



Arizona Public Service Company  
CCR Program  
Environmental Policy & Programs

PO Box 53999  
Mail Station 9303  
Phoenix, AZ 85072-3999

Telephone: 602-250-1000

December 20, 2022

**CCR Program Documentation  
CH\_EAPMeeting\_020\_20221207**

Subject: EAP – Documentation of Annual Exercise – Cholla

This document serves as Notification of an annual face-to-face meeting or exercise between representatives of APS and local emergency response agencies as required by 40 CFR 257.73(a)(3)(i)(E). The exercise was coordinated with and by the local emergency response agency with jurisdiction, and as described in the Emergency Action Plan.

Attendees:

Participants:

Brent Young (facilitated) Cholla Fire Chief, Incident Commander  
Matthew Click, Cholla Planner  
Brian Gardner, Safety Consultant  
Sam Nelson, Supervisor of Engineering  
Pam Norris, Environmental Section Leader  
Cody Miller, Environmental Sr Scientist  
Catrina Jenkins (Navajo County LEPC)

**From:** [Norris, Pamela J](#)  
**To:** [Miller, Cody L](#); [Zito, Lori](#)  
**Cc:** [Young, Brent S](#)  
**Subject:** Cholla Emergency Action Plan Dam Drill  
**Date:** Wednesday, December 7, 2022 2:42:25 PM  
**Attachments:** [image001.png](#)

Attendance for Emergency Action Plan Dam Drill:  
Catrina Jenkins, Navajo County LEPC  
Brent Young, APS Fire Chief  
Sam Nelson, Engineering Supervisor (EAP Coordinator)  
Matthew Click, Cholla Planning  
Brian Gardner, Cholla Safety Consultant  
Cody Miller, Cholla Environmental Scientist  
Pam Norris, Cholla Environmental Section Leader

Cholla Dam Breach Table Top

30:06

Take control Pop out People Chat Reactions Apps More Camera Mic Share Leave (Ctrl+Shift+H)

CM Miller, Cody L MC Click, Matthew R BY Young, Brent S Gardner, Brian CJ Catrina Jenkins SN Nelson, Sa... PN

**Conclusion:**

- > What is the trigger point to transition to the next level?
- > Who are you going to call?

Proprietary

26 of 26

Young, Brent S

**Participants**

Invite someone or dial a number

Share invite

In this meeting (7) Mute all

- PN Norris, Pamela J
- CJ Catrina Jenkins External
- MC Click, Matthew R
- Gardner, Brian
- CM Miller, Cody L
- SN Nelson, Samuel
- BY Young, Brent S Organizer

Others invited (5)

- MH Hancock, Michael V Tentative
- DW Wood, Dustin L No response
- Caldwell, Aaron D Declined

Thank you,

Pam

Environmental Section Leader – Coal Generation  
Cholla and Four Corners Power Plants




# Emergency Action Plan for Cholla Power Plant Dams

Dec. 7, 2022



# Scenario for Drill

- It has been raining continuously for the last 7 days.
  - Both the Fly Ash and Bottom Ash ponds are at full capacity.
  - There is a seismic event that causes both the Bottom Ash and Fly Ash ponds to fail.
- 

# Three types of alerts

- 1. **Green** Alert
- 2. **Yellow** Alert
- 
- 3. **Red** Alert

# Definition of a GREEN Alert

- Significant new or increased seepage or sand boils downstream from the embankment.
- Pond level is **RAPIDLY falling** without apparent cause.
- New, or slowly increasing seepage rates transporting some sediment and/or unusual discoloration (higher turbidity readings) of seepage.
- New cracks or cracks significantly increasing in length, width, or offset.
- **Cracking is the beginning of a large slide.**
- Large deformations or slides Potential for breach of impoundment.

# Green Alert

- Is a **slow** evolving event.
- Something unusual is happening.
- There is the **potential** for impoundment breach.
- Current conditions are not **serious but** could progress into a potential impoundment failure if it continues or intensifies.

# Level Green Notification

## GREEN ALERT CONTACT TELEPHONE NUMBERS APS RESPONSIBILITY FOR CALLING

Switchyard	Scott Richey 928-587-4082
APS Management and Plant Personnel	7711
Arizona Department of Public Safety (DPS) - Emergency Operations Command (EOC)	602-223-2212
DPS - Highway Patrol - Holbrook (District 3)	928-773-3700
Navajo County Sherriff's Department Dispatch	928-524-4050
Burlington Northern Santa Fe. - Dispatcher	1-800-795-2673
Navajo County Department of Emergency Management	Catrina Jenkins 928-524-4163 Rhonda Krouse 928-414-1962 Kym O'Farrell 928-414-1310
Arizona Department of Water Resources - Dam Safety Program	Waleed Aboshanp..... 602-771-8418 (office) 480-388-9560 (cell) Ravi Murthy..... 602-771-8656 (office) 602-692-5162 (cell)



# Definition of a YELLOW Alert

- **RAPIDLY** increasing seepage and or movement of large quantities of material.
- Sinkholes or settlement **RAPIDLY** increasing in size and number.
- Whirlpool or other signs of the pond draining **RAPIDLY**.
- **Cracks with flow through them.**
- Large deformations and breach of impoundment.

# Level Yellow Alert

## ➤ **Rapidly Developing Situation**

- Conditions are serious (more than a GREEN condition).
- Notify 24-hour operating staff. (**Unit #3 Control Room**)
- The condition is becoming unstable.
- Initiate Level YELLOW notifications
- Populations at risk **SHOULD** be notified to stand by, prepare to leave, and await further instructions.
- Evacuations in low-lying areas may be required.

