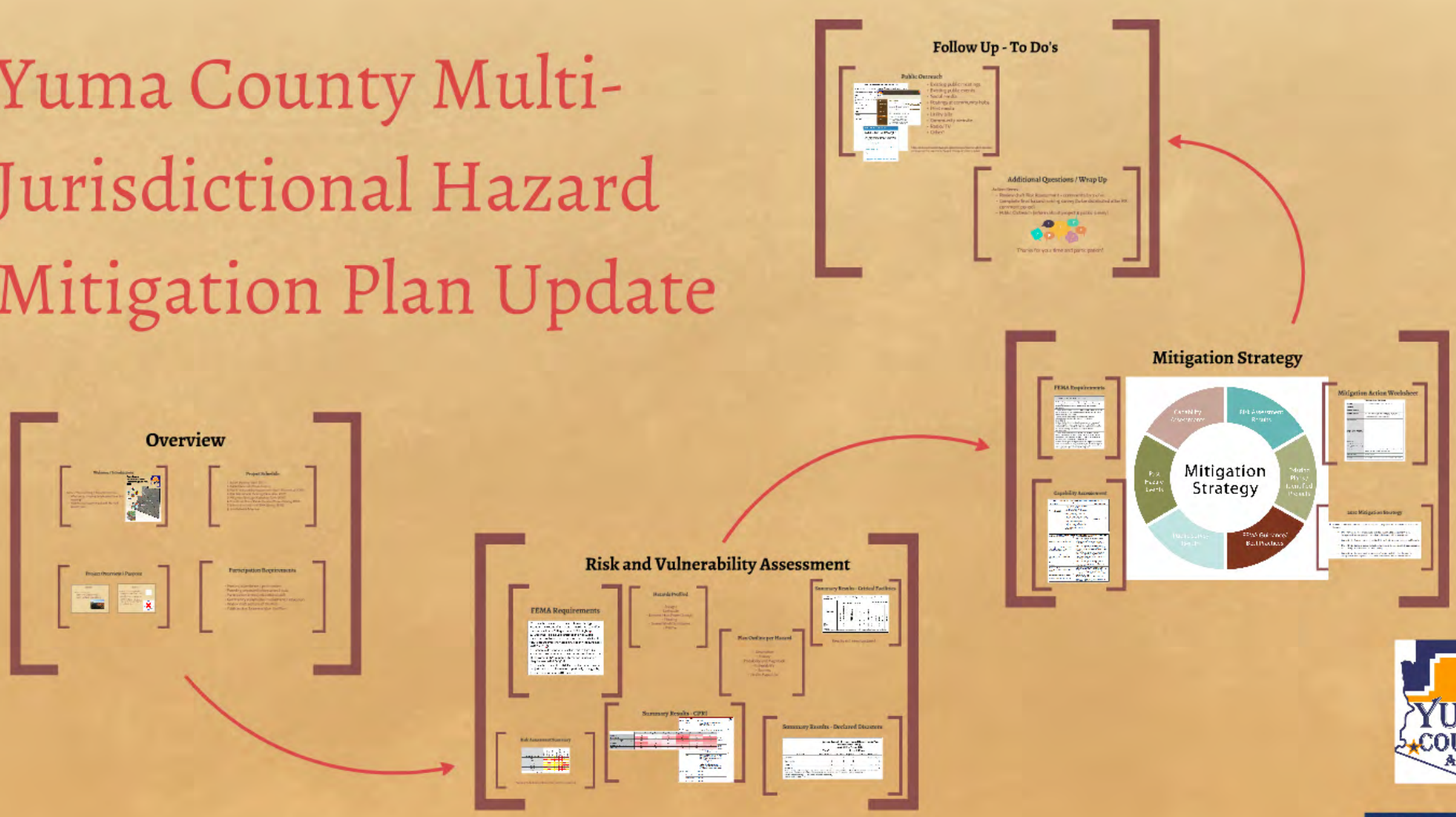
# Yuma County Multi-Jurisdictional Hazard Mitigation Plan Update



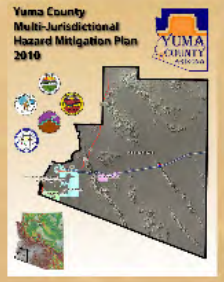

YUMA COUNTY ARIZONA

Michael Baker INTERNATIONAL

# Overview

## Welcome / Introductions

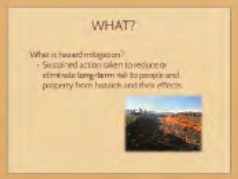
- Name / Representing / Department (I/A)
  - What are you hoping to take away from this meeting?
  - How do you hope the updated Plan will benefit you?

