# EMERGENCY SERVICES PLANNING FOR TRANSIT ORGANIZATIONS

SEAGO - 10/2021

# Working Paper 1 – Existing Emergency Management Plans and Their Impact on Rural Transit Providers in the SEAGO Region.

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# **Project Overview**

# Introduction

Resiliency in the face of hazards, threats, and events is the hopeful outcome of any emergency planning. As the prospect of these emergency situations continues and even grows, rural transit agencies in southeastern Arizona are more likely to be tasked to implement their own internal emergency plans or work with larger, coordinated efforts to address emergencies faced by one or more communities.

Phase 1 of an ADOT funded planning effort seeks to identify gaps in emergency preparedness among 5310 and 5311 providers in the SEAGO region. This working paper describes the outcomes of reviews and evaluations of existing emergency plans at the state, county and local levels impacting the SEAGO region regarding the role of rural transit providers as responders (Tasks 1 and 2 of funded scope of work.)

# **Project Objectives**

Working Paper 1 will provide information garnered in conducting three of eight identified tasks in the approved scope of work:

Tasks 1 is to initiate the planning effort by forming a TAC committee or committees and meeting with these groups to introduce the project.

Task 2 is a review and evaluation of existing emergency plans at the state, county, and local level to determine existing roles for transit organizations and their assets (rolling stock, qualified drivers, etc.)

Task 3 is a review and evaluation of existing emergency plans among rural transit providers in the SEAGO region regarding their internal emergency response plans.

# TAC

To achieve these objectives, SEAGO developed a comprehensive list of stakeholders and TAC members to be engaged throughout the process.

A comprehensive list of transit providers includes information on the type of agency (municipal or nonprofit), the type of transit services provided (fixed/flexible routes, para transit, dial-a-ride, and limited consumer service), the number of vehicles operated by these transit organizations (both those on lien by ADOT and those not on lien), along with current contact information for transit managers. These transit providers comprise the TAC.

Stakeholders inform the TAC, include emergency planners and responders including law enforcement officials, public safety and fire officials, town and city managers, hospitals, and those responsible for emergency planning at the local and county levels.

This TAC and Stakeholders list can be found in Appendix A.

# Task 1 – Project Initiation

# TAC meetings

TAC meetings with transit providers and stakeholders were held in each county from August 23 through August 30, 2021. Invitations were issued via email with meeting notices posted on the SEAGO website.

Meetings were held in person at County Supervisor's offices in each county with options to participate by phone. (See Appendix B for agendas and sign-in sheets.)

These initial meetings introduced the project and discussed general emergency issues, emergency planning, vulnerable populations, resources – including those of transit providers, protocols for addressing emergency events, and next steps.

Outcomes from these meetings yielded information that enhanced knowledge gained from reviewing published emergency plans for each county and provided insights into how communities and counties address emergency response differently. These findings are addressed in Section - Task 2 of this working paper.

TAC members also meet in conjunction with the SEAGO Transit Coordination Councils. The region is divided into two councils: Santa Cruz and Cochise counties, and Graham and Greenlee counties. These Transit Coordination Council members serve as TAC members to the project and represent 5310, 5311, and 5307 transit providers in the region. TAC/Coordination Council meetings are held quarterly using a hybrid in-person/Zoom meeting platform. (In-person meetings are expected to resume when COVID concerns are significantly reduced). Meetings are typically scheduled in October, January, April, and July. TAC members will review and make comment on Working Paper #1 as part of their Coordination Council Agenda in mid-October.

At least once per year, a region-wide Coordination Council meeting is set, typically around the first of the year or when ADOT opens transit grant applications and/or training.

TAC-Stakeholder meetings #1

Graham – Monday, August 23<sup>rd</sup>, 921 Thatcher Blvd., Safford AZ Cochise – Tuesday, August 24<sup>th</sup>, 1415 W. Melody Lane, Bisbee AZ Santa Cruz – Thursday August 26<sup>th</sup>, 2150 N. Congress, Nogales AZ Greenlee – Monday August 30<sup>th</sup>, 253 5<sup>th</sup> St., Clifton AZ

Summary of Initial Meetings by County

# **Graham County findings**

Threats that are most likely to constitute a state of emergency: Fires and Flooding

Incident command is coordinated through the jurisdiction first. If the emergency extends beyond the jurisdiction, then the County assumes command with the jurisdiction. All emergencies are dispatched through a central dispatch system.

Transportation and Evacuation services are reliant on individuals and organizations to have their own evacuation plans. Supplemental evacuation services, when deemed necessary by incident command, are reliant primarily on use of school buses and drivers. No one present was aware of an Emergency Response Plan that detailed roles and responsibilities for jurisdictional departments within government

agencies, or support agreements between governmental emergency responders and private support organizations. The only exception was the utilization of the Red Cross for sheltering support.

The County Health Department keeps a list of people who need help in an evacuation situation. This is a voluntary list.

The LEPC meets quarterly.

Efforts moving forward:

- Develop list of congregate living facilities (prisons, nursing homes, senior housing) and confirm evacuation planning and resources.
- Create MOU between County and Transit Providers outlining transportation/evacuation resources and the extent and/or limits of their use.
- Provide central dispatch units with list of available transportation/evacuation resources held by Transit Providers.
- Develop list of organizations willing to house persons in case of emergency.

#### **Cochise County findings**

# Bisbee and Douglas sent representatives. No representatives from Sierra Vista, Tombstone, or Benson.

Threats that are most likely to constitute a state of emergency:

Douglas

- Chemical or Hazardous Materials Spill (port of entry)
- Flooding

Bisbee

FireFlood

Each jurisdiction has its own dispatch. Each jurisdiction cited school districts as source of buses for evacuation. Most were unaware if adequate/trained drivers were available to operate those buses, or if drivers were aware of their obligations during an emergency. The County has an Emergency Response Plan, however; it is outdated, and the resources lists included are no longer up to date making it useless. The County has an alert system whereby people in need of help during an evacuation can register.

Efforts moving forward:

- Develop list of congregate living facilities and confirm evacuation planning and resources.
- Create MOU between County and Transit Providers outlining transportation/evacuation resources and the extent and/or limits of their use.
- Provide jurisdictional dispatch units with list of available transportation/evacuation resources held by Transit Providers.

#### **Greenlee County findings**

Threats that are most likely to constitute a state of emergency:

Northern County – Fires Southern County – Flood

Each jurisdiction has its own dispatch. Each jurisdiction cited school districts as source of buses for evacuation. No one present was aware of a County Emergency Response Plan. Health Department has list of home bound persons using the County's Health Department services. They do not keep a general list or allow people to voluntarily sign up for assistance in evacuation during an emergency. The County said that such software was prohibitively expensive. The County does have an MOU with Freeport McMoRan (mining company operating in Morenci) for mutual aid. There is also an expired MOU with transit providers for mutual aid. There are no Red Cross volunteers in Greenlee County though the Tucson office would be called upon if sheltering assistance was needed. Most likely, shelters would be located in Safford (Graham County). LEPC meets annually.

Efforts moving forward:

- Develop list of congregate living facilities and confirm evacuation planning and resources.
- Update MOU between County and Transit Providers outlining transportation/evacuation resources and the extent and/or limits of their use.
- Provide jurisdictional dispatch units with list of available transportation/evacuation resources held by Transit Providers.
- Seek resources for software that creates voluntary sign-up for evacuation support

#### Santa Cruz County findings

Threats that are most likely to constitute a state of emergency:

Railroad incidents including hazardous waste spills

Wastewater and other hazardous spills from Nogales Sonora MX (upstream from Nogales AZ)

Flooding in the Nogales wash

Fire in eastern part of County

Emergencies are dispatched from either Nogales or the Sherriff's office depending on origin of emergency. Sherriff's office also dispatches for five fire districts. There is no centralized list of persons who may need support in the event of an evacuation. There are no agreements with school districts for use of buses for evacuation services.

Efforts moving forward:

• Develop list of congregate living facilities and confirm evacuation planning and resources.

• Develop MOU between County and Transit Providers outlining transportation/evacuation resources and the extent and/or limits of their use.

• Provide jurisdictional dispatch units with list of available transportation/evacuation resources held by Transit Providers.

• Seek resources for software that creates voluntary sign-up for evacuation support

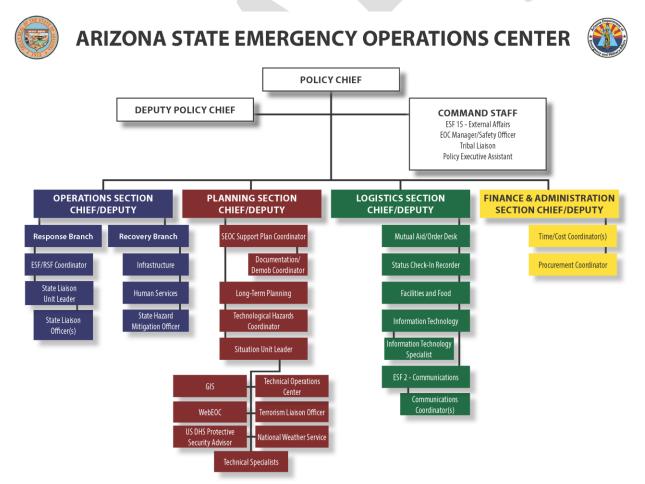
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Task 2 – Review and evaluation of existing emergency plans at state, county, and local levels impacting the SEAGO region regarding the role of rural transit providers as responders

# State Level review

The State of Arizona's Emergency Management efforts are divided into four departments: the Planning Branch, the Preparedness Branch, the Response Branch, and Operations and Coordination.