# Level Yellow Notification

YELLOW ALERT CONTACT TELEPHONE NUMBERS		CALLING	APS RESPONSIBILITY FOR
Navajo County System Dispatch			9-1-1
Switchyard			Scott Richey 928-587-4082
APS Management and Plant personnel			7711
Hunt Families (Dennis and Boyce)			Dennis - 928-288-3274 Boyce - 928-288-3620 Tony - 928-288-3230
Jack Rabbit			
Arizona Department of Water Resources - Dam Safety Program			Waleed Aboshanp....602-771-8418 (office) 480-388-9560 (cell) Ravi Murthy....602-771-8656 (office) 602-692-5162 (cell)
Arizona Department of Environmental Quality - APP			602-771-2330
Environmental Protection Agency - Region 9			415-947-4400
YELLOW ALERT CONTACT PHONE NUMBERS		FOR CALLING	9-1-1 SYSTEM DISPATCH RESPONSIBILITY
DPS - Highway Patrol - Holbrook (District 3)			928-773-3700
DPS - Emergency Operations Command (EOC)			602-223-2212
Navajo County Sherriff's Department Dispatch			928-524-4050
Burlington Northern Santa Fe (BNSF) - Dispatcher (Railroad)			1-800-795-2673
Navajo County Department of Emergency Management and Preparedness			Catrina Jenkins 928-524-4163 Kym O'Farrell 928-414-1310 Rhonda Krouse 928-414-1962

# Definition of a Red Alert

## ➤ **FAILURE IS IMMINENT**

It has been determined that the (\_\_\_\_\_) WILL FAIL, IS OCCURRING, OR HAS OCCURRED; LIFE THREATENING FLOOD WATERS HAVE BEEN OR WILL BE RELEASED.

Life threatening releases will affect populations at risk.

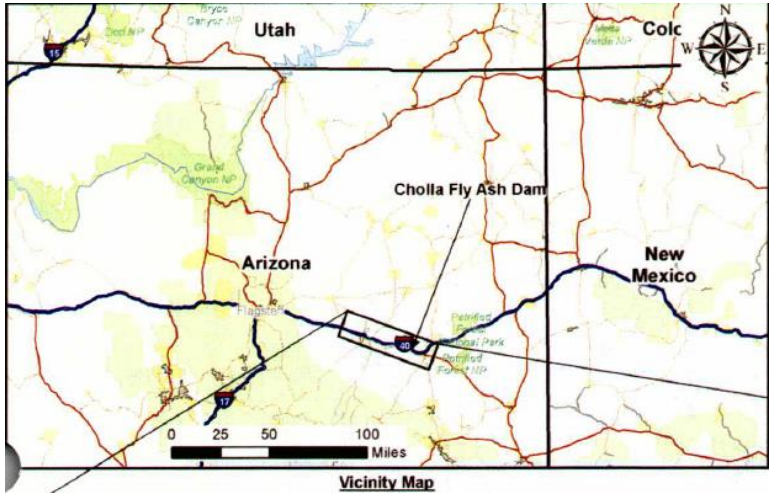
Immediate evacuation of populations at risk is necessary.

Initiate Level RED notifications

# Red Level Notification

RED ALERT CONTACT TELEPHONE NUMBERS		APS RESPONSIBILITY FOR CALLING
Navajo County System Dispatch		928-524-4050
APS Switchyard		Scott Richey 928-587-4082
APS Management and Plant personnel		7711
Hunt Families (Dennis and Boyce)		Dennis - 928-288-3274 Boyce - 928-288-3620 Tony- 928-288-3230
Jack Rabbit		
Arizona Department of Water Resources - Dam Safety Program		Waleed Aboshanp....602-771-8418 (office) 480-388-9560 (cell) Ravi Murthy....602-771-8656 (office) 602-692-5162 (cell)
Arizona Department of Environmental Quality - APP		602-771-2330
Environmental Protection Agency - Region 9		415-947-4400
RED ALERT CONTACT PHONE NUMBERS		9-1-1 SYSTEM DISPATCH RESPONSIBILITY
FOR CALLING		
DPS - Highway Patrol - Holbrook (District 3)		928-773-3700
DPS - Emergency Operations Command (EOC)		602-223-2212
Navajo County Sheriff's Department Dispatch		928-524-4050
Burlington Northern Santa Fe (BNSF) - Dispatcher (Railroad)		1-800-795-2673
Navajo County Department of Emergency Management and Preparedness		Catrina Jenkins 928-524-4163 Kym O'Farrell 928-414-1310 Rhonda Krouse 928-414-1962

# Flood Inundation Map Index



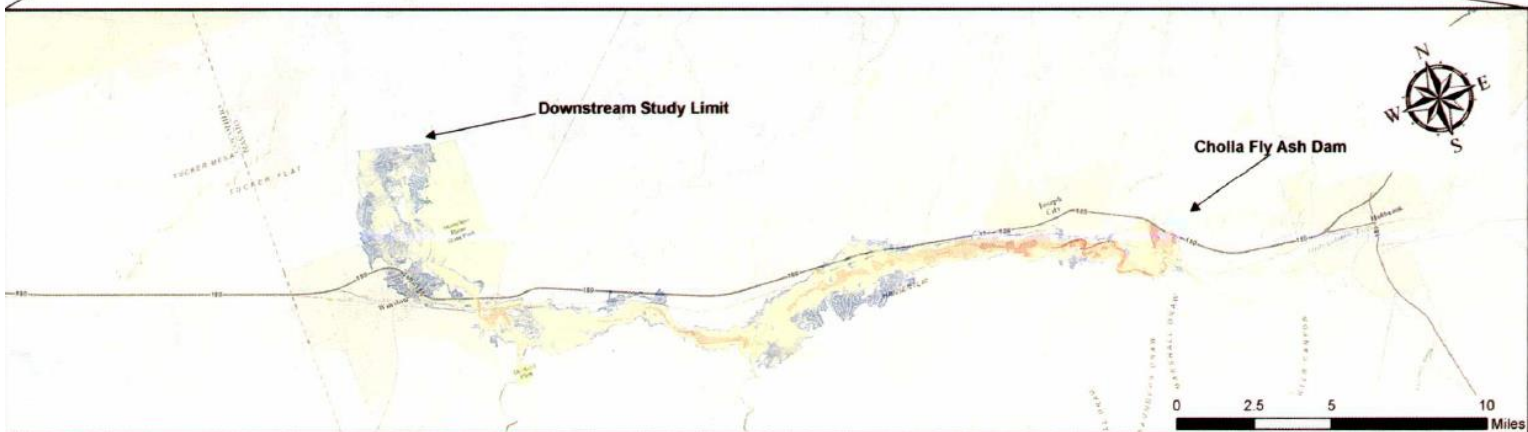
## Cholla Fly Ash Dam Flood Inundation Map Index

Prepared For:  
Arizona Public Service Co.