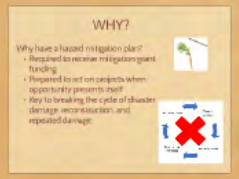



## Project Schedule

1. Kickoff Meeting (April 2017)
2. Public Outreach (Entire Project)
3. Risk & Vulnerability Assessment (April - November 2017)
4. Risk Assessment Meeting (December 2017)
5. Mitigation Strategy Workshop (Early 2018)
6. Final Draft Plan / Public Review (Winter/Spring 2018)
7. Submission to State/FEMA (Spring 2018)
8. Jurisdictional Adoption

## Project Overview / Purpose




## Participation Requirements

- Meeting attendance / participation
- Providing requested information & data
- Participation across jurisdictional staff
- Community stakeholder involvement / education
- Review draft sections of the Plan
- Public review & comment on the Plan

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# Project Overview / Purpose

## WHAT?

What is hazard mitigation?

- Sustained action taken to reduce or eliminate **long-term** risk to people and property from hazards and their effects.

## WHY?

Why have a hazard mitigation plan?

- Required to receive mitigation grant funding
- Prepared to act on projects when opportunity presents itself
- Key to breaking the cycle of disaster damage, reconstruction, and repeated damage

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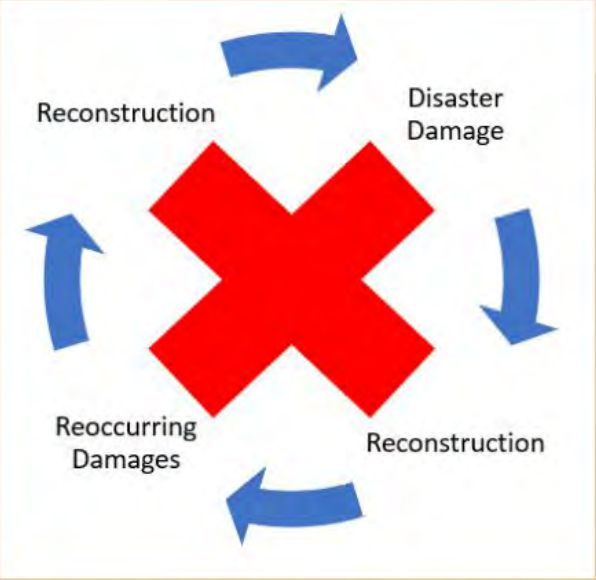

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# Risk and Vulnerability Assessment

## FEMA Requirements

| |
|---|
| B1. Does the Plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement §201.6(c)(2)(i)) |
| B2. Does the Plan include information on previous occurrences of hazard events and on the probability of future hazard events for each jurisdiction? (Requirement §201.6(c)(2)(i)) |
| B3. Is there a description of each identified hazard's impact on the community as well as an overall summary of the community's vulnerability for each jurisdiction? (Requirement §201.6(c)(2)(ii)) |
| B4. Does the Plan address NFIP insured structures within the jurisdiction that have been repetitively damaged by floods? (Requirement §201.6(c)(2)(ii)) |

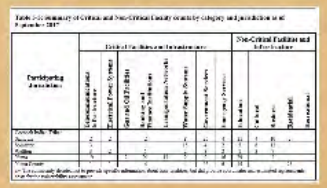
## Hazards Profiled

- Drought
- Earthquake
- Extreme Heat (Power Outage)
- Flooding
- Severe Wind/Dust Storms
- Wildfire

## Plan Outline per Hazard

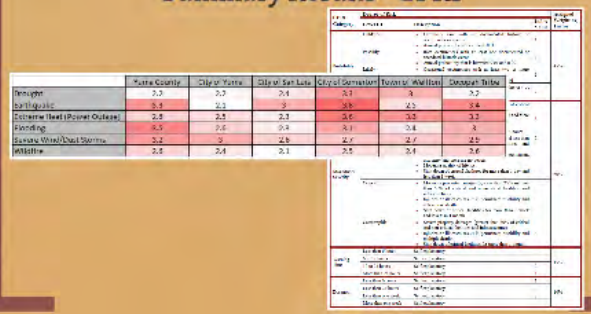
- Description
- History
- Probability and Magnitude
- Vulnerability
- Sources
- Profile Maps (I/A)

## Summary Results - Critical Facilities



Results still need updated

## Summary Results - CPRI



| | Yuma County | City of Yuma | City of San Luis | City of Somerton | Town of Wellton | Cocopah Tribe |
|---|---|---|---|---|---|---|
| Drought | 2.2 | 2.2 | 2.4 | 2.1 | 3 | 2.2 |
| Earthquake | 3.4 | 2.1 | 3 | 3.6 | 2.5 | 3.4 |
| Extreme Heat (Power Outage) | 2.8 | 2.5 | 2.3 | 3.6 | 3.5 | 3.2 |
| Flooding | 3.5 | 2.6 | 2.3 | 3.1 | 3.4 | 3 |
| Severe Wind/Dust Storms | 3.2 | 3 | 2.6 | 2.7 | 2.7 | 2.5 |
| Wildfire | 2.8 | 2.4 | 2.1 | 2.5 | 2.4 | 2.6 |