The Planning Branch is responsible for the creation and update of the <u>State Emergency Response and</u> <u>Recover Plan</u> (SERRP). This all-hazards plan identifies state agency **roles and responsibilities** during and emergency or disaster. This plan is implemented when an emergency or disaster reaches a level that overwhelms local, county, or tribal resources or is determined by the Governor to constitute a state of emergency. The Planning Branch also assists local, county, and tribal partners with emergency operations plans and other related planning documents.



State emergency planning relies on each identified Primary Agency within state government to appoint an emergency coordinator and alternate, develop and maintain procedures, coordinate-maintain-testtrain-and exercise the SERRP, staff emergency operations, maintain 24-hour response capability, maintain logs and records, and develop a Continuity of Operations plan.

The SERRP recognizes the fifteen hazards identified in the State of Arizona Hazard Mitigation Plan:

- Dam failure
- Drought
- Earthquake
- Extreme heat
- Fissure
- Flooding
- Hazardous materials incidents
- Infectious disease

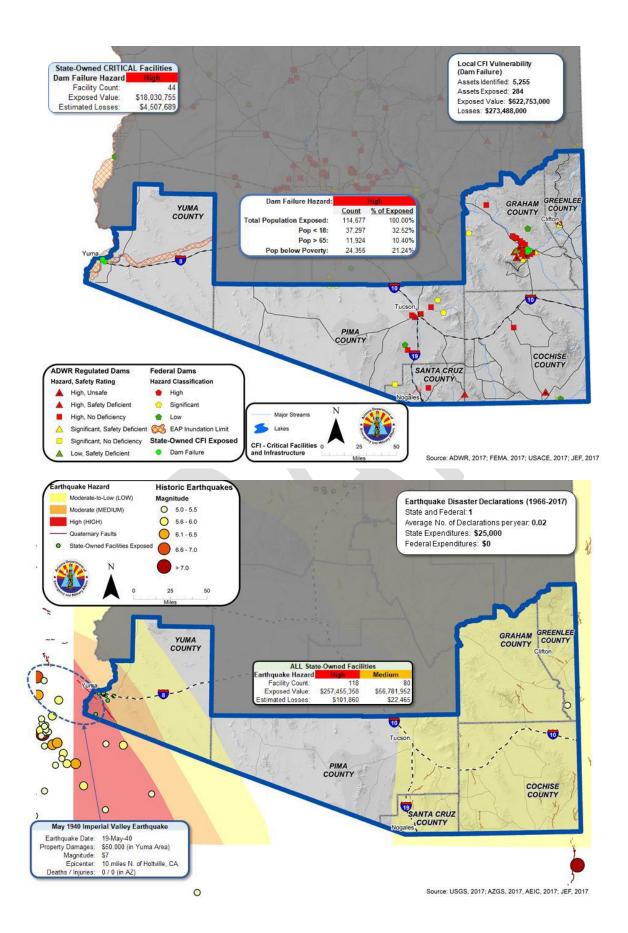
- Landslide
- Levee failure
- Severe wind
- Subsidence
- Terrorism
- Wildfire
- Winter storm

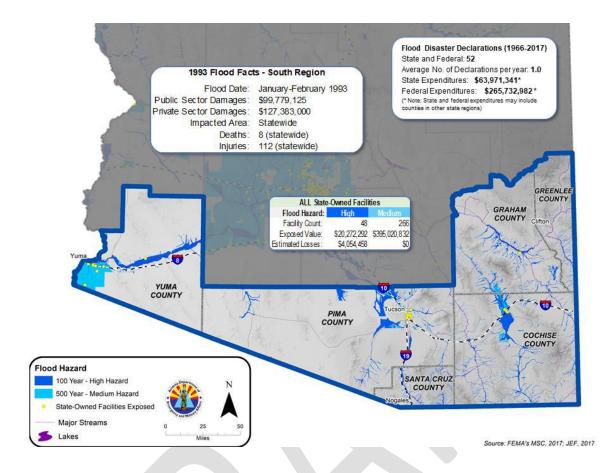
Response priorities are life, safety, incident stabilization, and property and environment conservation – in that order.

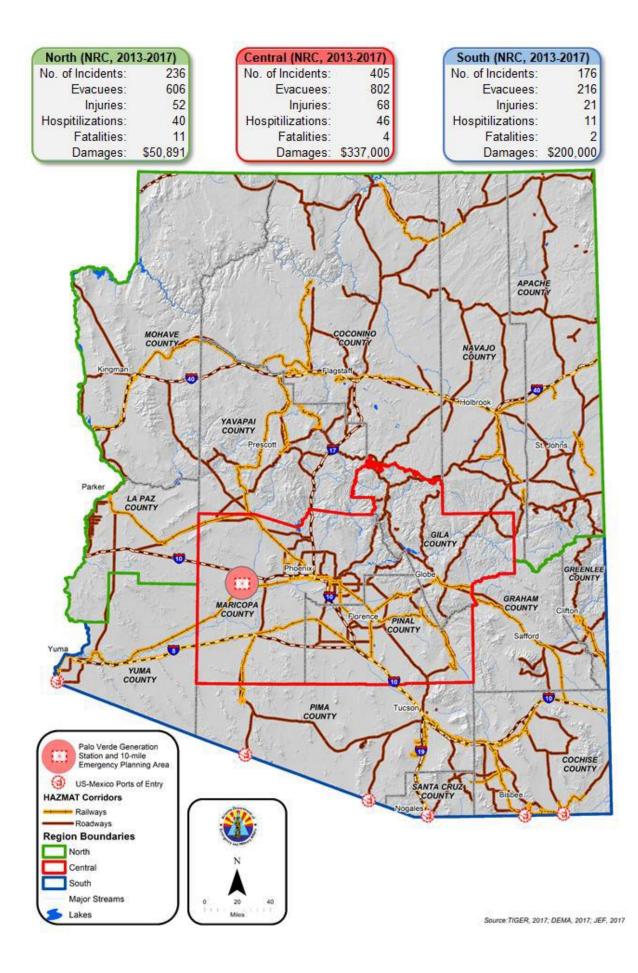
The State's planning is centered on an understanding that emergencies begin and end locally. Therefore, the hierarchical structure of mitigation and response relies on local/county response plans that are then supplemented, when required, by state-based responses.

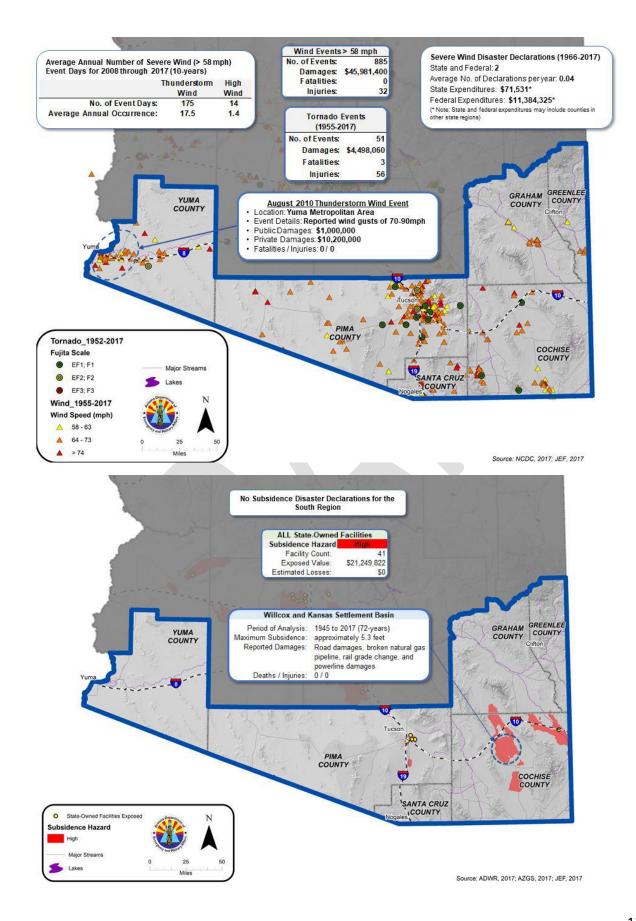
The Hazard Mitigation Plan (2018) (HMP) identifies risks and vulnerabilities associated with disasters as well as long-term strategies to reduce or eliminate impacts for future hazard events. The plan was approved by the Federal Emergency Management Administration (FEMA) in October 2018 and is effective until October 2023. FEMA requires this plan in order for the state to receive Federal Stafford Act (non-emergency) funding. This plan is about avoiding hazard-based emergencies through mitigation and less about responding to emergencies. The HMP provides comprehensive data and analysis in identifying hazards in each of three regions (North, Central, South) of the state using the same fifteen hazards found in the SERRP. This plan is useful in identifying potential hazards such as likelihood for dam failure in the Safford area; moderate potential for earthquake activity across the region; high likelihood of isolating fissures in northern Cochise County (Willcox area); high flood hazards in Nogales, Clifton, Patagonia, and Sahuarita; transportation-centered hazardous materials concerns in Nogales, Naco, and Douglas (rail and truck activity along hazmat corridors is considered the second most vulnerable region in the state; Bisbee and Clifton at elevated risk to landslide events; levee failure potential in Greenlee county (Duncan-Clifton); high wind damage potential across the region (winds in excess of 58 miles an hour, recorded in excess of 74 miles per hour) and particular concerns in eastern Cochise, along I10 for dust storm activity; active land subsidence activity in the Willcox and Kansas Settlement basin; high wildfire hazard potential for the entire SEAGO region; and winter storm damage in mountain communities like Bisbee and Portal.