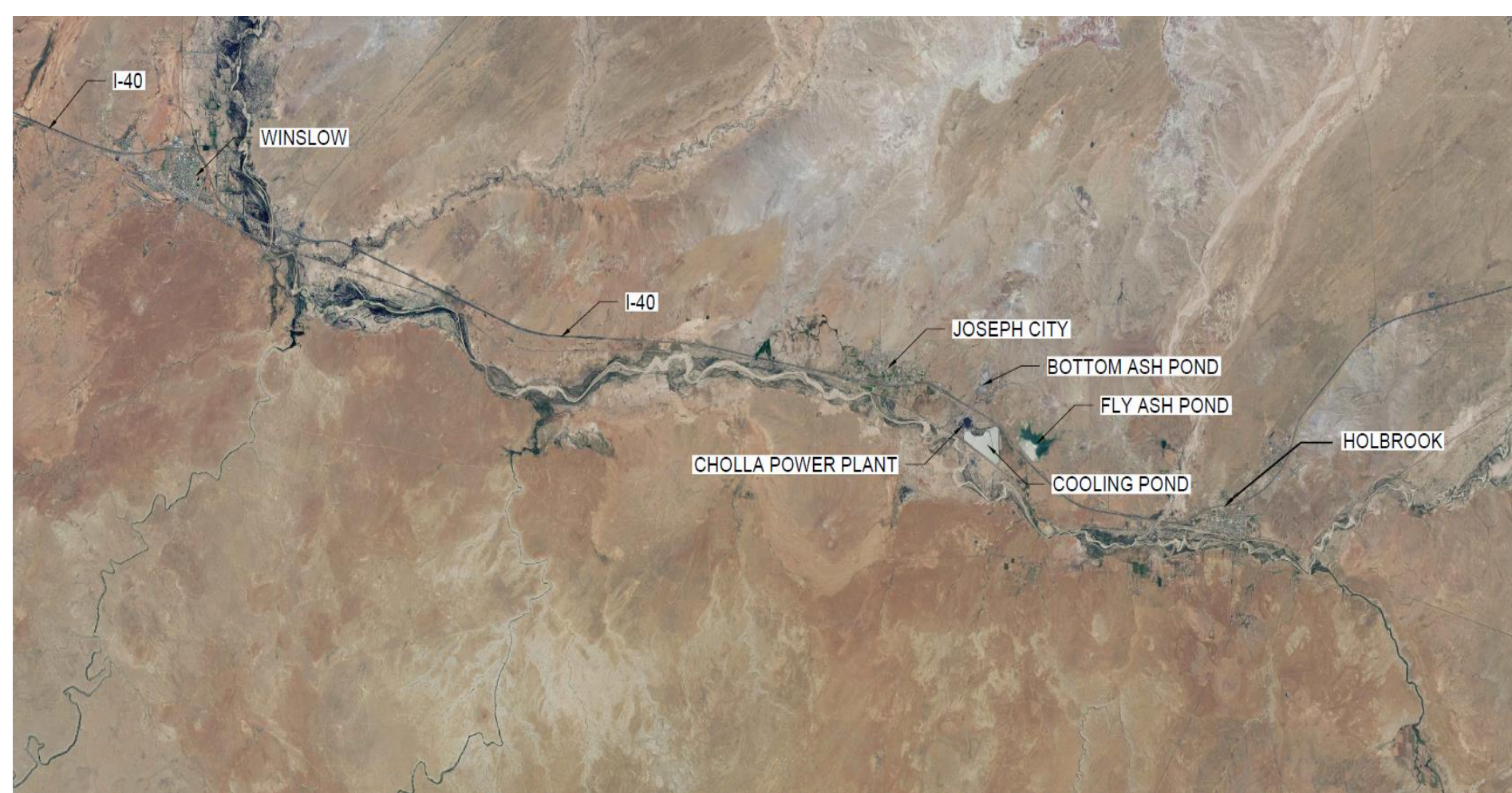
Prepared By:

**AECOM**

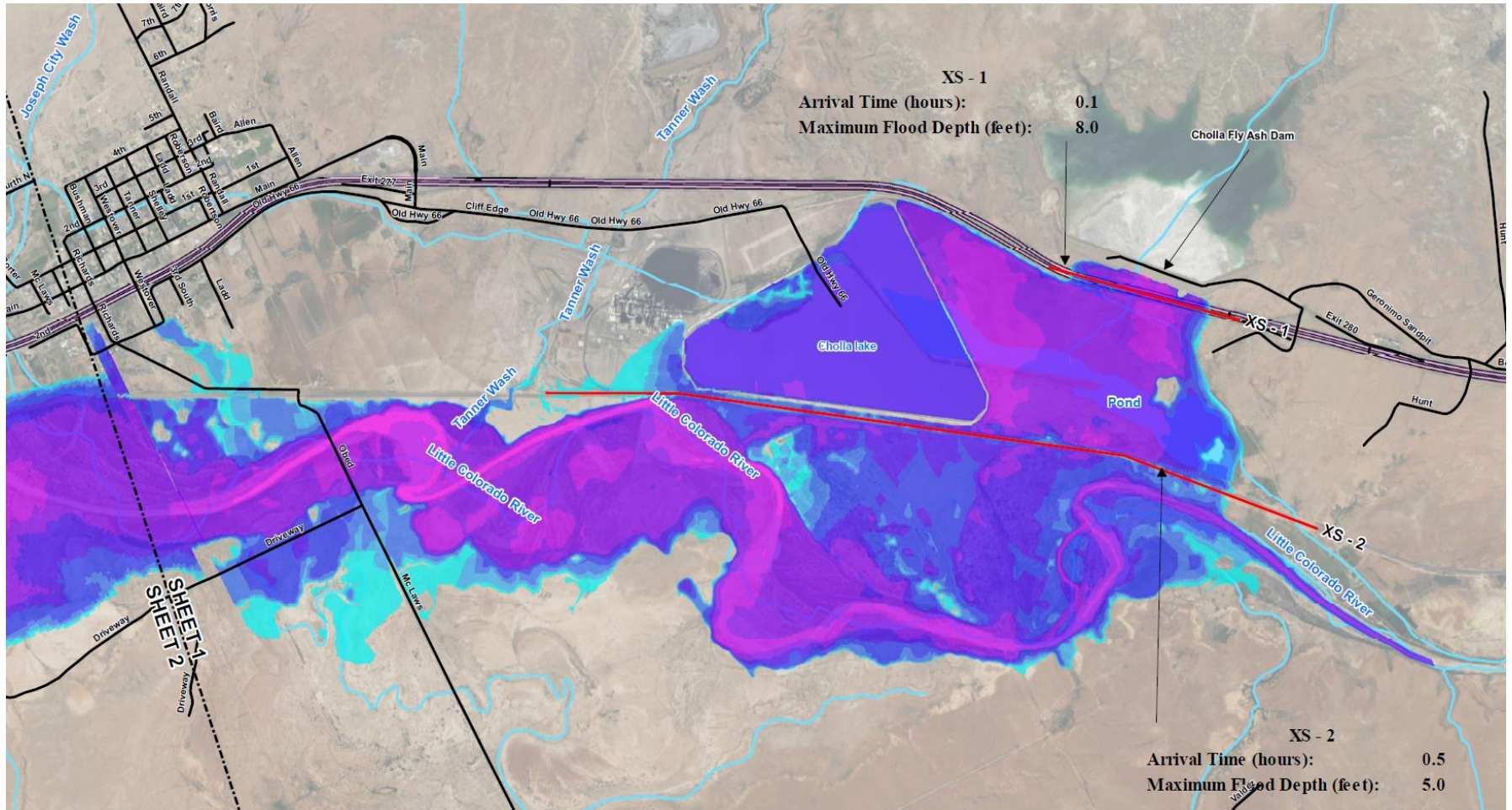
March 2017



# Map of effected area



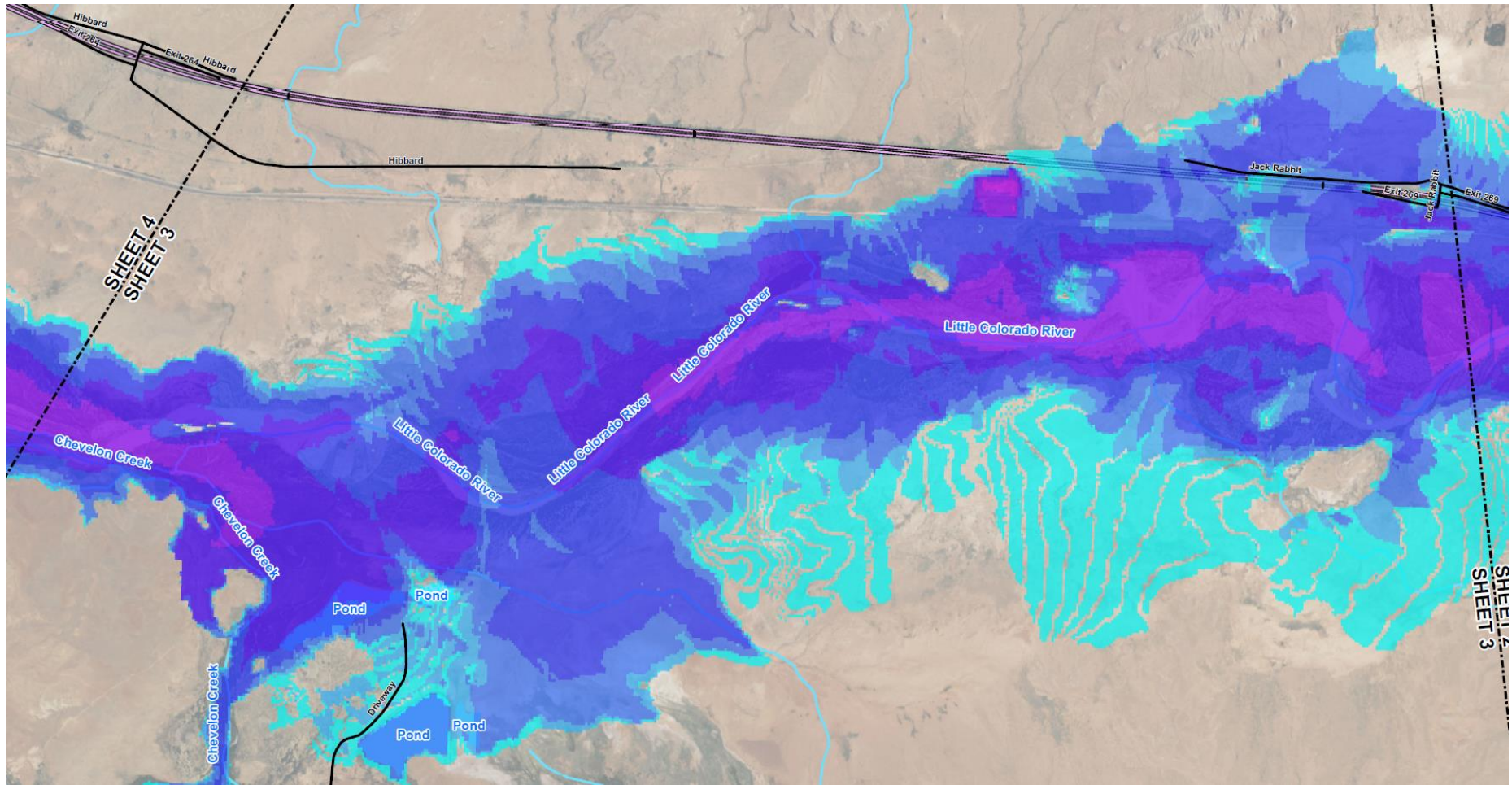
# 6 to 30 minutes after breach



MAP LEGEND	
<p>Maximum Flood Depth (feet)</p>	<ul style="list-style-type: none"> <li> Major Highways</li> <li> Matchline</li> <li> Drainageways</li> <li> Local Roads</li> <li> Cross Sections</li> </ul>
<p><b>AECOM</b></p> <p>0 1,000 2,000 4,000            Feet</p>	