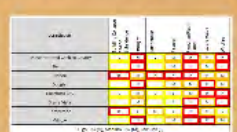
## Summary Results - Declared Disasters

State and Federally Declared Natural Hazard Events That Included Yuma County - April 1973 to August 2017

| Hazard | No. of Declarations | Recorded Losses: Fatalities | Injuries | Property Damage($) |
|---|---|---|---|---|
| Drought | 9 | 0 | 0 | $403,000,000 |
| Earthquake | 1 | 0 | 0 | $0 |
| Flooding | 8 | 22 | 112 | $505,750,000 |
| Wildfire | 19 | 0 | 0 | $0 |

Notes: Damage Costs include property and crop/livestock losses and are reported as is with no attempt to adjust costs to current dollar values. Furthermore, wildfire damage costs do not include the cost of suppression, which can be quite substantial (approximately $2.5 million for eleven wildfire events).
Sources: ADEM, FEMA, USDA

## Risk Assessment Summary



Survey to follow review and comment period

# FEMA Requirements

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# Summary Results - Declared Disasters

| | State and Federally Declared Natural Hazard Events That Included Yuma County - April 1973 to August 2017 | | | |
|---|---|---|---|---|
| | No. of | Recorded Losses | | |
| Hazard | Declarations | Fatalities | Injuries | Property Damage($) |
| Drought | 9 | 0 | 0 | $303,000,000 |
| Earthquake | 1 | 0 | 0 | $0 |
| Flooding | 8 | 22 | 112 | $505,750,000 |
| Wildfire | 19 | 0 | 0 | $0 |

Notes: Damage Costs include property and crop/livestock losses and are reported as is with no attempt to adjust costs to current dollar values. Furthermore, wildfire damage costs do not include the cost of suppression which can be quite substantial(approximately $2.3 million for eleven wildfire events).
Sources: ADEM, FEMA, USDA

# Summary Results - Critical Facilities

**Table 5-5: Summary of Critical and Non-Critical Facility counts by category and jurisdiction as of September 2017**

| Participating Jurisdiction | Critical Facilities and Infrastructure | | | | | | | | Non-Critical Facilities and Infrastructure | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Telecommunications Infrastructure | Electrical Power Systems | Gas and Oil Facilities | Banking and Finance Institutions | Transportation Networks | Water Supply Systems | Government Services | Emergency Services | Education | Cultural | Business | Residential | Recreational |
| Cocopah Indian Tribe[a] | | | | | | | | | | | | | |
| San Luis | 2 | 2 | | 2 | | 8 | 25 | 4 | 11 | 4 | 10 | 3 | |
| Somerton | 3 | | | 1 | | 15 | 4 | 2 | 5 | 6 | 12 | | |
| Wellton | 3 | 2 | | 1 | | 2 | 3 | 2 | 1 | 3 | 7 | | |
| Yuma | 19 | | 2 | 21 | 13 | 2 | 9 | 16 | 29 | | 2 | | |
| Yuma County | 1 | 1 | | 4 | | 4 | 56 | 6 | 14 | | | 78 | |

a – The community decided not to provide specific information about their facilities, but did provide coordinates and estimated replacements costs for the vulnerability assessment.

Results still need updated

# Summary Results - CPRI

| | Yuma County | City of Yuma | City of San Luis | City of Somerton | Town of Wellton | Cocopah Tribe |
|---|---|---|---|---|---|---|
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| Severe Wind/Dust Storms | 3.2 | 3 | 2.6 | 2.7 | 2.7 | 2.9 |
| Wildfire | 2.6 | 2.4 | 2.1 | 2.5 | 2.4 | 2.6 |

