **Earthquakes** | Sizable earthquake reported within 50 miles of the dam | Non-Failure Emergency |
| | Earthquake resulting in visible damage to dam or appurtenances | Potential Failure |
| | Earthquake resulting in uncontrolled release of water over dam or rapidly developing flow through cracks or rapidly developing erosion through increased seepage | Imminent Failure |
| **Embankment Cracking or Settlement** | New cracks in embankment greater than 1/4 inch wide without seepage | Non-Failure Emergency |
| | Cracks in the embankment with seepage | Potential Failure |
| **Embankment Movement** | Visual shallow slippage | Non-Failure Emergency |
| | Visual deep seated movement/slippage of embankment | Potential Failure |
| | Sudden or rapidly proceeding slides of embankment slope | Imminent Failure |
| **Erosion of Spillway** | Spillway flowing with active erosion gullies | Potential Failure |
| | Spillway flowing with significant erosion and head cutting advancing rapidly toward reservoir | Imminent Failure |
| **Fire** | Significant fire in the area that affects access to the dam | Non-Failure Emergency |
| **Outlet System Failure** | Releases causing erosion around outlet works | Non-Failure Emergency |
| | Uncontrolled releases through the outlet but the dam's structural integrity is still maintained | Potential Failure |
| | Uncontrolled releases through the outlet with dam failure imminent | Imminent Failure |

**Info Sheet 2 – Example Situations and Emergency Levels (Cont.)**

| Event | Example Situation | Emergency Level |
|---|---|---|
| **Sabotage or Vandalism** | Damage to dam or appurtenances with no impacts to the functioning of dam | Non-Failure Emergency |
| | Damage to dam or appurtenances that could adversely impact functioning of dam | Potential Failure |
| | Damage to dam or appurtenances resulting in uncontrolled water release or rapidly developing erosion | Imminent Failure |
| **Sand Boils** | New sand boil appears in or near dam | Non-Failure Emergency |
| | New sand boil continues to increase in size and /or is carrying soil particles | Potential Failure |
| | Sudden and rapid increases in flow through boil | Imminent Failure |
| **Security Threats** | Unauthorized personnel seen or reported to be at dam | Non-Failure Emergency |
| | Verified bomb threat that could result in damage to dam | Potential Failure |
| | Detonated bomb resulting in damage to dam or appurtenances | Imminent Failure |
| **Seepage, Springs, Piping** | New wet areas in or near dam | Non-Failure Emergency |
| | New wet areas with active flow and cloudy discharge or increasing flow rate | Potential Failure |
| | Increasing and rapidly developing seepage with cloudy discharge | Imminent Failure |
| **Sinkholes** | Observation of new sinkhole in reservoir area or on embankment | Potential Failure |
| | Rapidly enlarging sinkhole | Imminent Failure |
| **Storm Event** | Emergency Spillway is flowing, limited damage downstream, but dam is not endangered or about to overtop | High Flow Operations |
| | Spillway is flowing, causing damage downstream, potential for dam to overtop | Potential Failure |
| | Spillway is overcome and flow is going over the dam embankments | Imminent Failure |

# Appendix B: Record of EAP Revisions

| Revision # | Date | Sections Reviewed or Revisions Made | By Whom |
|---|---|---|---|
| 1 | 7/7/2021 | Appendix M, 7.13 | Peter Thielke |
| 2 | 9/13/2022 | Notification Charts, Appendix M, 7.13 | Peter Thielke |
| 3 | 6/7/2023 | Notification Charts, Appendix M | Peter Thielke |
| 4 | 8/9/2024 | Notification Charts, Appendix M, Appendix K | Peter Thielke |
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# Appendix C: Pre-scripted Messages

## C.1 Script for Emergency Notification

The following pre-scripted message is to be used as a guide for providing emergency notification for a potential dam failure and an imminent dam failure.

### Potential Failure

This is_____[your name and position]

We have an emergency condition at Senior Canyon Dam, located at the north end of McNell Road approximately 2 miles northeast of the City of Ojai.

We have activated the Emergency Action Plan for this dam and are determining this to be a **Potential Failure** condition.

We are implementing predetermined actions to respond to a rapidly developing situation that could result in dam failure.