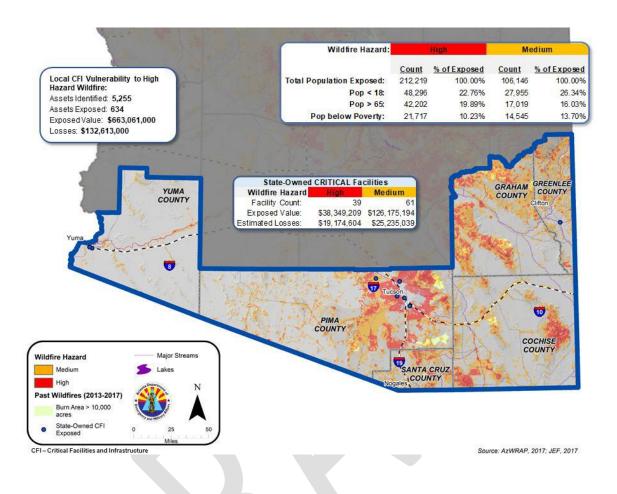
The following graphics indicate hazard history and vulnerability for the most-likely hazards to affect the region. This data comes from the State's Hazard Mitigation Plan (2018).











#### SUMMARY

The State's emergency planning documents identify potential hazards mitigation strategies (Hazard Mitigation Plan) and identifies the roles and responsibilities of the State and its departments in planning for and responding to emergencies (SERRP). The State relies on each of its eight Primary Agencies to develop detailed procedures and policies in addressing emergencies. These eight agencies have their emergency plan documents available on departmental websites. Local and County jurisdictions are relied upon to create more detailed response and mitigation plans as the assumes that "Incidents begin locally and end locally and are typically managed at the lowest possible jurisdictional level." Because the State's plan is broad, it does not mention or include references to local or regional resources needed to address emergency events. No mention of publicly funded transit vehicles and their availability in responding to emergency events was made in the SERRP or HMP.

Primary Agencies within the State that must provide detailed emergency response plans:

- Arizona Department of Agriculture
- Arizona Department of Emergency and Military Affairs
- Arizona Department of Environmental Quality
- Arizona Department of Forestry and Fire Management

- Arizona Department of Health Services
- Arizona Department of Housing
- Arizona Department of Public Safety
- Arizona Department of Transportation

# **County Reviews**

Each county which may seek federal non-emergency funding from FEMA is required to develop a multijurisdictional hazard mitigation plan to be approved by FEMA and submitted to the State of Arizona. These plans follow formats required by the State with the purpose of identifying natural hazards that impact the various jurisdictions located within the county, assess the vulnerability and risk posed by those hazards to community-wide human and structural assets, develop strategies for mitigation of those identified hazards, present future maintenance procedures for the plan, and document the planning process. These plans, once created, must be updated no less than every five years.

The tables, charts, data, risk analysis, other information in this section is taken from the Multi-Jurisdictional Hazard Mitigation Plans for each County. Mentions of transportation needs and evacuation are not from these plans, but analyses made by the author of this working paper. Independent analyses are italicized for clarity.

The following are highlights from each Counties' Multi-Jurisdictional Hazard Mitigation plans.

# Graham County

The Graham County Multi-Jurisdictional Hazard Mitigation Plan (2018) includes planning and mitigation strategies for the entire county including incorporated jurisdictions of Pima, Safford, Thatcher and twenty-one other places (villages, communities, hamlets) as part of the unincorporated areas of Graham County. While the San Carlos Apache Indian Reservation occupies over one third of the county, it is not included in the County's mitigation plan.

The hazard mitigation plan identifies six of the state's 15 potential hazards as relevant to the county. They are:

- Dam failure,
- Drought,
- Fissure,
- Flooding,
- Severe Wind, and
- Wildfire.

In terms of emergency response that may require evacuation or a sudden need to move populations to safer areas, flood, fire, and levee failure post the most hazardous conditions.

# Dam Failure

There are 45 dams in Graham County. 21 are in the High Hazard class, and of those eight are considered safety risks. Three additional dams are in the Significant Hazard class and all three have safety deficiencies.

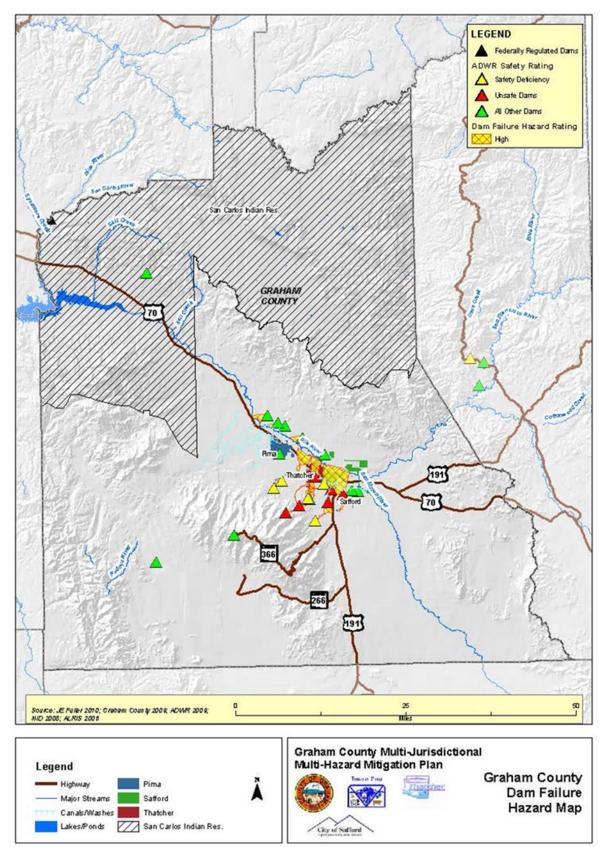
Ratings for Graham County as a whole indicated the probability for dam failure as unlikely but the magnitude/severity of a failure to be catastrophic. 52 percent of the total Graham County population is potentially exposed to a dam failure inundation event with a high probability of population displacement for most inhabitants within the inundation areas downstream of the dams.

Dam Failure hazards may require evacuation and transportation services in addressing emergency responses. Dam Failure may also limit access if infrastructure such as roads and bridges are impacted.

Dam Failure Risk

		Magnitude/	Warning	
Jurisdiction	Probability	Severity	Time	Duration
Graham County	Unlikely	Catastrophic	<6 hours	<24 hours
Pima	Unlikely	Limited	6-12 hours	<1 week
Safford	Possibly	Catastrophic	12-24 hours	>1 week
Thatcher	Unlikely	Critical	<6 hours	<24 hours

#### Dam Failure



# Drought

Drought, which can cause loss of agricultural resources, water supply and wildlife habitat could impact farming and ranching industries and groundwater availability, and create greater secondary impacts such as fire, fissures, subsidence, and even flooding. While there are no standardized methods for estimating losses due to drought, the county's population is subjected to a high probability for limited drought conditions that may require readiness for secondary conditions such as wildfire.

### Drought Risk

<u>_</u>		Magnitude/	Warning	
Jurisdiction	Probability	Severity	Time	Duration
Graham County	Highly Likely	Critical	>24 hours	>1 week
Pima	Unlikely	Negligible	>24 hours	>1 week
Safford	Likely	Critical	>24 hours	>1 week
Thatcher	Likely	Negligible	>24 hours	>1 week

It is unlikely that evacuation and transportation issues will arise in hazardous drought conditions.

#### Fissure

Fissures are often a result of subsidence caused by groundwater depletion. In Graham County, fissures have appeared in the Klondyke are on the south side of Mt. Graham.

#### **Fissure Risk**

Jurisdiction	Probability	Magnitude/ Severity	Warning Time	Duration
Graham County	Likely	Limited	<6 hours	>1 week
Pima	Unlikely	Limited	<6 hours	<24 hours
Safford	Likely	Limited	>24 hours	>1 week
Thatcher	Unlikely	Negligible	<6 hours	<6 hours

It is unlikely that evacuation and transportation issues will arise as a result of fissure activity.

#### Flooding

Tropical storm remnants, winter rains, and summer monsoons are events that tend to trigger floods in the area. Graham County has had several declared and undeclared flood disasters since the mid-90s. Evacuation of homes, closure and damage to roads and infrastructure, water supply damage, as well as agricultural damages are commonly reported.

Graham County is very vulnerable to flooding. Based on the historic record, multiple deaths and injuries are plausible and a substantial portion of the exposed population is subject to being displaced depending on the event magnitude.

The likelihood for evacuation and transportation services are high in areas impacted by severe flooding or in more urban compacted areas.

#### Severe Wind

For Graham County, severe winds usually result either from extreme pressure gradients that usually occur in the spring and early summer months, or from thunderstorms. Thunderstorms can occur year-round and are usually associated with cold fronts in the winter, monsoon activity in the summer, and tropical storm remnants in late summer or early fall.

Sever Wind Risk

		Magnitude/	Warning	
Jurisdiction	Probability	Severity	Time	Duration
Graham County	Likely	Limited	<6 hours	<1 week
Pima	Likely	Limited	6-12 hours	<6 hours
Safford	Highly Likely	Limited	<6 hours	<6 hours
Thatcher	Possibly	Limited	12-24 hours	<24 hours

Wind damage may impact infrastructure and transportation corridors as well as residences leaving more densely populated areas vulnerable.