| CPRI Category | Degree of Risk | | | Assigned Weighting Factor |
|---|---|---|---|---|
| | Level ID | Description | Index Value | |
| Probability | Unlikely | ▪ Extremely rare with no documented history of occurrences or events.<br>▪ Annual probability of less than 0.001. | 1 | 45% |
| | Possibly | ▪ Rare occurrences with at least one documented or anecdotal historic event.<br>▪ Annual probability that is between 0.01 and 0.001. | 2 | |
| | Likely | ▪ Occasional occurrences with at least two or more 01.<br>history of | 3 | |
| | | | 4 | |
| Magnitude/ Severity | | of critical<br>l and there<br>4 hours.<br>d less than<br>ities and<br>permanent<br>disability and there are no deaths.<br>▪ Moderate quality of life lost.<br>▪ Shut down of critical facilities for more than 1 day and less than 1 week. | 1<br>2 | 30% |
| | Critical | ▪ Moderate property damages (greater than 25% and less than 50% of critical and non-critical facilities and infrastructure).<br>▪ Injuries or illnesses result in permanent disability and at least one death.<br>▪ Shut down of critical facilities for more than 1 week and less than 1 month. | 3 | |
| | Catastrophic | ▪ Severe property damages (greater than 50% of critical and non-critical facilities and infrastructure).<br>▪ Injuries or illnesses result in permanent disability and multiple deaths.<br>▪ Shut down of critical facilities for more than 1 month. | 4 | |
| Warning Time | Less than 6 hours | Self explanatory. | 4 | 15% |
| | 6 to 12 hours | Self explanatory. | 3 | |
| | 12 to 24 hours | Self explanatory. | 2 | |
| | More than 24 hours | Self explanatory. | 1 | |
| Duration | Less than 6 hours | Self explanatory. | 1 | 10% |
| | Less than 24 hours | Self explanatory. | 2 | |
| | Less than one week | Self explanatory. | 3 | |
| | More than one week | Self explanatory. | 4 | |

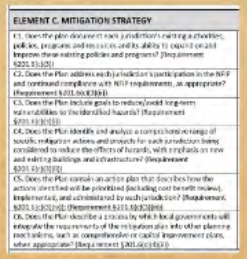
# Risk Assessment Summary

| Jurisdiction | Building Collapse / Mine Subsidence | Drought | Earthquake | Fissure | Flooding/Flash Flood | Severe Wind | Wildfire |
|---|---|---|---|---|---|---|---|
| Unincorporated Cochise County | L | H | L | M | H | M | H |
| Benson | L | H | L | M | H | M | H |
| Bisbee | H | M | H | H | H | M | M |
| Douglas | L | H | L | M | M | H | M |
| Huachuca City | L | M | L | L | M | H | H |
| Sierra Vista | L | M | L | L | H | M | H |
| Tombstone | H | L | M | L | H | M | L |
| Willcox | L | H | L | M | H | H | M |
| High Risk (H), Medium Risk (M), Low Risk (L) | | | | | | | |

Survey to follow review and comment period

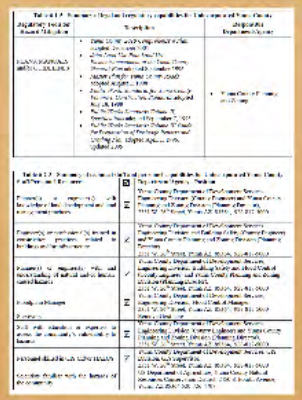
# Mitigation Strategy

## FEMA Requirements

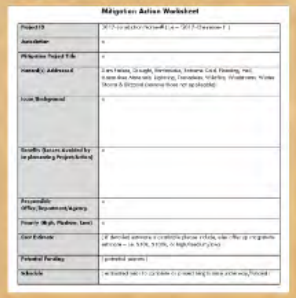


| ELEMENT C. MITIGATION STRATEGY |
| --- |
| C1. Does the plan document each jurisdiction's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement §201.6(c)(3)) |
| C2. Does the Plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement §201.6(c)(3)(ii)) |
| C3. Does the Plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement §201.6(c)(3)(i)) |
| C4. Does the Plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? (Requirement §201.6(c)(3)(ii)) |
| C5. Does the Plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented, and administered by each jurisdiction? (Requirement §201.6(c)(3)(iii); (Requirement §201.6(c)(3)(iv)) |
| C6. Does the Plan describe a process by which local governments will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? (Requirement §201.6(c)(4)(ii)) |

## Capability Assessement



## Mitigation Action Worksheet



**Mitigation Action Worksheet**

| | |
| --- | --- |
| Project ID | [illegible] |
| Jurisdiction | x |
| Mitigation Project Title | x |
| Hazard(s) Addressed | [illegible] |
| Issue Background | x |
| Benefits (Losses Avoided by Implementing Project Action) | x |
| Responsible Office/Department/Agency | x |
| Priority (High, Medium, Low) | x |
| Cost Estimate | [illegible] |
| Potential Funding | [illegible] |
| Schedule | [illegible] |

## 2010 Mitigation Strategy

- **GOAL:** Reduce or eliminate the risk to people and property from natural and human caused hazards.
  - **Objective 1:** Reduce or minimize risks that threaten life and property in the incorporated, unincorporated, and Tribal jurisdictions within Yuma County.
  - **Objective 2:** Reduce risk to critical facilities and infrastructure from natural hazards.
  - **Objective 3:** Promote hazard mitigation throughout the incorporated, unincorporated, and Tribal jurisdictions within Yuma County.
  - **Objective 4:** Increase public awareness of hazards and risks that threaten the incorporated, unincorporated, and Tribal jurisdictions within Yuma County.