Please prepare to evacuate the following downstream areas:

- Areas north of Thatcher Road between Carne Road and McNell Road including Chaparral Road.
- Areas between Thatcher Road and Grand Avenue between Carne Road and McNell Road.
- Areas between E Ojai Avenue and Grand avenue between Carne Road and San Antonio Creek
- Boardman Road North of Soule Park Drive.

The dam could potentially fail as early as XX:00 AM today.

Reference the inundation maps in your copy of the Emergency Action Plan.

We will advise you when the situation is resolved or if the situation gets worse.

I can be contacted at the following number: _____.

If you cannot reach me, please call the following alternative number: _____.

## Imminent Failure

This is an emergency. This is _____ [your name and position].

Senior Canyon Dam, Senior Canyon Dam, located at the north end of McNell Road approximately 2 miles northeast of the City of Ojai, is failing.

Downstream areas along McNell Creek must be evacuated immediately including:

- Areas north of Thatcher Road between Carne Road and McNell Road including Chaparral Road.
- Areas between Thatcher Road and Grand Avenue between Carne Road and McNell Road.
- Areas between E Ojai Avenue and Grand avenue between Carne Road and San Antonio Creek
- Boardman Road North of Soule Park Drive.

Repeat, Senior Canyon Dam, is failing. The downstream area areas along McNell Creek must be evacuated immediately.

We have activated the Emergency Action Plan for this dam and are determining this to be an

**Imminent Failure** condition.

Reference the inundation map in your copy of the Emergency Action Plan.

I can be contacted at the following number _____.

If you cannot reach me, please call the following alternative number: _____.

The next status report will be provided in approximately 30 minutes.

The following pre-scripted message is to be used as a guide for emergency management authorities to communicate the status of the emergency with the public:

- Attention: This is an emergency message from the Sheriff. Listen carefully. Your life may depend on immediate action.

- Senior Canyon Dam located at the north end of McNell Road approximately 2 miles northeast of the City of Ojai, is failing, is failing. Repeat. Senior Canyon Dam located at the north end of McNell Road approximately 2 miles northeast of the City of Ojai, is failing, is failing.

- If you are in or near the downstream area, proceed immediately to high ground away from McNell Creek. Do not return to your homes or workplaces to recover your possessions. You cannot outrun or drive away from the flood wave. Proceed immediately to high ground away from McNell Creek.

- Repeat message.

## C.2 Media Release Example

# MEDIA RELEASE
## DRAFT
## Imminent Failure of Senior Canyon Dam

**Ventura County, CA – *Date***

Starting at 8:00 AM this morning, the Senior Canyon Mutual Water Company's Senior Canyon Dam began experiencing a failure. A XX foot-long fissure developed in the face of the dam, causing increased uncontrolled water flows from the dam overland toward McNell Creek. District staff have notified emergency management officials and downstream agencies.

The situation is under control, but all areas below the Dam to the San Antonio have been safely evacuated. Ladera Road, Thatcher Road, McNell Road, Carne Road, Gorham Road, Grand Avenue, and Boardman Rd are closed. Please stay out of the area until further notice.

Senior Canyon Dam is located at the north end of McNell Road approximately 1 mile north of the intersection of McNell Road and Grand Avenue, about 2 miles northeast of the City of Ojai. It impounds a maximum of 103 acre-feet of water and serves as an water supply reservoir.

# Appendix D: Contact Log

| | | | |
|---|---|---|---|
| **Dam Name: Senior Canyon Dam** | | **Date:** | |
| **NID #: CA01019** | **DSOD Dam #: 1761** | | **FERC #: N/A** |
| **DSOD Region: South** | | **County: Ventura** | |
| **Emergency Level:** | | **Incident/Exercise:** | |
| After determining the emergency level, immediately contact the following agencies/entities. The person making the contact should initial and record the time of the call and who was contacted at each agency/entity. | | | |
| **Agency/Entity** | **Person Contacted** | **Contact Time** | **Contacted By** |
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# Appendix E: Emergency Incident Log

| | |
|---|---|
| Name: | Job Title: |
| Incident Start Date: | Incident Start Time: |
| Incident Description: | |
| Initial Incident Level: | |
| Incident Detection: | |
| When did you detect or learn about the incident? | |
| How did you detect or learn about the incident? | |