Except for incidents of severe damage caused by wind, it is not expected that evacuation of residents or commercial areas would be required. Exceptions may be the need to temporarily remove people from hazardous conditions after a wind event such as persons at schools or hospitals that have been damaged and cannot safely attend to persons in these buildings.

#### Wildfire

Graham County has experienced over 140 wildfires greater than 100 acres in size (2018). Wildfire activity that moves into the urban interface may impact ingress and egress for firefighters as well as residents needing to evacuate. While the Mitigation Plan lists no historical fires requiring evacuation, the increasing fuel loads in the region provide increased risk in the wildland urban interface.

Jurisdiction	Probability	Magnitude/ Severity	Warning Time	Duration
Graham	Highly Likely	Limited	<6 hours	<24 hours
Pima	Possibly	Limited	6-12 hours	<6 hours
Safford	Highly Likely	Critical	6-12 hours	<1 week
Thatcher	Unlikely	Negligible	>24 hours	< 24 hours

#### Wildfire Risk

#### Risk Assessment Summary

Jurisdiction	Dam Failure	Drought	Fissure	Flood	Severe Wind	Wildfire
Unincorporated Graham Co	Х	Х	Х	Х	Х	Х
Pima				Х	Х	
Safford	Х	Х	Х	Х	Х	Х
Thatcher				Х		

The Graham County Multi-Jurisdictional Hazard Mitigation Plan identified mitigation strategies but does not address emergency response and recovery. A Response and Recovery Plan was not available for review.

No mention of evacuation preparedness is mentioned in the plan.

# Greenlee County

The Greenlee County Multi-Jurisdictional Hazard Mitigation Plan (2021) includes planning and mitigation strategies for the entire county including the incorporated towns of Clifton and Duncan and 13 unincorporated communities scattered across the County. This planning process updated the first multi-jurisdictional plan developed in 2016. The hazard mitigation plan identifies four of the state's 15 potential hazards as relevant to the county. They are:

- Drought,
- Flooding,
- Levee Failure, and
- Wildfires.

*Of note, HAZMAT or chemical-based hazards are not listed though the spur rail line to Morenci through Clifton carries hazardous chemicals on a routine basis through Clifton and to the Morenci mining operations.* 

In terms of emergency response that may require evacuation or a sudden need to move populations to safer areas, flood, fire, and levee failure post the most hazardous conditions.

#### Drought

Drought, which can cause loss of agricultural resources, water supply and wildlife habitat could impact farming and ranching industries and groundwater availability, and create greater secondary impacts such as fire, fissures, subsidence, and even flooding. While there are no standardized methods for estimating losses due to drought, the county's population is subjected to a high probability for limited drought conditions that may require readiness for secondary conditions.

It is not expected that drought conditions will necessitate transportation or evacuation needs.

# Flooding

Tropical storm remnants, winter rains, and summer monsoons are events that tend to trigger floods in the area. 10 federal disaster declarations for flooding in the area (most recent in 2010) create a high probability for critical and catastrophic magnitude events that provide 6 to 12 hours of warning time and could last from 24 hours to 1 week in duration. Duncan and unincorporated parts of the county are most at risk for catastrophic events.

Greenlee County's Mitigation Plan includes both Vulnerability assessments and population exposure assessments.

Flood Risk

Participating Jurisdiction	Probability	Magnitude/ Severity	Warning Time	Duration
Clifton	Highly Likely	Critical	6-12 hours	< 24 hours
Duncan	Highly Likely	Catastrophic	6-12 hours	< 1 week
Unincorporated Greenlee County	Highly Likely	Catastrophic	< 6 hours	< 1 week

Population sectors exposed to high and medium hazard flooding are estimated as follows.

Generalite	Total	Population	Percent of Population	Total Population	Population Over 65	Percent of Population Over 65
Community	Population	Exposed	Exposed IIGH	Over 65	Exposed	Exposed
County-Wide Totals	8,438	1,017	12.05%	1,015	183	18.03%
Clifton	3,319	242	7.29%	313	31	9.90%
Duncan	699	146	20.89%	109	28	25.69%
Unincorporated Greenlee						
County	4,420	629	14.23%	593	123	20.74%
		ME	EDIUM			
County-Wide Totals	8,438	479	5.68%	1,015	78	7.68%
Clifton	3,319	291	8.77%	313	40	12.78%
Duncan	699	0	0.00%	109	0	0.00%
Unincorporated Greenlee						
County	4,420	188	4.25%	593	37	6.24%

Flooding conditions may require transportation and evacuation in residential areas or where high concentrations of vulnerable populations are housed (hospitals, nursing homes, schools, etc.). However, flooded roads and unstable infrastructure may make evacuation efforts difficult or impossible.

#### Levee Failure

Levee failure is possible in both Clifton and unincorporated regions of the county and highly likely in Duncan. Any levee failure is considered catastrophic in magnitude with a warning time of less than six hours and a duration of 24 hours to one week.

Levee Failure Risk

		Magnitude/	Warning	
Participating Jurisdiction	Probability	Severity	Time	Duration
Clifton	Possible	Catastrophic	< 6 hours	< one week
Duncan	Highly Likely	Catastrophic	< 6 hours	< one week
Unincorporated Greenlee County	Possible	Catastrophic	< 6 hours	< 24 hours
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Community	Total Population	Population Exposed	Percent of Population Exposed	Total Population Over 65	Population Over 65 Exposed	Percent of Population Over 65 Exposed
		HIG	H			
County-Wide Totals	8,438	247	2.93%	1,015	29	2.84%
Clifton	3,319	247	7.44%	313	29	9.27%
Duncan	699	0	0.00%	109	0	0.00%
Unincorporated Greenlee						
County	4,420	0	0.00%	593	0	0.00%

Population sectors exposed to high levee failure emergencies are estimated as follows:

As with flooding, Levee failure may necessitate evacuation efforts.

#### Wildfire

Wildfire represents a significant threat to all regions of the county. Over 70 wildfires greater than 100 acres have occurred since 1980. Four fires larger than 10,000 acres have burned during the period of 2020 to 2021.

#### Wildfire Risk

Participating Jurisdiction	Probability	Magnitude/ Severity	Warning Time	Duration
Clifton	Possible	Limited	> 24 hours	< 1 week
Duncan	Possible	Negligible	< 6 hours	< 24 hours
Unincorporated Greenlee County	Highly Likely	Critical	< 6 hours	> 1 week

Population sectors exposed to high and medium wildfire hazards are estimated as follows:

Community	Total Population	Population Exposed	Percent of Population Exposed	Total Population Over 65	Population Over 65 Exposed	Percent of Population Over 65 Exposed
		H	IIGH	-		
County-Wide Totals	8,438	95	1.12%	1,015	18	1.82%
Clifton	3,319	0	0.00%	313	0	0.00%
Duncan	699	0	0.00%	109	0	0.00%
Unincorporated Greenlee						
County	4,420	95	2.15%	593	18	3.11%
		MI	EDIUM			
County-Wide Totals	8,438	327	3.88%	1,015	69	6.80%
Clifton	3,319	122	3.68%	313	26	8.31%
Duncan	699	11	1.57%	109	2	1.83%
Unincorporated Greenlee County	4,420	194	4.39%	593	41	6.91%

*Wildfires, particularly at the wildlands/urban interface, may necessitate transportation and evacuation efforts.* 

#### Greenlee County Summary of Risk

Jurisdiction	Drought	Flooding	Levee Failure	Wildfire		
Unincorporated Greenlee County	М	М	NH	М		
Clifton	Μ	М	М	NH		
Duncan	Μ	М	М	NH		
M – Mitigation A/Ps will be identified						
NH – Nuisance hazard - no mitigation is warranted						
NV - Jurisdiction is not vulnerable	to hazard – no mitig	gation is warran	ted			

The Greenlee County Multi-Jurisdictional Hazard Mitigation Plan identified mitigation strategies but does not address emergency response and recovery. A Response and Recovery Plan was not available for review. Maintaining flood alert systems for Clifton and Duncan are a high priority in the Plan which can enhance response abilities in those communities.

# Greenlee County Interagency Mutual Aid Agreement for Emergency Transport

In December 2009, the Board of Supervisors approved an MOU with members of the SEAGO Graham and Greenlee Transit Coordination Advisory Committee to provide aid in times of local emergencies by providing response and assistance to requesting parties when emergencies exceed the requesting party's ability to respond. The agreement lays out responsibilities, resource lists, implementation plans, contact lists, reimbursement procedures, immunity, indemnification, and compliance. The MOU term was 10 years and expired in 2019 without renewal.

# Cochise County

The Cochise County Multi-Jurisdictional Hazard Mitigation Plan was adopted in 2017 and includes all of Cochise County, the Cities of Benson, Bisbee, Douglas, Sierra Vista, Tombstone, and Willcox, and the town of Huachuca City. FEMA approval was received in August of 2017.

Of the 15 identified potential hazards listed in the State's Hazard Response Plan, Cochise County identified seven as relevant to the County:

- Building Collapse/Mine Subsidence,
- Drought,
- Earthquake,
- Fissure,
- Flood/Flash Flood,
- Severe Wind, and
- Wildfire.