Mitigation Strategy
Capability Assessments
Risk Assessment Results
Existing Plans / Identified Projects
FEMA Guidance/ Best Practices
Public Survey Results
Past Hazard Events

# FEMA Requirements

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  - **Objective 4:** Increase public awareness of hazards and risks that threaten the incorporated, unincorporated, and Tribal jurisdictions within Yuma County.

# Capability Assessement

| Table 6-1-5: Summary of legal and regulatory capabilities for Unincorporated Yuma County | | |
|---|---|---|
| **Regulatory Tools for Hazard Mitigation** | **Description** | **Responsible Department/Agency** |
| PLANS, MANUALS and/or GUIDELINES | • *Yuma County 2010 Comprehensive Plan* adopted December 2001<br>• *Joint Land Use Plan Land Use Element/Amendment of the Yuma County General Plan* adopted September 1996<br>• *Master Plan for Yuma County Roads* adopted August 1, 1998<br>• *Public Works Standards for Yuma County Volume I, Construction Standards* adopted July 18, 1988<br>• *Public Works Standards Volume II, Specifications* adopted September 7, 1993<br>• *Public Works Standards Volume III Guide for Preparation of Drainage Reports and Grading Plan* adopted April 1, 1996, updated 2005 | • Yuma County Planning and Zoning |

| Table 6-2-5: Summary of technical staff and personnel capabilities for Unincorporated Yuma County | | |
|---|---|---|
| **Staff/Personnel Resources** | ☑ | **Department/Agency - Position** |
| Planner(s) or engineer(s) with knowledge of land development and land management practices | ☑ | Yuma County Department of Development Services, Engineering Division (County Engineer) and Yuma County Planning and Zoning Division (Planning Director), 2351 W. 26th Street, Yuma AZ 85364, 928-817-5000 |
| Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure | ☑ | Yuma County Department of Development Services, Engineering Division and Building Safety (County Engineer) and Yuma County Planning and Zoning Division (Planning Director), 2351 W. 26th Street, Yuma AZ 85364, 928-817-5000 |
| Planner(s) or engineer(s) with and understanding of natural and/or human-caused hazards | ☑ | Yuma County Department of Development Services, Engineering Division, Building Safety and Flood Control (County Engineer) and Yuma County Planning and Zoning Division (Planning Director), 2351 W. 26th Street, Yuma AZ 85364, 928-817-5000 |
| Floodplain Manager | ☑ | Yuma County Department of Development Services, Engineering Division, Flood Control Manager, 2351 W. 26th Street, Yuma AZ 85364, 928-817-5000 |
| Surveyors | | Removed text here |
| Staff with education or expertise to assess the community's vulnerability to hazards | ☑ | Yuma County Department of Development Services, Engineering Division (County Engineer) and Yuma County Planning and Zoning Division (Planning Director), 2351 W. 26th Street, Yuma AZ 85364, 928-817-5000 |
| Personnel skilled in GIS and/or HAZUS | ☑ | Yuma County Department of Development Services, GIS Division, GIS Supervisor, 2351 W. 26th Street, Yuma AZ 85364, 928-817-5000 |
| Scientists familiar with the hazards of the community | | US Department of Agriculture, Yuma County Natural Resources Conservation District, 2450 S. Fourth Avenue, Yuma, AZ 85364 520-726-4707. |

# Mitigation Action Worksheet

## Mitigation Action Worksheet

| | |
|---|---|
| **Project ID** | 2017-Jurisdiction Name-# ( i.e – '2017-Cheyenne-1' ) |
| **Jurisdiction** | x |
| **Mitigation Project Title** | x |
| **Hazard(s) Addressed** | Dam Failure, Drought, Earthquake, Extreme Cold, Flooding, Hail, Hazardous Materials, Lightning, Tornadoes, Wildfire, Windstorms, Winter Storms & Blizzard (remove those not applicable) |
| **Issue/Background** | x |
| **Benefits (Losses Avoided by Implementing Project/Action)** | x |
| **Responsible Office/Department/Agency** | x |
| **Priority (High, Medium, Low)** | x |
| **Cost Estimate** | ( if detailed estimate is available please include, else offer up magnitude estimate – i.e. $10k, $100k, or high/medium/low) |
| **Potential Funding** | ( potential sources ) |
| **Schedule** | ( estimated year to complete or project length once underway/funded ) |