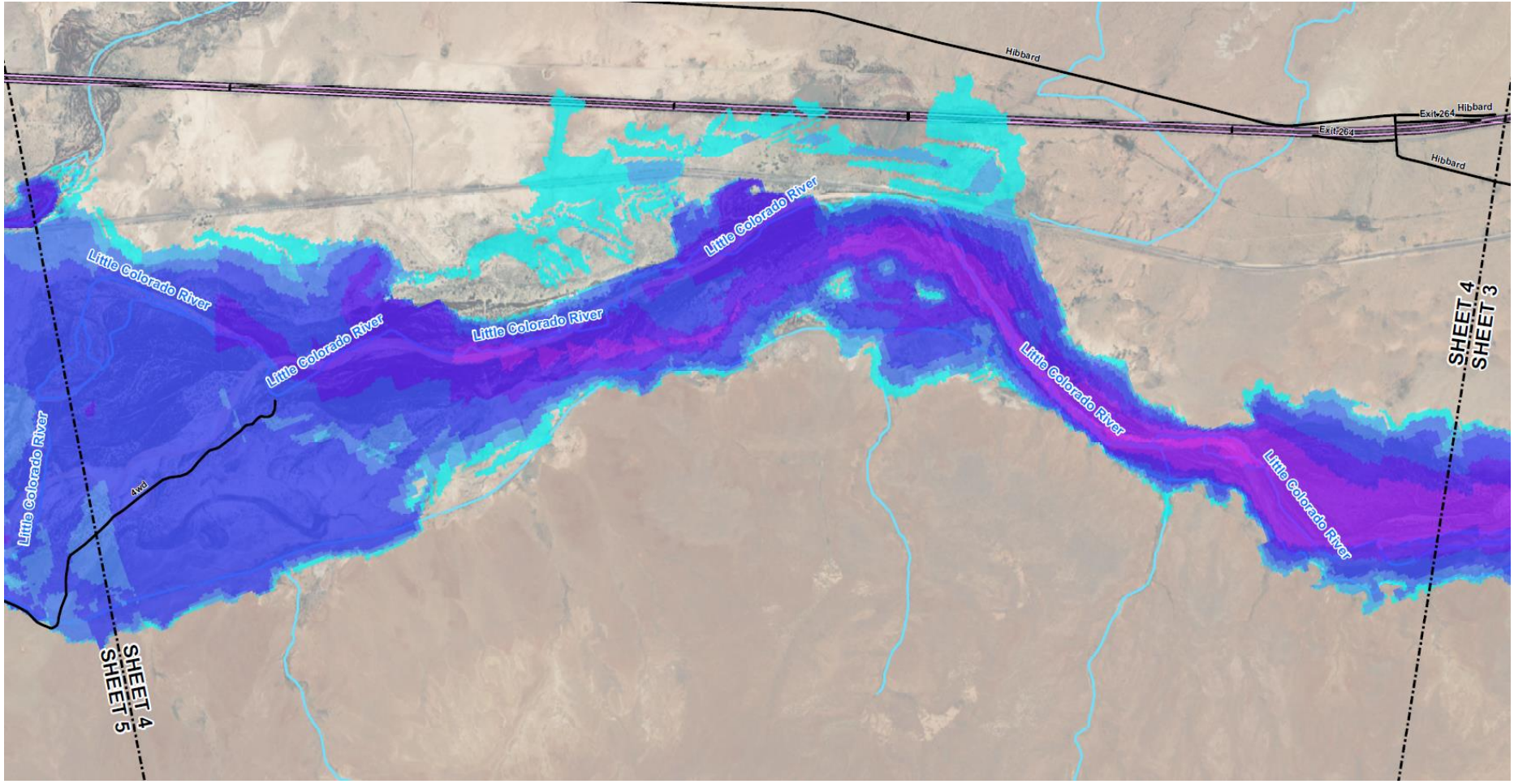


**MAP LEGEND**  
Maximum Flood Depth (feet)



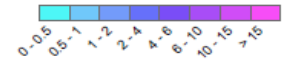
- Major Highways
- Matchline
- Drainageways
- Local Roads
- Cross Sections





**MAP LEGEND**

Maximum Flood Depth (feet)



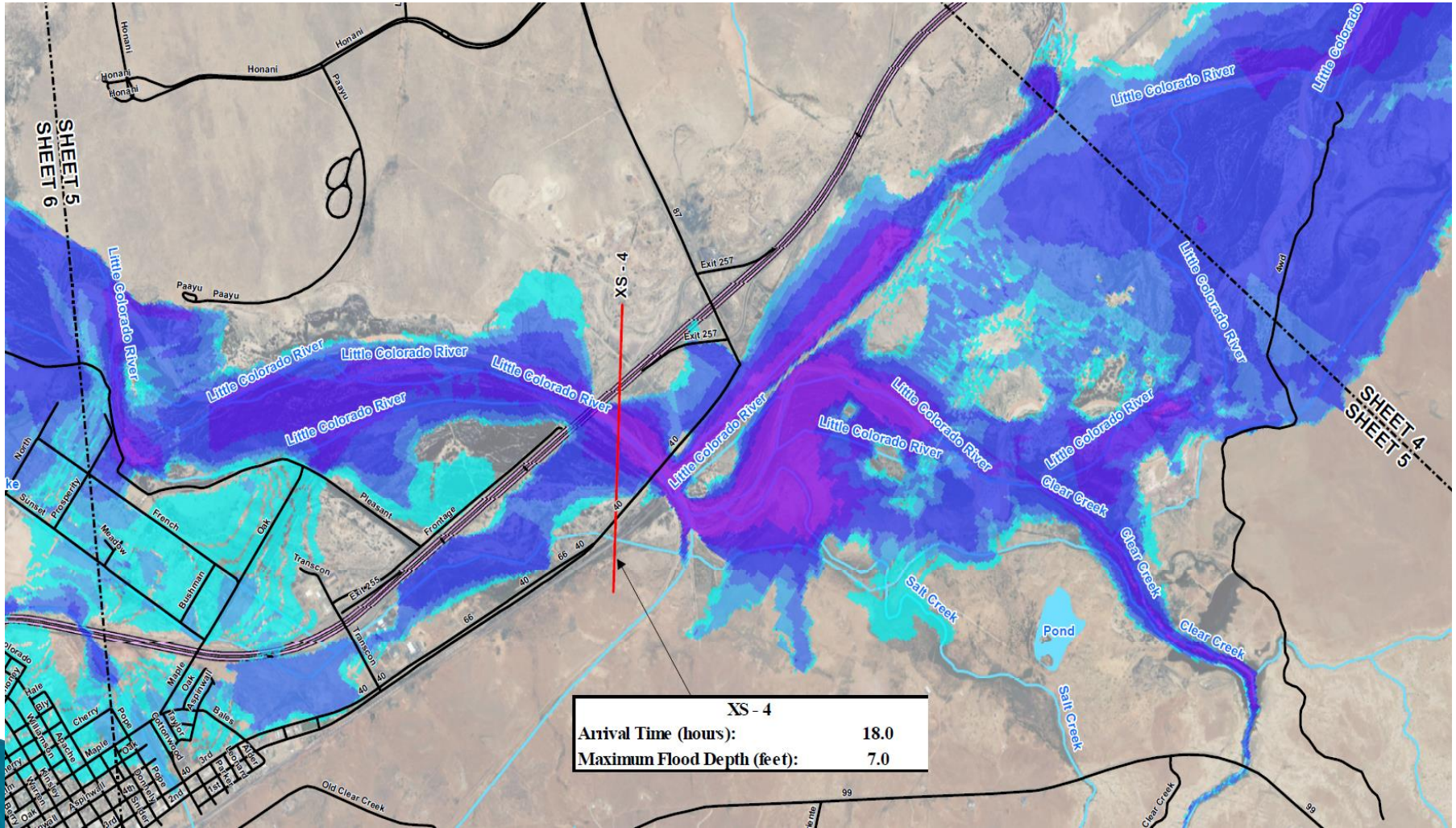
- Major Highways
- Matchline
- Drainageways
- Local Roads
- Cross Sections