# Building Collapse/Mine Subsidence

Because many areas of Cochise County were locations for subterranean mining activities, collapse of buildings, roadways, and infrastructure are vulnerable to failure due to the collapse or implosion of subterranean cavities. Additionally, criminal tunneling along the US/Mexico border is a concern as it is typically structurally crude and lacking structural support.

Tombstone and Bisbee are identified as having the most at-risk infrastructure including housing. Three percent of Tombstone's housing units are exposed to a high building collapse/mine subsidence hazard though the probability is measured as unlikely. High-risk areas within Bisbee are generally not subject to future development though failure of the City's storm water drainage system could present a severe hazard to both residential and commercial buildings and occupants.

Building collapse/mine subsidence may trigger an urgent need for evacuation and transportation assistance, particularly if an impacted area is more urban or the infrastructure impacted is highly populated (schools, hospitals, apartments, etc.)

#### Building Collapse/Mine Subsidence Risk

Participating		Magnitude/	Warning	
Jurisdiction	Probability	Severity	Time	Duration
			3.51 (6-12	2.27 (< 24
Bisbee			hours/< 6	hours/< 1
	2.02 (Possible/Likely)	2.29 (Limited/Critical)	hours)	week)
			3.2 (6-12	1.5 (<6
Douglas			hours/< 6	hours/< 24
	1.6 (Unlikely/Possible)	1.5 (Negligible/Limited)	hours)	hours)
			3.65 (6-12	1.71 (<6
Huachuca City			hours/<6	hours/<24
	1.42 (Unlikely/Possible)	1.71 (Negligible/Limited)	hours)	hours)
			3.61 (6-12	1.83 (<6
Sierra Vista			hours/< 6	hours/< 24
	2.04 (Possible/Likely)	2.04 (Limited/Critical)	hours)	hours)
			3.67 (6-12	1.67 (< 6
Tombstone			hours/< 6	hours/<24
	1.83 (Unlikely/Possible)	1.67 (Negligible/Limited)	hours)	hours)
			3.69 (6-12	1.69 (< 6
Willcox			hours/<6	hours/<24
	1.31 (Unlikely/Possible)	1.38 (Negligible/Limited)	hours)	hours)
Unincorporated Coshice			3.9 (6-12	2.17 (< 24
Unincorporated Cochise County			hours/< 6	hours/< 1
County	2.07 (Possible/Likely)	2.07 (Limited/Critical)	hours)	week)

# Drought

The magnitude of drought is usually measured in time and the severity of the deficit. The County remains in a long-term drought status with wells across the County drying up or providing significantly less water. Prolonged drought is also believed to strongly include the formation of giant desiccation cracks where soil is clay rich. It is widely believed that earth fissures in the County are the result of subsidence due to groundwater pumping and climate conditions (drought).

Because drought conditions are not likely to create a sudden need for evacuation or removal of persons in large numbers, loss estimates are focused on crops, livestock, and wildlife. However, sustained drought conditions will have a secondary impact on other hazards such as fissures, flooding, subsidence, and wildfire where loss estimates for infrastructure and life could be significant.

Evacuation and transportation issues are not likely in a drought emergency.

# Drought Risk

Participating Jurisdiction	Probability	Magnitude/ Severity	Warning Time	Duration
Benson	3.32 (Likely/Highly Likely)	2.21 (Limited/Critical)	1.21 (< 24 hours/12-24 hours)	3.68 (< 1 week/> 1 week)
Bisbee	2.61 (Possible/ Likely)	2.2 (Limited/Critical)	1.54 (> 24 hours/12-24 hours)	3.59 (< 1 week/> 1 week)
Douglas	2.3 (Possible/Likely)	2.2 (Limited/Critical)	2.0 (12-24 hours)	3.2 (> 1 week/< 1 week)
Huachuca City	2.74 (Possible/Likely)	2.26 (Limited/Critical)	2.39 (12-24 hours/6-12 hours)	2.97 (< 24 hours/< 1 week)
Sierra Vista	3.17 (Likely/Highly Likely)	2.26 (Limited/Critical)	1.39 (> 24 hours/12-24 hours)	3.43 (<1 week/> 1 week)
Tombstone	2.33 (Possible/Likely)	2.17 (Limited/Critical)	1.83 (12-24 hours/> 24 hours)	3.5 (> 1 week/< 1 week)
Willcox	2.56 (Possible/Likely)	2.06 (Limited/Critical)	1.81 (> 24 hours/12-24 hours)	3.31 (> 1 week/< 1 week)
Unincorporated Cochise County	3.03 (Likely/Highly Likely)	2.31 (Limited/Critical)	1.21 (> 24 hours/12-24 hours)	3.97 (> 1 week/< 1 week)

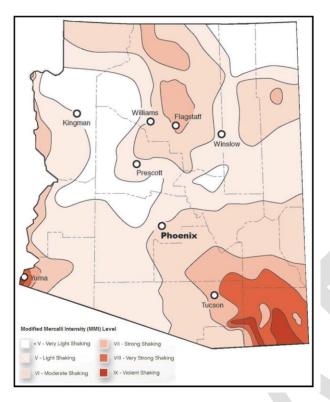
# Earthquake

Arizona experiences more earthquakes than most states in the nation due to its close proximity to California and Mexico. A total of 15 earthquake epicenters have occurred in Cochise County with a maximum magnitude of 6.9 (1830) and an average of 4.9. Benson, Bisbee, and parts of unincorporated Cochise County have a Possible/Likely probability while the other jurisdictions have an Unlikely/Possible probability of magnitude that is Limited/Critical for the higher probability jurisdictions and Negligible/Limited for jurisdictions with less probability.

Most expected damage will be to single family residential structures though it is estimated that no persons will seek temporary shelter after an earthquake event.

The following figure shows that Cochise County has some of the highest chances for experiencing the most severe ground shaking across the state. Jurisdictions that could be most impacted include Bisbee, Huachuca City, and Sierra Vista and portions of the unincorporated areas as shown by the darker red in the figure below:

#### Earthquake risk



Of note: The use of various vulnerability tools and analysis alongside other forecasts and data analysis sometimes create conflicting results or summaries that make it difficult to understand the true nature of the hazard or the realistic threat for the County. Earthquakes of large magnitude are part of the record and suggest that they are Likely in the future. Probability and Severity estimates may vary, however with a significant quake, emergency response requirements will be significant across the affected area and require significant resources in any response. Evacuation and transportation assistance could be considerable and needed in more than one area and jurisdiction depending on the severity of the quake.

# Fissures

As groundwater is depleted, incidents of fissures have increased dramatically. In Cochise County fissures in the Kansas Settlement area, south of the unincorporated community of Cochise, and in central Sulphur Springs Valley west of Hwy 191 create hazards for utility services and can trap residents in their homes.

There are not methods of quantifiably prediction the probability and magnitude of earth fissures. Fissures are Possible/Likely in Benson, Bisbee, Douglas, Sierra Vista, Willcox, and areas of unincorporated Cochise County. They are Unlikely/Possible in Huachuca City and Tombstone. In Bisbee and parts of unincorporated Cochise County, the magnitude/severity of fissures is estimated to be Limited/Critical. In the other jurisdictions fissure magnitude/severity is estimated to be Negligible/Limited.

Continuous fissures presently impacting residential areas (subdivisions or multiple homes in close proximity) are found in the settlement of Cochise, City of Willcox, and Kansas Settlement. Other individual residences throughout unincorporated areas of the County are impacted as well.

Hazards directly related to fissures that may also require temporary or permanent relocation of residents include cracked or collapsing roads, broken pipes and utility lines, damaged or breached canals, cracked foundations and walls, damaged well casings and wellheads, disrupted drainage, and contaminated groundwater. Evacuation and transportation assistance is likely to be minimal and directed to specific areas of fissure activity impacting residences.

### Fissure Risk

Participating Jurisdiction	Probability	Magnitude/ Severity	Warning Time	Duration
Benson	robability	1.89	3.37 (6-12 hours/< 6	2.58 (< 24 hours/< 1
benden	2.53 (Possible/Likely)	(Negligible/Limited)	hours)	week)
Bisbee	2.22 (Possible/Likely)	2.12 (Limited/Critical)	3.22 (6-12 hours/< 6 hours)	2.34 (<24 hours/< 1 week)
Douglas	2.1 (Possible/Likely)	1.5 (Negligible/Limited)	3.5 (6-12 hours/< 6 hours)	2.2 (< 24 hours/< 1 week)
Huachuca City	1.48 (Unlikely/Possible)	1.81 (Negligible/Limited)	3.39 (6-12 hours/< 6 hours)	1.87 (< 6 hours/< 24 hours)
Sierra Vista	2 (Possible)	1.91 <mark>(</mark> Negligible/Limited)	3.61 (6-12 hours/< 6 hours)	1.78 (< 6 hours/< 24 hours)
Tombstone	1.5 (Unlikely/Possible)	1.33 (Negligible/Limited)	3.83 (6-12 hours/< 6 hours)	1.5 (< 6 hours/<24 hours)
Willcox	2.38 (Possible/Likely)	1.88 (Negligible/Limited)	3.56 (6-12 hours/< 6 hours)	2.12 (< 24 hours/< 1 week)
Unincorporated Cochise County	2.66 (Possible/Likely)	2.1 (Limited/Critical)	3.93 (6-12 hours/< 6 hours)	2.52 (< 24 hours/< 1 week)

# Flood/Flash Flood

The three main sources for flood and flash flood in Cochise County are tropical storm remnants (usually early autumn), winter rains (made worse with snowmelt), and summer monsoons (flash flooding). Flooding also occur as a secondary impact of wildfires. Cochise County has been part of nine flood related disaster declarations and there have been numerous other non-declared events. From 1996 to 2016, there were 151 flood events with 11 direct deaths and four injuries.