# Follow Up - To Do's

## Public Outreach

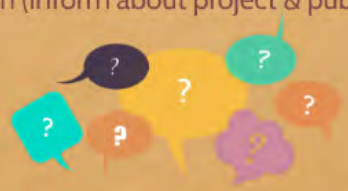
- Existing public meetings
- Existing public events
- Social media
- Postings at community hubs
- Print media
- Utility bills
- Community website
- Radio/TV
- Other?

http://www.yumacountyaz.gov/government/county-administrator/emergency-management/hazard-mitigation-plan-update

## Additional Questions / Wrap Up

Action Items:

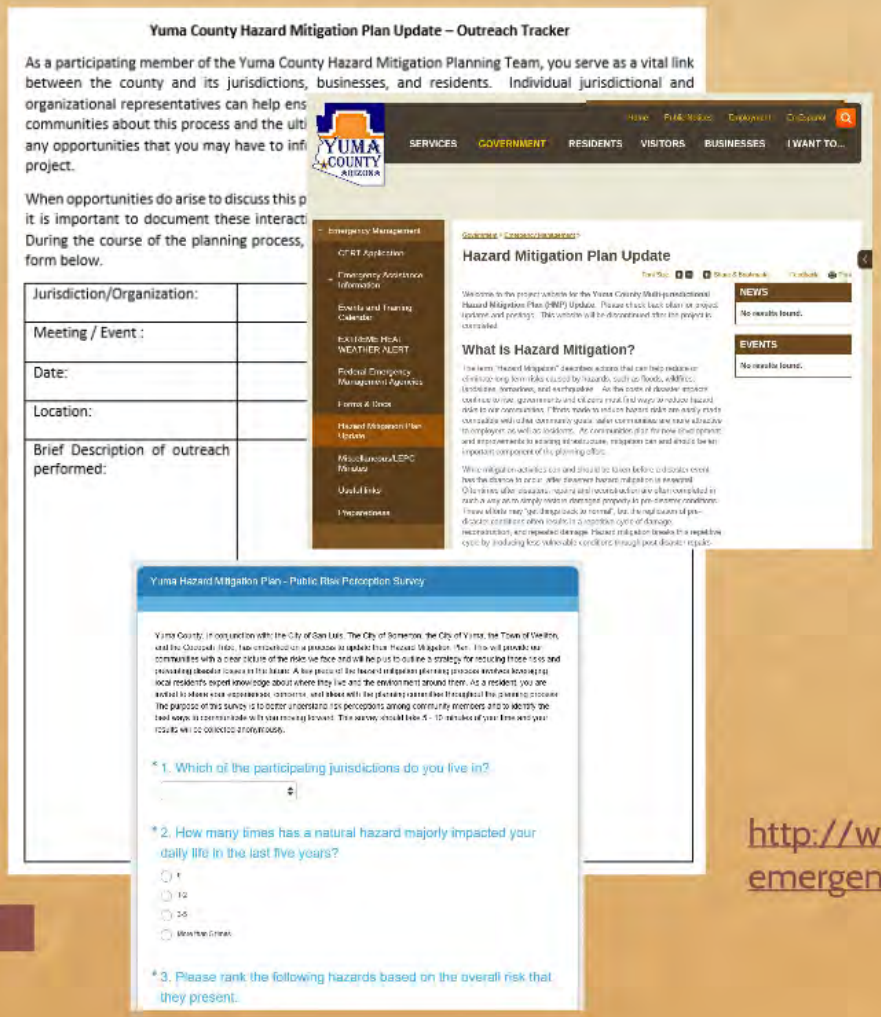
- Review draft Risk Assessment - comments by xx/xx
- Complete final hazard ranking survey (to be distributed after RA comment period)
- Public Outreach (inform about project & public survey)



Thanks for your time and participation!