LOG ALL NOTIFICATION AND ACTIVITY IN THE TABLE BELOW

| Date | Time | Action/Incident Progression | Action Taken By |
|---|---|---|---|
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# Appendix F: Remedial Actions

This Appendix provides examples of possible remediation actions.

| Event | Possible Remediation Actions |
|---|---|
| **Earthquakes** | Inspect dam and evaluate the damage sustained and the potential danger of failure. Check for seepage, cracks, displacements, and settlement. Inspect outlet works and spillways. Evaluate instrumentation. |
| **Embankment Cracking or Settlement** | Lower the water level by releasing it through outlet or by pumping or siphoning. If necessary, restore freeboard. Lower water level in reservoir to a safe level; continue operating at a reduced level until repairs can be made. |
| **Embankment Movement** | Lower water level in the reservoir by opening all gates and valves at a rate and to an elevation that is considered safe given slide condition. If outlet is damaged or blocked, pumping or siphoning may be required. |
| **Erosion of Spillway** | Provide temporary protection at the point of erosion by placing sandbags, riprap materials, or plastic sheets weighted with sandbags. Consider pumps and siphons to help reduce the water level in the reservoir. When inflow subsides, lower the water level in the reservoir to a safe level; continue operating at a lower water level to minimize spillway flow. |
| **Fire** | Implement fire procedures (if applicable). |
| **Abnormal Instrumentation Reading** | Conduct daily inspections of the dam. Check and record reservoir elevation, rate at which reservoir is rising, weather conditions (past, current, forecasted), discharge conditions of creeks/rivers downstream, and new or changed conditions associated with this event. Evaluate accuracy of instrumentation. |
| **Outlet System Failure** | Shut off water diversion inflows. Implement temporary measures to protect the damaged structure, such as closing the inlet. Lower the water level in the reservoir to a safe elevation, possibly by using pumps or siphons. Consider the severity of flow through outlet and increased flows in determining emergency level. |

## Info Sheet 7 – Possible Remediation Actions (Cont.)

| Event | Possible Remediation Actions |
|---|---|
| **Sabotage or Vandalism** | Contact law enforcement to help evaluate the situation. If embankment or spillway has been damaged, provide temporary protection in damaged area. Lower water in reservoir by using outlet or pumps and siphons if necessary. If water supply has been contaminated, immediately close all inlets to water supply system and notify appropriate authorities. |
| **Sand Boils** | Determine location and size of affected area. Estimate discharge rate and nature of discharge (cloudy or clear seepage). Provide temporary protection at point of erosion by placing sandbags around boil area to confine flow. If necessary, lower water level in reservoir to a safe level until permanent repairs can be made. |
| **Security Threats** | Contact law enforcement. |
| **Seepage, Springs, Piping** | If the leak originates from within the reservoir or the upstream embankment, plug the flow with available material such as hay bales, bentonite, or plastic sheeting. Lower water level in the reservoir until flow decreases to a non-erosive velocity or until it stops. Place an inverted filter (a protective sand and gravel filter) over the exit area to hold materials in place. Continue lowering the water level until a safe elevation is reached; continue operating at a reduced level until repairs are made. Stabilize damaged areas on the downstream slope by weighting the toe area below the slide with additional soil, rock, or gravel. |
| **Sinkholes** | Conduct an immediate engineering exploration to determine cause of sinkhole, and to evaluate damage sustained and potential for failure. Determine exit point of flowing water. Implement temporary measures to protect damaged structure, such as closing inlet and lowering water level in reservoir to a safe level until permanent repairs can be made. |
| **Storm Event** | Conduct daily inspections of dam. Check and record the reservoir elevation, rate at which reservoir is rising, weather conditions (past, current, forecasted), discharge conditions of creeks/rivers downstream, and new or changed conditions associated with this event. If heavy spillway flows are expected to cause downstream damage even though the dam is not in danger, take appropriate emergency action for downstream facilities and people. |