Flood emergencies may cut off access for residents that require assistance. However, this type of emergency has a duration of less than 24 hours though recovery from damage may take more than a week. Where infrastructure is involved (roads, bridges, etc.), recovery could take weeks or months. Loss of bridges and roads can impact transportation and evacuation routes when rendered inaccessible.

While Willcox is most at risk from a flooding event, all jurisdictions have localized areas prone to flooding. Severe flooding is also likely to negatively impact utility availability, emergency services, transportation networks, water supply systems, and telecommunications infrastructure. Evacuation and

transportation assistance is likely to be minimal and directed to specific areas of flooding where residences are impacted severely.

Flood Risk

Participating Jurisdiction	Probability	Magnitude/ Severity	Warning Time	Duration
Benson	3.16 (Likely/Highly Likely)	2.74 (Limited/Critical)	3.21 (6-12 hours/< 6 hours)	2 (< 24 hours)
Bisbee	3.17 (Likely/Highly Likely)	2.76 (Limited/Critical)	2.68 (12-24 hours/6-12 hours)	2.34 (< 24 hours/< 1 week)
Douglas	3.2 (Likely/Highly Likely)	2.2 (Limited/Critical)	3 (6-12 hours)	2.1 (< 24 hours/ < 1 week)
Huachuca City	2.81 (Possible/Likely)	2.48 (Limited/Critical)	3.19 (6-12 hours/< 6 hours)	1.94 (< 6 hours/< 24 hours)
Sierra Vista	3.52 (Likely/Highly Likely)	2.48 (Limited/Critical)	2.48 (12-24 hours/6-12 hours)	2.04 (< 24 hours/< 1 week)
Tombstone	3.17 (Likely/Highly Likely)	2 (Limited)	3.5 (6-12 hours/< 6 hours)	1.67 (< 6 hours/< 24 hours)
Willcox	3.19 (Likely/Highly Likely)	2.75 (Limited)	2.81 (12-24 hours/6 - 12 hours)	2.5 (< 24 hours/< 1 week)
Unincorporated Cochise County	3.59 (Likely/Highly Likely)	2.62 (Limited/Critical)	3 (6-12 hours)	2.24 (< 24 hours/< 1 week)

# Severe Wind

Severe wind hazards generally occur in the spring and early summer months or from thunderstorms. Based on the historic record, the probability of tornados occurring in Cochise County is probable. Located in Zone 1 of the FEMA wind zones (winds at 130 mph gust speed), severe wind activity is Likely/Highly in all jurisdictions with a magnitude/severity level of Limited/Critical.

Wind damage may impact infrastructure and transportation corridors as well as residences leaving more densely populated areas vulnerable.

Except for incidents of severe damage caused by wind, it is not expected that evacuation of residents or commercial areas would be required. Exceptions may be the need to temporarily remove people from hazardous conditions after a wind event such as persons at schools or hospitals that have been damaged and cannot safely attend to persons in these buildings.

#### Wildfire

Wildfire poses a significant threat across Cochise County, particularly at the interface between wildlands and inhabited areas. If not promptly controlled wildfires may grow into an emergency or disaster that threaten lives, infrastructure, and resources.

Two recent and major fires required evacuation of several homes and business. 650 homes evacuated and5 50 burned to the ground. 44 homes and 17 other buildings were damaged. Post-fire flooding also destroyed the City of Tombstone's water catchment structures and overall damage exceeded \$20 million. Another fire required the evacuation of 50 residents and threatened 10 homes.

Wildfire poses a significant exposure to evacuation and transportation response needs in all areas across the county. Removing people from hazardous conditions, particularly in areas where vulnerable people with limited access to safe and timely transportation may reside or work will be critical. These include schools, hospitals, places of business, senior and disable residents, and neighborhoods where little reaction time is available.

Participating		Magnitude/	Warning	
Jurisdiction	Probability	Severity	Time	Duration
			2.95 (12-24	2.95 (< 24
Benson			hours/6-12	hours/< 1
	2.79 (Possible/Likely)	2.58 (Limited/Critical)	hours)	week)
			3.05 (6-12	3.17 (< 1
Bisbee			hours/< 6	week/>1
	3.05 (Likely/Highly Likely)	3.05 (Limited/Critical)	hours)	week)
			3.3 (6-12	3.2 (< 1
Douglas			hours/< 6	week/>1
	3.2 (Likely/Highly Likely)	2.6 (Limited/Critical)	hours)	week)
			3.45 (6-12	2.39 (< 24
Huachuca City			hours/< 6	hours/< 1
	3. (Likely/Highly Likely)	2.9 (Limited/Critical)	hours)	week)
			2.78 (12-24	
Sierra Vista		3.26	hours/6-12	
	3.61 (Likely/Highly Likely)	(Critical/Catastrophic)	hours)	3 (< 1 week)
			3.33 (6-12	2.83 (< 24
Tombstone			hours/< 6	hours/< 1
	3.17 (Likely/Highly Likely)	2.33 (Limited/Critical)	hours)	week)
			3.19 (6-12	2.5 (< 24
Willcox			hours/< 6	hours/< 1
	3.25 (Likely/Highly Likely)	2.88 (Limited/Critical)	hours)	week)
Unincorporated Cochise			3.24 (6-12	3.59 (< 1
County			hours/< 6	week/>1
county	3.34 (Likely/Highly Likely)	2.97 (Limited/Critical)	hours)	week)

Wildfire Risk

### Wildlands-Urban Interface Fire Risk

Community WUI	WUI Risk	Communities within	Fire Dept/Dist
		WUI	
Benson	Low	Benson	Benson Fire
			Department
Bisbee	From Bisbee CWPP:	Bisbee Banning Creek,	Bisbee Fire Dept.,
	37% High	Highland Creek, Naco,	Naco Fire Dist., San
	34% Moderate	South Bisbee, Warren	Jose Fire Dist.
	29% Low		
Douglas/Sunnyside	Moderate	Calumet, Douglas,	Douglas Fire Dept.,
		Pirtleville, Sunnyside	Sunnyside Fire Dist.,
			Pirtleville Fire Dist.
Town of Huachuca City	Low	Campstone, Huachuca	Huachuca City Fire
		City, Whetstone	Dept., Whetstone Fire
			Dept., PBW Fire Dist.
Sierra Vista/Palominas	Moderate	Bledsoe, Hereford,	Sierra Vista Fire Dept.,
		Miracle Valley,	Fry Fire Dist.,
		Nicksville, Palominas,	Palominas Fire Dist.
		Ramsey, Sierra Vista,	
		Sierra Vista Southeast,	
		Stark	
Willcox	Moderate	Willcox	Willcox Fire Dept.

Wildfire risks are significant for a sizable portion of the county. The need for transportation and evacuation services in cases of fire at the wildlands-urban interface are significant. Access may be limited depending on fire location.

#### Risk Assessment Summary

The following table indicates each type of defined hazard in the Cochise County Multi-Jurisdictional	
Hazard Mitigation Plan and the level of risk for those threats in each jurisdiction.	

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

Survey respondents to the Mitigation Plan recommended a regional emergency evacuation plan. It is unclear of such a plan was developed.

Cochise County does have an Emergency Response and Recovery Plan (2006 – updated 2014). The Plan identifies School District busses as the primary form of emergency transportation for larger groups or evacuation efforts. In the Volunteer, Local, & Other County Agencies list of supporting organizations, transit providers are not listed. The County Highway & Flood Plains Department is listed as the primary department for transportation networking and evacuation of special populations. Highway and Flood Plans Department is responsible for the allocation of vehicles and related resources to move people, equipment, and essential supplies during an emergency. It also states that local jurisdictions will provide transportation and evacuation services within its jurisdiction. The section of the Emergency Support Functions describing transportation and evacuation resources **does not identify public transit vehicles** but does list other means such as school buses, commercially owned vehicles, mining vehicles and mail trucks as well as planes, helicopters, and passenger vehicles.

# Santa Cruz County

The Santa Cruz County Multi-Jurisdictional Hazard Mitigation Plan was adopted in 2018. The Plan includes the incorporated communities of Nogales and Patagonia and the unincorporated areas of Santa Cruz County. The Plan identifies six of the State's 15 hazards as relevant to the County. These are Dam Failure, Drought, Flooding, HAZMAT, and Wildfire.

#### Dam Failure

The largest dam failure risk is to Nogales Arizona through failures of flood control and water storage dams located upstream in Nogales Sonora MX. Failure would cause significant flooding at the international border and into the City of Nogales AZ.

		Magnitude/	Warning	
Participating Jurisdiction	Probability	Severity	Time	Duration
Nogales	Likely	Catastrophic	< 6 hours	< 6 hours
Patagonia	Unlikely	Negligible	< 6 hours	< 6 hours
Unincorporated Santa Cruz County	Unlikely	Catastrophic	< 6 hours	< 24 hours

Dam Failure Risk

						Percent of
	Total	Population	Percent of Population	Total Population	Population Over 65	Population Over 65
Community	Population	Exposed	Exposed	Over 65	Exposed	Exposed
			HIGH			
County-Wide Totals	47,384	4,788	10.10%	6,218	665	10.70%
City of Nogales	20,773	2,940	14.15%	2,863	456	15.93%
Town of Patagonia	890	0	0.00%	201	0	0.00%
Unincorporated	25,721	1,848	7.18%	3,154	209	6.63%

Of the three dams located in the County (Parker Canyon, Pena Blanca, and Lake Patagonia), none pose a significant risk to populations as they are located in rural areas of the County.