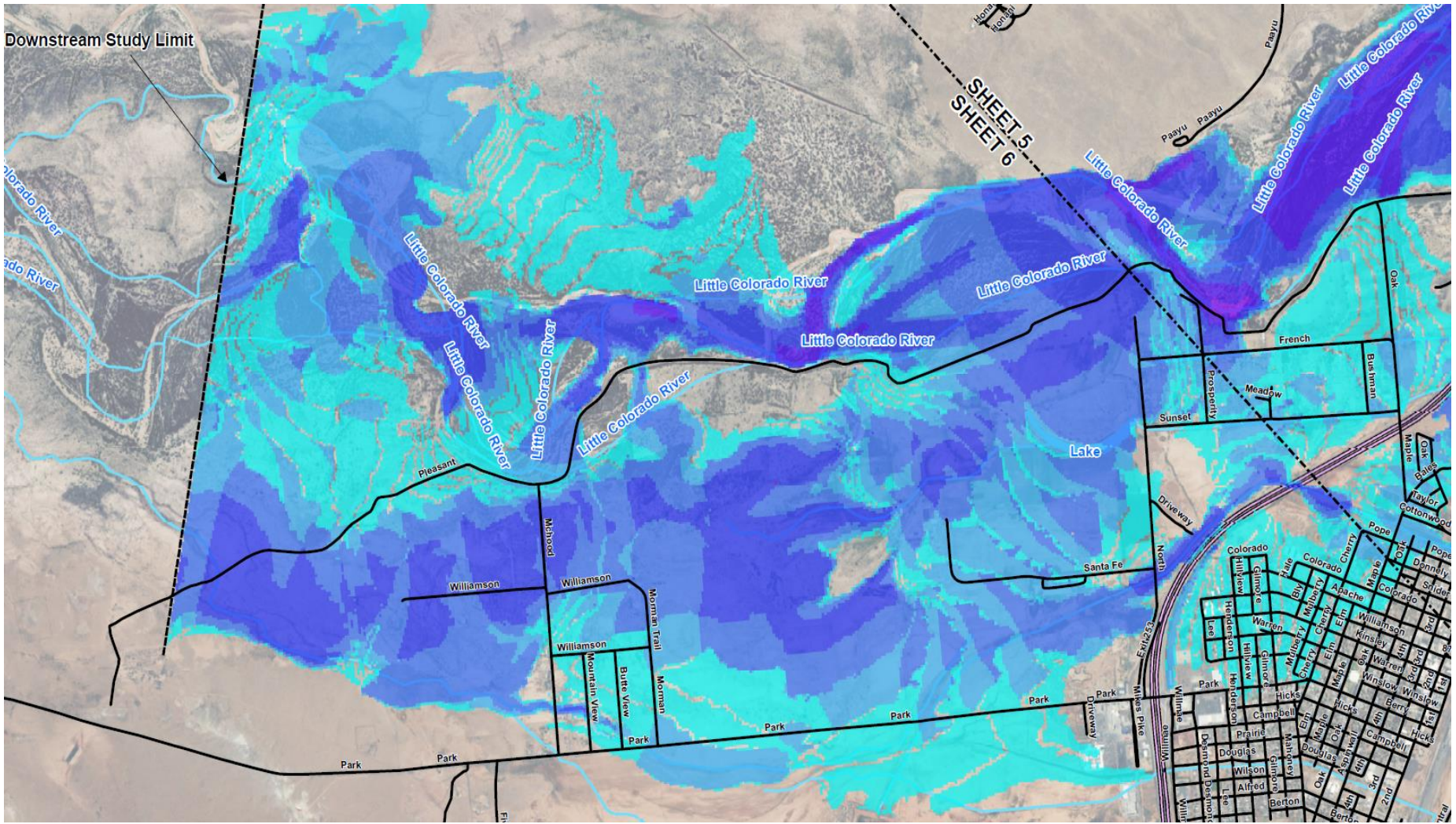


**AECOM**

0 1,000 2,000 4,000 Feet

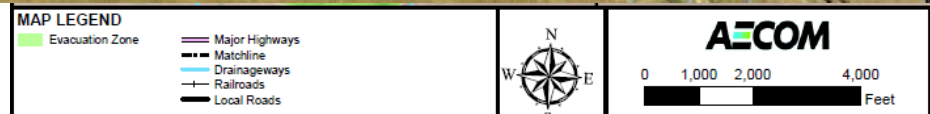
# 18.0 hours after beach





MAP LEGEND			
Maximum Flood Depth (feet)		Major Highways Matchline Drainageways Local Roads Cross Sections	
0-0.5	0.5-1		
1-2	2-4		
4-6	6-10		
10-15	>15		