# Follow Up

## Public Outreach

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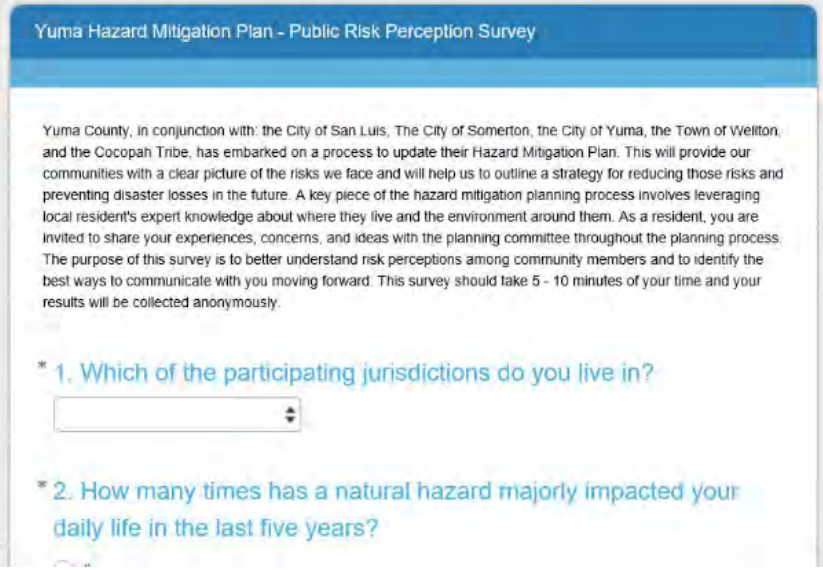
http://www.yumacountyaz.gov/government/county-administrator/emergency-management/hazard-mitigation-plan-update

## Yuma County Hazard Mitigation Plan Update – Outreach Tracker

As a participating member of the Yuma County Hazard Mitigation Planning Team, you serve as a vital link between the county and its jurisdictions, businesses, and residents. Individual jurisdictional and organizational representatives can help ens
communities about this process and the ulti
any opportunities that you may have to inf
project.

When opportunities do arise to discuss this p
it is important to document these interact
During the course of the planning process,
form below.

| | |
|---|---|
| Jurisdiction/Organization: | |
| Meeting / Event : | |
| Date: | |
| Location: | |
| Brief Description of outreach performed: | |




http://www

- Emergency Management
- CERT Application
- + Emergency Assistance Information
- Events and Training Calendar
- EXTREME HEAT WEATHER ALERT
- Federal Emergency Management Agencies
- Forms & Docs
- Hazard Mitigation Plan Update
- Miscellaneous/LEPC Minutes
- Useful links
- Preparedness



# Hazard Mitigation Plan Update



Welcome to the project website for the **Yuma County Multi-jurisdictional Hazard Mitigation Plan (HMP) Update**. Please check back often for project updates and postings. This website will be discontinued after the project is completed.

## What is Hazard Mitigation?

The term "Hazard Mitigation" describes actions that can help reduce or eliminate long-term risks caused by hazards, such as floods, wildfires, landslides, tornadoes, and earthquakes. As the costs of disaster impacts continue to rise, governments and citizens must find ways to reduce hazard risks to our communities. Efforts made to reduce hazard risks are easily made compatible with other community goals; safer communities are more attractive to employers as well as residents. As communities plan for new development and improvements to existing infrastructure, mitigation can and should be an important component of the planning effort.

While mitigation activities can and should be taken before a disaster event has the chance to occur, after disasters hazard mitigation is essential. Oftentimes after disasters, repairs and reconstruction are often completed in such a way as to simply restore damaged property to pre-disaster conditions. These efforts may "get things back to normal", but the replication of pre-disaster conditions often results in a repetitive cycle of damage, reconstruction, and repeated damage. Hazard mitigation breaks this repetitive cycle by producing less vulnerable conditions through post-disaster repairs

**NEWS**

No results found.

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# Yuma Hazard Mitigation Plan - Public Risk Perception Survey

Yuma County, in conjunction with: the City of San Luis, The City of Somerton, the City of Yuma, the Town of Wellton, and the Cocopah Tribe, has embarked on a process to update their Hazard Mitigation Plan. This will provide our communities with a clear picture of the risks we face and will help us to outline a strategy for reducing those risks and preventing disaster losses in the future. A key piece of the hazard mitigation planning process involves leveraging local resident's expert knowledge about where they live and the environment around them. As a resident, you are invited to share your experiences, concerns, and ideas with the planning committee throughout the planning process. The purpose of this survey is to better understand risk perceptions among community members and to identify the best ways to communicate with you moving forward. This survey should take 5 - 10 minutes of your time and your results will be collected anonymously.

## * 1. Which of the participating jurisdictions do you live in?

## * 2. How many times has a natural hazard majorly impacted your daily life in the last five years?

- 0
- 1-2
- 3-5
- More than 5 times

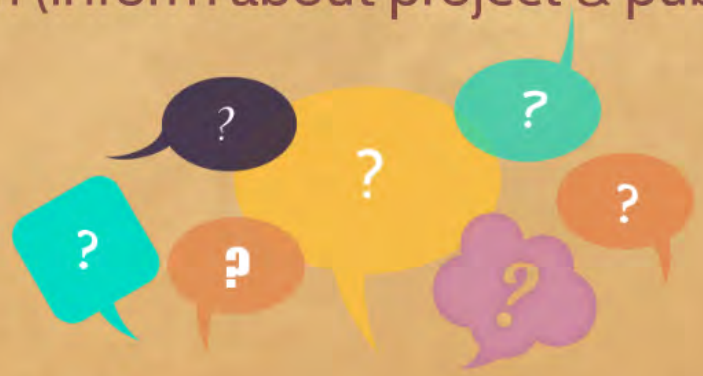
## * 3. Please rank the following hazards based on the overall risk that they present.