# Appendix G: Emergency Resources

| Heavy Equipment Service and Rental | Sand and Gravel Supply | Ready-Mix Concrete Supply |
|---|---|---|
| ***Primary*** | | |
| **Greg Rents** | **Greg Rents** | **State Ready Mix** |
| 420 N Ventura Ave, Oak View, CA 93022 | 420 N Ventura Ave, Oak View, CA 93022 | 3127 Los Angeles Ave, Oxnard, CA 93036 |
| (805) 649-2590 | (805) 649-2590 | (805) 647-2817 |
| ***Secondary*** | | |
| **Sunbelt Rentals** | **Ojai Lumber Company** | **Cemex** |
| 320 W Stanley Avenue, Ventura, CA 93001 | 1900 E. Ojai Avenue, Ojai, CA 93023 | 1430 Santa Clara St, Santa Paula, CA 93060 |
| (805) 643-0996 | (805) 646-1419 | (855) 292-8453 |

| Pumps | Sand Bags | Road Maintenance |
|---|---|---|
| ***Primary*** | | |
| **Rain for Rent** | **Greg Rents** | **Travis Ag Construction** |
| 333 S 12th St, Santa Paula, CA 93060 | 420 N Ventura Ave, Oak View, CA 93022 | 10435 Telegraph Rd, Ventura, CA 93004 |
| (805) 525-3306 | (805) 649-2590 | (805) 647-7211 |
| ***Secondary*** | | |
| **Greg Rents** | **Ojai Lumber Company** | **Toro Enterprises Inc.** |
| 420 N Ventura Ave, Oak View, CA 93022 | 1900 E. Ojai Avenue, Ojai, CA 93023 | 2101 Ventura Blvd, Oxnard, CA 93036 |
| (805) 649-2590 | (805) 646-1419 | (805) 483-4515 |

# Appendix H: Emergency Termination Log

| | |
|---|---|
| Dam Name: Senior Canyon Dam | County: Ventura County |
| Dam Location:<br>Latitude: 34.4723 N Longitude: 119.1958 W | Stream/River: McNell Creek |
| Date/Time: | |
| Weather Conditions: | |
| General Description of Emergency Situation: | |
| Area(s) of Dam Affected: | |
| Extent of Damage to Dam and Possible Causes: | |
| Effect on Dam Operation: | |
| Initial Reservoir Elevation/Time:<br>Maximum Reservoir Elevation/Time:<br>Final Reservoir Elevation/Time: | |
| Description of Area Flooded Downstream/Damage/Loss of Life: | |
| Justification for Termination of Dam Safety Emergency: | |
| Other Data and Comments: | |
| Report Prepared By (Printed Name and Signature):<br>Date: | |

# Appendix I: After Action Report

**Background**

**Event Details**
Type of Event:
Location:
Incident Period:
Brief Description of Event:

**Response Activities**

**Summary of Successes**

**Summary of Recommended Improvements**

**Organizations Contributing to this Report**

# Appendix J: Cal OES Warning Center Dam Incident Report

## DAM INCIDENT – CALIFORNIA STATE WARNING CENTER

| | | | |
|---|---|---|---|
| **EVENT TYPE:** | ☐ **DRILL** ☐ **ACTUAL EVENT** | | |
| **DATE:** | | **TIME:** | |
| **CALLER INFORMATION** | | | |
| **NAME/AGENCY:** | | **PHONE #:** | |
| **ALTERNATE CONTACT:** | | **PHONE #:** | |
| **DAM INFORMATION** | | | |
| **DAM NAME: Senior Canyon Dam** | | **DSOD DAM #: 1761** | **FERC: N/A** |
| **DSOD HAZARD CLASSIFICATION: High Hazard** | | | |
| **LOCATION OF DAM** | | | |
| **DSOD REGION:** | ☐ **NORTHERN** ☐ **CENTRAL** ☒ **SOUTHERN** | | |
| **PHYSICAL ADDRESS:** | | | |
| **LATITUDE:** 34.4723 N | | **LONGITUDE:** 119.1958 W | |
| **COUNTY: Ventura County** | | **DOWNSTREAM JURISDICTIONS: Ventura County** | |
| **NEAREST CITY OR POPULATED AREA: City of Ojai** | | | |
| **NEAREST OR AFFECTED HIGHWAY OR CROSS ROADS: Thatcher Rd & Mc Nell Rd** | | | |
| **RIVER OR CREEK THAT FLOWS INTO RESERVOIR: N/A** | | | |
| **SITUATION** | | | |
| **ACTIVATION OF EAP:** | ☐ Yes ☐ No | | |
| **EMERGENCY LEVEL:** | ☐ High Flow ☐ Non-Failure ☐ Potential Failure ☐ Imminent Failure | | |
| **EMERGENCY TYPE:** | | | |
| ☐ Earthquake<br>☐ Embankment Cracking or Settlement<br>☐ Embankment Movement<br>☐ Erosion of Spillway<br>☐ Instrumentation Reading (Abnormal) | ☐ Outlet System Failure<br>☐ Sabotage/Vandalism<br>☐ Sand Boils<br>☐ Security Threats<br>☐ Seepage, Springs, Piping | ☐ Sinkholes<br>☐ Storm Event<br>☐ Other: List Below | |
| **OTHER:** | | | |
| **RESERVOIR LEVEL:** | ☐ Full ☐ Partially Full ☐ Empty | | |
| | **Approximate % Full (Acre-Feet):** | | |
| **WHEN/HOW EVENT WAS DETECTED:** | | | |