Dam Failure could pose a significant need for transportation and evacuation services. Because flooding has low warning times and the severity can be catastrophic for roadways and infrastructure, evacuation efforts may be lengthy and costly.

# Drought

Santa Cruz County has been included in each of the 21 State/Federal Drought Emergency declarations and 93 drought events since records have been kept in the County. Each of the Plan's jurisdictions is subject to drought and may experience secondary impacts affecting water supply, costs associated with water infrastructure, lost income from tourism and trade, and hazards such as fissures, flooding, subsidence, and wildfire. Drought Risk

Participating Jurisdiction	Probability	Magnitude/ Severity	Warning Time	Duration
Nogales	Likely	Critical	> 24 hours	>1 week
Patagonia	Possible	Critical	> 24 hours	>1 week
Unincorporated Santa Cruz County	Highly Likely	Limited	> 24 hours	> 1 week

It is unlikely that evacuation and transportation issues will arise in hazardous drought conditions.

# Flood Flash Flood

In the County's Plan, flooding is described as a result of precipitation and runoff related events. Other flooding from dam or levee failure are not addressed in this section.

The three seasonal atmospheric events that tend to trigger floods in Santa Cruz County are tropical storm remnants, winter rains, and summer monsoons. Another secondary source of flood hazards is related to wildfires and the extreme runoff from newly burned and denuded lands.

Santa Cruz County has been part of 15 declared flood disasters, some emanating from the Sonoran side of the border.

Flood Risk

Participating Jurisdiction	Probability	Magnitude/ Severity	Warning Time	Duration
Nogales	Highly Likely	Critical	< 6 hours	< 24 hours
Patagonia	Highly Likely	Catastrophic	< 6 hours	< 24 hours
Unincorporated Santa Cruz County	Highly Likely	Critical	< 6 hours	< 1 week

Population at risk for flooding

Community	Total Population	Population Exposed	Percent of Population Exposed	Total Population Over 65	Population Over 65 Exposed	Percent of Population Over 65 Exposed		
HIGH								
County-Wide Totals	47,384	18,973	40.04%	6,218	2,783	44.75%		
City of Nogales	20,773	9,242	44.49%	2,863	1,327	46.34%		
Town of Patagonia	890	701	78.75%	201	157	77.88%		
Unincorporated	25,721	9,030	35.11%	3,154	1,299	41.19%		
MEDIUM								
County-Wide Totals	47,384	926	1.95%	6,218	163	2.62%		
City of Nogales	20,773	677	3.26%	2,863	106	3.69%		
Town of Patagonia	890	12	1.40%	201	3	1.60%		

Flood emergencies may cut off access for residents that require assistance. However, this type of emergency has a duration of less than 24 hours though recovery from damage may take more than a week. Where infrastructure is involved (roads, bridges, etc.), recovery could take weeks or months. Loss of bridges and roads can impact transportation and evacuation routes when rendered inaccessible.

#### Hazardous Materials Incidents

Santa Cruz County faces HAZMAT hazards on its major roads and rail lines as well as pipelines transporting hazardous substances. The Nogales port of entry receives the most substantial number of hazardous waste shipments in Arizona with many loads originating in California. These shipments are avoiding more stringent California requirements at ports of entry. Hazardous incidents that happen in Nogales Sonora along the border and impact downstream waterways are often unknown until damage has been identified on the Arizona side. A number of incidents involving sulfuric acid and ammonia have been reported at or near the port of entry.

This type of hazard could command transportation and evacuation services when larger areas are impacted or when businesses and residences near the port of entry are directly impacted.

#### HAZMAT Risk

Participating Jurisdiction	Probability	Magnitude/ Severity	Warning Time	Duration
Nogales	Likely	Catastrophic	< 6 hours	< 1 week
Patagonia	Possibly	Limited	< 6 hours	< 24 hours
Unincorporated Santa Cruz County	Likely	Limited	< 6 hours	< 1 week

#### Population risk for HAZMAT hazard

Community	Total Population	Population Exposed	Percent of Population Exposed	Total Population Over 65	Population Over 65 Exposed	Percent of Population Over 65 Exposed	
HIGH							
County-Wide Totals	47,384	36,890	77.85%	6,218	5,061	81.39%	
City of Nogales	20,773	20,188	97.18%	2,863	2,815	98.31%	
Town of Patagonia	890	890	100.00%	201	201	100.00%	
Unincorporated	25,721	15,812	61.47%	3,154	2,045	64.84%	
MEDIUM							
County-Wide Totals	47,384	7,219	15.24%	6,218	721	11.59%	
City of Nogales	20,773	585	2.82%	2,863	48	1.69%	
Town of Patagonia	890	0	0.00%	201	0	0.00%	
Unincorporated	25,721	6,635	25.80%	3,154	672	21.31%	

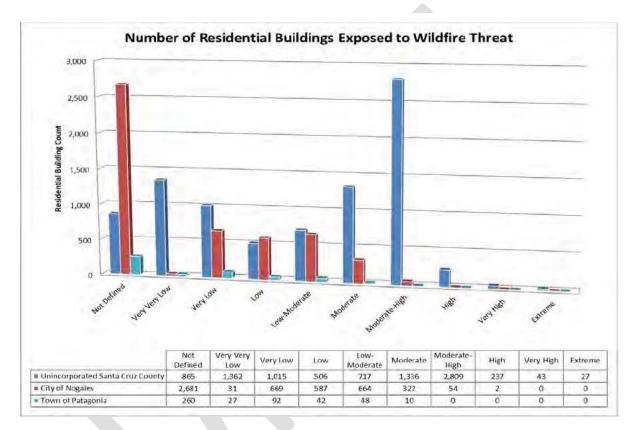
#### Wildfire

Santa Cruz County has logged eighty wildfires over one hundred acres (2017). It is expected that wildfire incidents will increase with climate change. There is a high probability of population displacement during a wildfire at the wildland urban interface.

Wildfire Risk

Participating Jurisdiction	Probability	Magnitude/ Severity	Warning Time	Duration
Nogales	Highly Likely	Critical	< 6 hours	< 24 hours
Patagonia	Highly Likely	Critical	< 6 hours	> 1 week
Unincorporated Santa Cruz County	Highly Likely	Limited	< 6 hours	>1 week

Residences at risk of wildfire



Incidents of wildfire often require the use of transportation and evacuation services if located near the wildlands urban interface. Active fire may reduce access should roadways and infrastructure be damaged or in the fire line.

Risk Assessment Summary

Jurisdiction	Dam Failure	Drought	Flooding	HAZMAT	Wildfire
Unincorporated Santa Cruz County	Х	Х	Х	х	Х
Nogales	Х	Х	Х	Х	Х
Patagonia		Х	Х	х	Х

An Emergency Response Plan for Santa Cruz County was not identified. Discussions with Emergency Planners indicated that emergency response requiring transportation or evacuation relied heavily on school bus access and school-based drivers.

Task 3 – Review and evaluation of existing emergency plans among rural transit providers in the SEAGO region regarding their internal emergency response plans

Transit organizations reviewed:

Cochise County

Benson – 5311

No Emergency Plan was provided for this Transit Program.

## Bisbee – 5311

The City of Bisbee has no Emergency Response Plan for its transit program. The City does have an Emergency Operation Plan dated March 2004. The Plan identifies eight natural hazards and 11 technological hazards as potential disasters. (Pandemics are not listed as a potential disaster.)

The Logistics Section is responsible for providing equipment, facilities, materials, and services in support of an emergency response. Staff Advisors are to prepare and maintain a resource inventory and serves as liaison to volunteers and private agencies. The Incident Commander is responsible for evacuation and securing disaster areas. The Public Works Director is responsible for identifying local transportation resources and arranging for their use in emergencies, and establishing and maintaining a reserve pool of drivers, maintenance personnel, parts, and tools. The Emergency Management Director coordinates evacuation planning including transportation.

Section X – Situations, Subsection R identifies transportation needs in certain disaster situations but does not indicate where transportation services will come from or how they will be accessed.

Section XI – Assumptions, Subsection E assumes that most people will evacuate themselves and recognizes that some populations (prisoners, hospital patients, schools, etc.) may require transportation. The Plan does not suggest where that transportation will come from.

Subsection R indicates that when the need arises, both public and private locally owned transportation resources will be made available for the duration of the emergency but does not indicate from where these resources will come.

Annex E – Evacuation, Transportation subsection defines the Public Works department as responsible for coordinating transportation needs for special population groups and emergency goods and services utilizing area schools, churches, and other organizations with transportation assets.

Annex R – Transportation: The Emergency Management Director is tasked with identifying transportation resources and ensuring agreements exist for utilization of public and private transportation assets. The Public Works Director is tasked with identifying and maintaining a resource list of transportation resources and coordinating with schools, churches, tour services, neighboring jurisdictions and private industry concerning the use of their assets.

Annex S – Emergency Contact numbers: These numbers have not been updated since the development of the Plan (2004).

## Summary:

**Comprehensiveness**: There is no Emergency Plan for the Transit Program at the City of Bisbee. The City's Emergency Response Plan (2004) uses an outdated format of Sections and Annexes that make it difficult to comprehend and utilize.