-update

# Additional Questions / Wrap Up

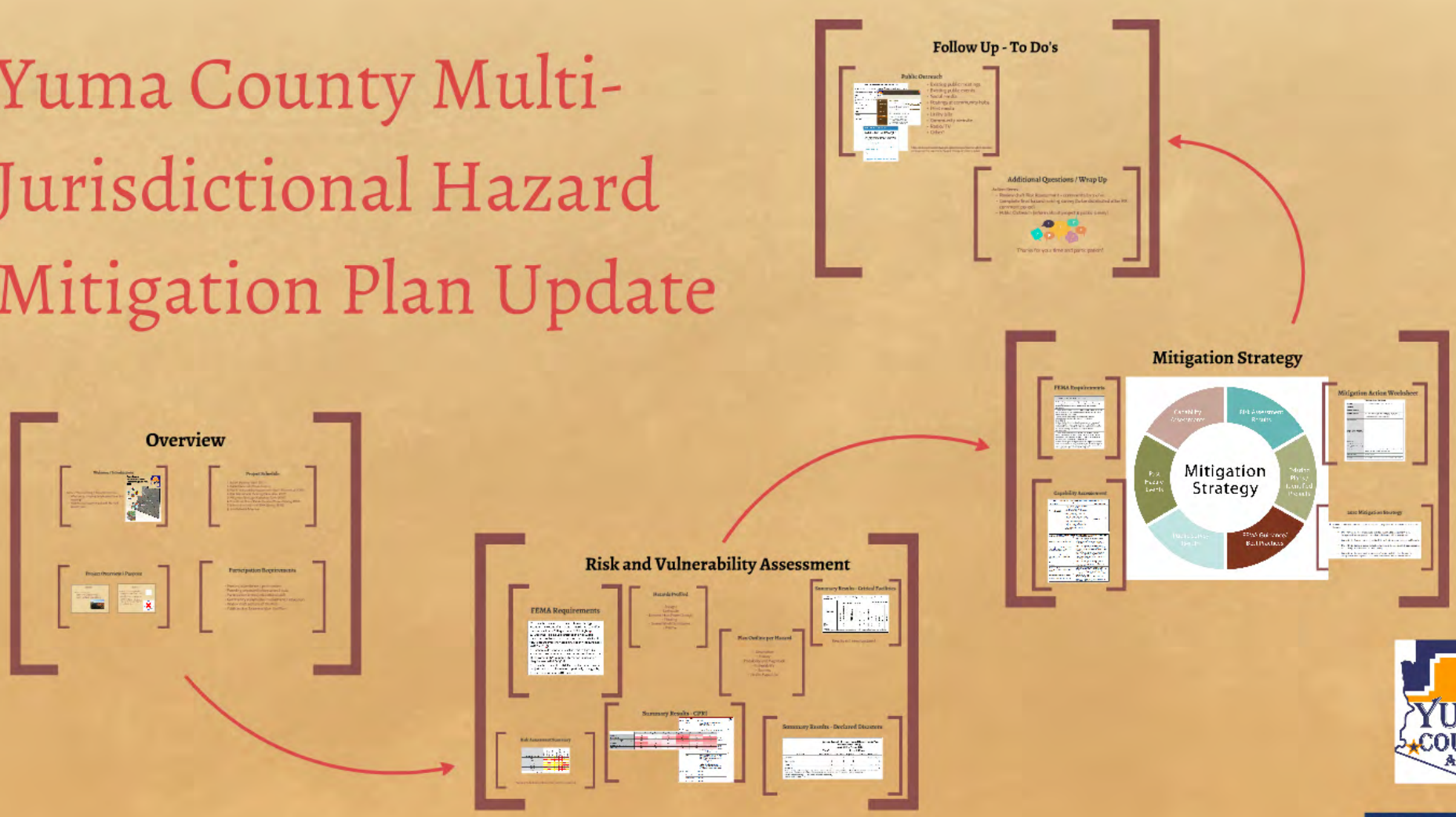
Action Items:

- Review draft Risk Assessment - comments by xx/xx
- Complete final hazard ranking survey (to be distributed after RA comment period)
- Public Outreach (inform about project & public survey)



Thanks for your time and participation!

# Yuma County Multi-Jurisdictional Hazard Mitigation Plan Update




YUMA COUNTY ARIZONA

Michael Baker INTERNATIONAL