| | |
|---|---|
| **OBSERVER IN POSITION:** | ☐ Yes ☐ No |
| **ADDITIONAL DETAILS:** | |

| **REPORTING PERSON NOTIFICATION** | | |
|---|---|---|
| | YES | NO |
| **Was the County Sheriff Notified by Reporting Person?** | | |
| **Were Downstream Jurisdictions Notified by Reporting Person?** | | |

# Appendix K: Signature Page

The following people participated in the planning process for the Emergency Action Plan for Name of Dam:

| Name | Title/Organization | Signature | Date |
|---|---|---|---|
| Bill Boyd | Emergency Manager<br>Office of Emergency Services<br>VCSO | Email Confirmation | |
| Chief Gary Monday | Ventura County Fire Department Battalion Chief | Email Confirmation | |
| James Brotherton | National Weather Service | Email Confirmation | |
| Ashley Moran, PE | California Division of Safety of Dams | Email Confirmation | |
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# Appendix L: EAP Status Report

## EAP Status Report for Senior Canyon Dam, DSOD No. 1761

**Annual EAP Review Performed**: July 16, 2024

**Annual Update Sent to Plan Holders**: August 12, 2024

**Annual Notification Exercise:** July 16, 2024

**Prepared by:** Jim Jackson, President, SCMWC
805.630.1094

Mail this document to the Cal OES Dam Safety Planning Division:

Division Chief
Dam Safety Planning Division
3650 Schriever Avenue
Mather, CA 95655

OR to send it electronically to the Division at eap@caloes.ca.gov.

# Appendix M: Record of Plan Holders

| Copy Number | Organization | Person Receiving Copy | Email | Phone |
|---|---|---|---|---|
| 1 | Ventura County Sherriff Office OES | Bill Boyd | Bill.Boyd@ventura.org | Office: (805) 648-9299<br>Cell: (805) 947-9021 |
| 2 | Ventura County Fire Department Battalion Chief | Duty Chief Joseph Williams | Joseph.Williams@ventura.org<br>fccsupervisor@ventura.org | 24hr FCC Non-emergency dispatch: (805) 388-4279 |
| 3 | National Weather Service | James Brotherton | James.brotherton@noaa.gov | Office: (805) 988-6623<br>(Emergency line)<br>(805) 988-6619 |
| 4 | California Division of Safety of Dams | Cameron Lancaster | Cameron.Lancaster@water.ca.gov | (916) 296-0187 (cell)<br>(916) 565-7830 (office) |
| 5 | California OES | Division Chief | eap@calOES.ca.gov | (916) 845-8911 |
| 6 | California Department of Water Resources Flood Operations Center | Wendy Francis | Warning.center@oes.ca.gov | (916) 574-2619<br>(24/7 Emergency Hotline) |
| 7 | California State Warning Center | Warning.center@oes.ca.gov | | |
| 8 | SCMWC | Peter Thielke | peter.@SeniorCanyonWater.com | Phone: (805) 798-2971 |

**Note:** Use Notification Flow Charts in Section 3 for emergency notifications.