# Evacuation Area (Page 1)



# Evacuation Area (Page 2)

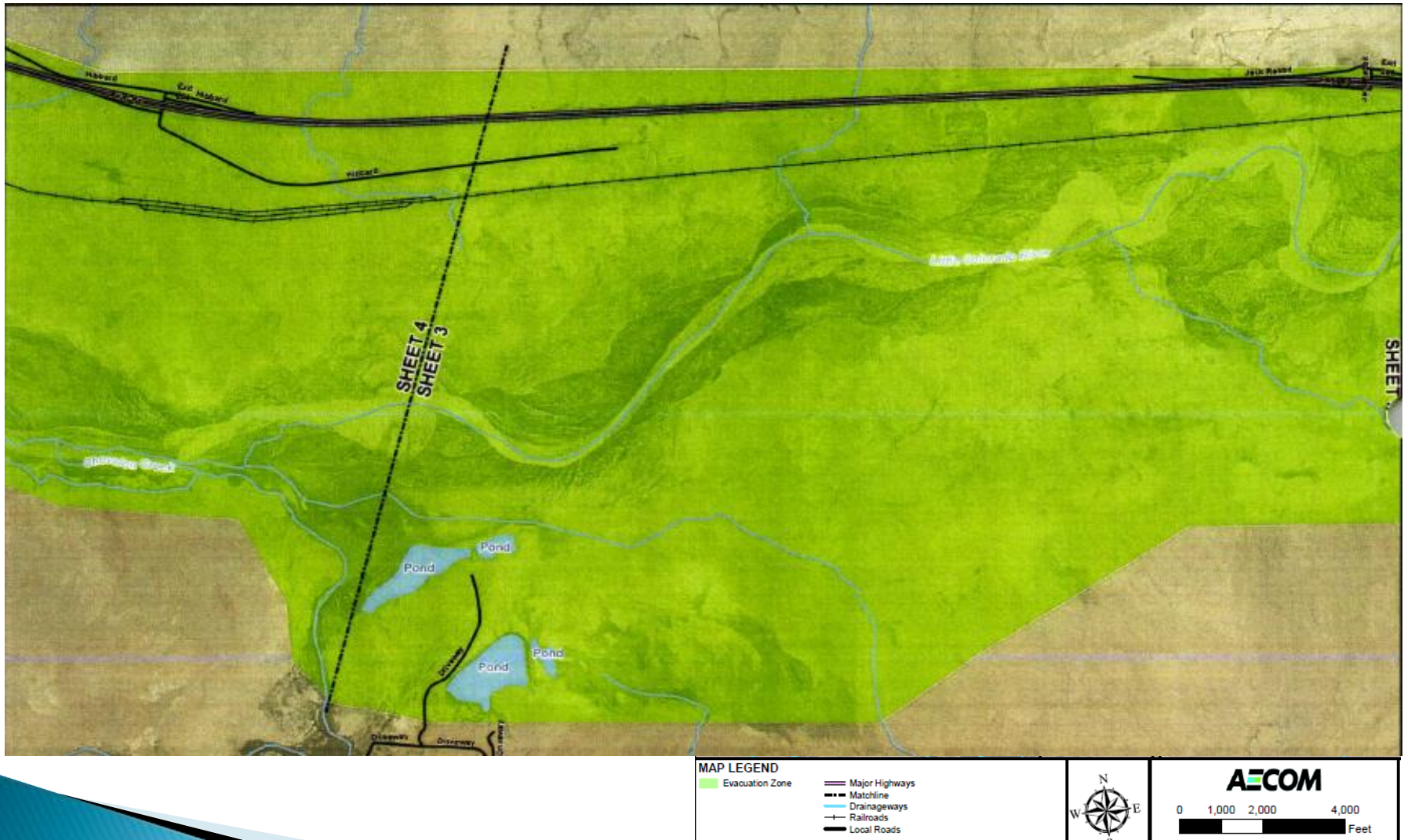


<b>MAP LEGEND</b>	
Evacuation Zone	Major Highways
Matchline	Drainageways
Railroads	Local Roads

W N E

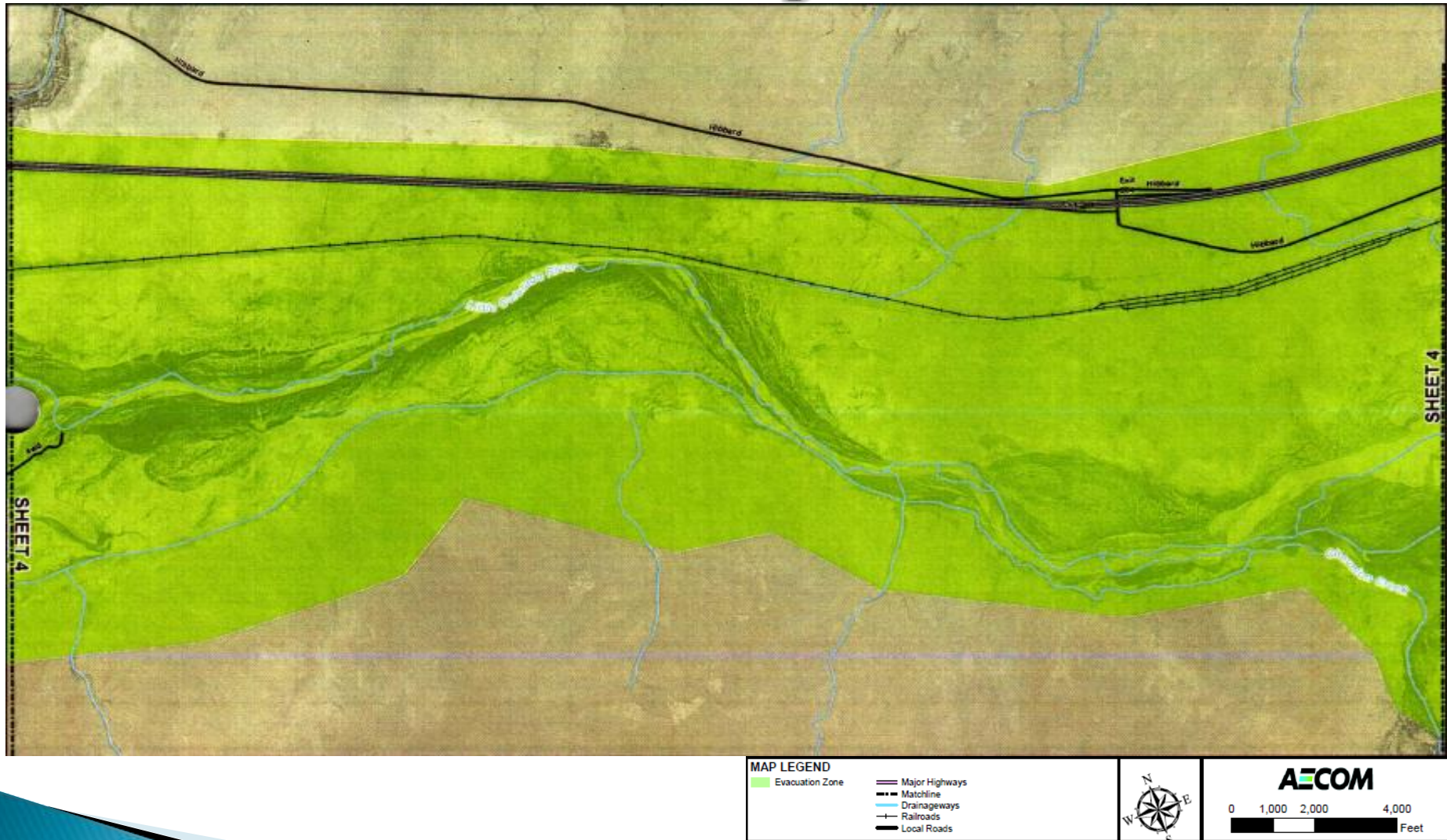
**AECOM**  
0 1,000 2,000 4,000 Feet

# Evacuation Area (Page 3)





# Evacuation Area (Page 4)



# Evacuation Area (Page 5)



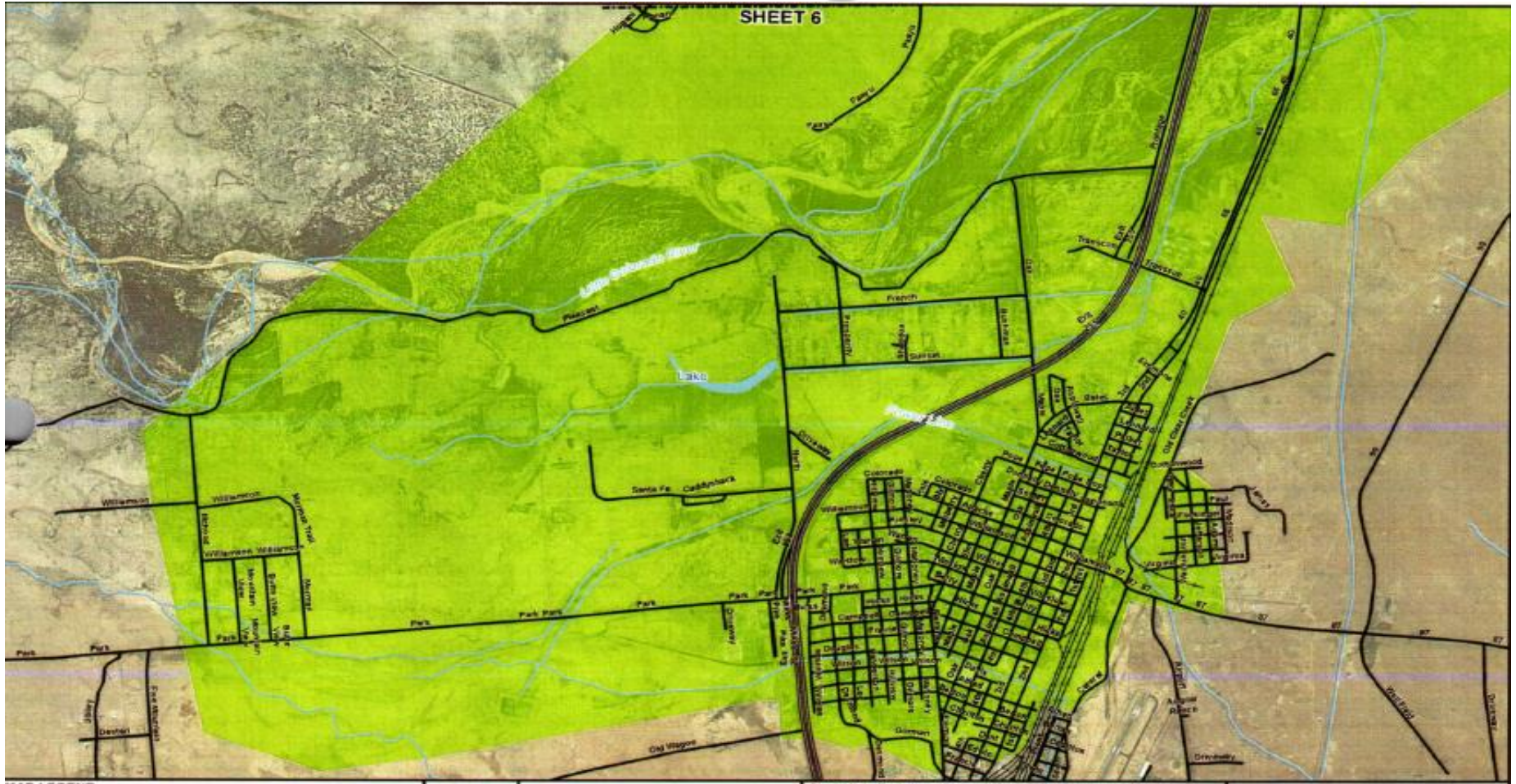
<b>MAP LEGEND</b>	
Evacuation Zone	Major Highways
Matchline	Drainageways
Railroads	Local Roads



**AECOM**

0 1,000 2,000 4,000 Feet

# Evacuation Area (Page 6)



<b>MAP LEGEND</b>	
Evacuation Zone	Major Highways
Matchline	Drainageways
Railroads	Local Roads

**AECOM**

# Conclusion:

- What is the trigger point to transition to the next level?
- Who are you going to call?