**Completeness**: The Plan, with regard to Transportation identifies various hazards that may require transportation assets but does not identify where those assets might come from. A general listing of potential sources (schools, churches, private sources) is identified but no MOUs or agreements of mutual aid are included.

**Internal and External Emergency Response**: This Plan does not include transit related emergencies internal to the Transit organization. It does address external (local and regional) emergency plans.

**Review and updates**: The Plan calls for reviews and updates on an annual basis. There is no indication that the Plan has been reviewed or updated since its inception in 2004.

**Conclusion**: The Transit Organization (a program within the Public Works Department of the City of Bisbee) does not have an Emergency Response Plan for Transit related emergencies. The City's Emergency Response Plan is outdated and does not include sufficient information on transportation resources including those of the City's Transit Program.

## Douglas – 5311

The City of Douglas and Douglas Rides has a comprehensive Safety, Security and Emergency Preparedness Plan. The Plan is dated 2012 and contains extensive supporting documentation and Resource Information. The Plan uses an extensive FTA template format that covers the following:

## PREFACE

1. DEFINING THE MISSION

1.1 INTRODUCTION

**1.2 SYSTEM OVERVIEW** 

- 1.3 SAFETY AND SECURITY ROLES AND RESPONSIBILITIES
- 1.4 CRITICAL ASSETS
- 2. ANALYZING THREATS

2.1 OVERVIEW

- 2.2 THREATS AND VULNERABILITIES
- 2.3 SCENARIO ANALYSIS

2.4 IDENTIFIED POTENTIAL TRANSIT SYSTEM THREATS

3. REDUCING VULNERABILITIES

3.1 OVERVIEW

3.2 HIRING AND TRAINING ......

3.3 POLICIES AND PROCEDURE

3.4 FACILITIES

**3.5 VEHICLE READINESS** 

## 3.6 ACCIDENT AND INCIDENT ANALYSIS

- 3.7 TRANSIT WATCH
- 4. PREPARING TO RESPOND
  - 4.1 OVERVIEW
  - 4.2 COORDINATION WITH EMERGENCY MANAGEMENT
  - 4.3 COORDINATION WITH FIRST RESPONDERS
  - 4.4 NOTIFICATION METHODOLOGY
  - 4.5. SUCCESSION PLANNING
  - 4.6 EXERCISES AND DRILLS
- 5. REACTING TO AN EVENT
  - 5.1 OVERVIEW
    - 5.2 ACCIDENTS AND INCIDENTS
    - 5.3 ACTS OF NATURE
    - 5.4 ORGANIZATION INFRASTRUCTURE
    - 5.5 HAZMAT
    - 5.6 CRIMINAL ACTIVITY
    - 5.7 TERRORISM
- 6. MANAGING THE INCIDENT
  - 6.1 NATIONAL INCIDENT MANAGEMENT SYSTEM (NIMS)
  - 6.2 INCIDENT COMMAND SYSTEM (ICS)
  - 6.3 TRANSIT INCIDENT MANAGEMENT PROTOCOL
  - 6.4 EMERGENCY INFORMATION DISSEMINATION
  - 6.5 INCIDENT RECOVERY
- 7. ACTIVATING AND UPDATING SSEPP
  - 7.1 OVERVIEW
  - 7.2 ACTIVATION
  - 7.3 EVALUATION AND MODIFICATION OF SSEPP
  - 7.4 UPDATING SSEPP
- 8. SSEPP SUPPORTING DOCUMENTS
  - 8.1 LIST OF KEY PERSONNEL & SSEPP RESPONSIBILITIES
  - 8.2 CRITICAL ASSET IDENTIFICATION AND ANALYSIS
  - 8.3 COMPLETED CAPABILITIES ASSESSMENT
  - 8.4 PRIORITIZED VULNERABILITY REPORT
  - 8.5 COMPLETED THREAT AND VULNERABILITY ASSESSMENT FORMS
  - 8.6 COMPLETED FTA TOP 20 SECURITY PROGRAM ACTION ITEMS FOR TRANSIT AGENCIES: SELF-ASSESSMENT CHECKLIST
  - 8.7 MEMORANDUM OF UNDERSTANDING BETWEEN [CITY OF DOUGLAS/DOUGLAS RIDES] AND COMMUNITY EMERGENCY MANAGEMENT
  - 8.8 MEMORANDUM OF UNDERSTANDING BETWEEN [CITY OF DOUGLAS/DOUGLAS RIDES] AND FIRST RESPONDERS
  - 8.9 INTERNAL AND EXTERNAL CONTACT LISTS
  - 8.10 SUCCESSION LIST
  - 8.11 EVALUATION FORM FOR TRANSIT INCIDENTS
  - 8.12 MEMORANDUM OF EXECUTIVE APPROVAL
- APPENDIX A INSTRUCTIONS FOR CREATING THE SSEPP
- APPENDIX B RESOURCE INFORMATION

EMPLOYEE RECRUITMENT

CRISIS MANAGEMENT FOR TRANSIT DRIVERS DRUG AND ALCOHOL POLICY REQUIREMENTS CHECKLIST BOMB THREAT PROCEDURAL STEPS RECOGNIZING WARNING SIGNS OF VIOLENCE IDENTIFYING AND REPORTING UNUSUAL VEHICLES IDENTIFYING AND REPORTING UNUSUAL BEHAVIOR CONVENTIONAL WEAPONS AND IMPROVISED EXPLOSIVE DEVICES REACTION TO WEAPONS AND IED THREAT AND ATTACK CHEMICAL, BIOLOGICAL AND RADIOLOGICAL RELEASE IED & CBR INCIDENT MANAGEMENT RELEASE OF SENSITIVE INFORMATION TO THE PUBLIC THE PS AND QS OF CRISIS COMMUNICATIONS THE SEVEN CS OF CRISIS COMMUNICATIONS TRANSIT WATCH INFORMATION

APPENDIX C FORMS

DRIVER TRAINING DOCUMENTATION FORM DRIVER EVALUATION & COACHING DOCUMENTATION VEHICLE INSPECTION REPORT VEHICLE DEFECT AND CORRECTION REPORT VEHICLE ACCIDENT REPORT FORM INCIDENT / INJURY REPORT FORM PREVENTIVE MAINTENANCE INSPECTION REPORT BOMB THREAT CHECKLIST AND PROCEDURES VISITOR SIGN-IN SHEET

#### Summary:

**Comprehensiveness**: At 179 pages, this Plan template is very comprehensive with eight major sections and three Appendixes. It is a template supplied by FTA.

**Completeness:** The plan includes several subsections from the template that are relevant but not populated. These include section 1.2 and all of section 8. Section 8 – Supporting Documentation, is where most of the Transit Organization specific information is to be located. This section is meant to contain the most vital information in the Plan but has not yet been populated by the City of Douglas.

Internal and External Emergency Response: This Plan includes emergency response information and protocols for emergencies that are internal (within the Transit Organization) and external (outside the Transit Organization including community and regional emergencies). It references MOUS with First Responders and the City. However, it appears that the MOU templates in section 8 have not been enacted.

**Review and updates:** The Plan calls for reviews and updates on an annual basis. There is no indication that the Plan has been reviewed or updated since its inception in 2012.

**Conclusion:** This Plan template is recommended by FTA for 5307 providers and can be made applicable to 5311 providers as it is highly comprehensive. City of Douglas/Douglas Rides will need to review, update, and complete the planning template, including MOUs with other entities/stakeholders and first responders, updating personnel policies, training of personnel, and completion of the various forms found in section-8 and the appendixes.

#### Sierra Vista – 5311

No Emergency Response Plan for the Transit Program or for the City was provided.

## Douglas ARC – 5310

No Emergency Response Plan for the Transit Program was provided.

## Vi-Cap - 5310

Vi-Cap has an Emergency/Pandemic Plan dated 2019. The Plan outlines who takes the lead in emergency response (Executive Director), the prioritization of clients requiring support, the location of information regarding staff, clients, and volunteers (Ride Scheduler), the existence of an Emergency Call Tree, intent to meet at a specified (not listed) location if communications are disrupted, service priorities for clients (transportation to shelter, special needs equipment, emergency cooking equipment), and provision of emergency supplies to clients (food, water, life sustaining items, and first aid supplies).

Vi-Cap also has a Pandemic Checklist that identifies lead (Executive Director) if a pandemic occurs, identifies the need for a continuity of operations plan (but does not include it in this Plan), identifies the need for staff and volunteers to be cross trained for continuity of business operations, and identifies the need for policies for flexible worksites and work hours. It also identifies the need to ensure services and products are available in the supply chain and identifies the need to update the emergency notification call-trees.

#### Summary:

**Comprehensiveness:** The Plan provided by Vi-Cap is for the organization. It does not include an Emergency Response plan for its transportation services and paid/volunteer drivers. At three pages and 11 points, the Plan provides very basic information, assurances, and priorities.

**Completeness**: A more complete Plan should address emergency response protocols including: internal and external emergency sections, internal emergency policies, protocols, training, and forms/lists (some of these exist in minimal form or are mentioned in the current Plan); External Emergency agreements, MOUs, and contact lists if assets will be used to assist in local or regional emergencies; Accident and Incident policies, protocols, and forms for volunteer and paid drivers; a list of threats and vulnerabilities (external emergency may make it difficult or impossible for volunteer drivers to respond – what is the contingency plan?); and staff/volunteer training.

**Internal and External Emergency Response**: This Plan does not include external emergency response plans other than services to its clients. This may be sufficient if the organization does not plan to assist other local and regional agencies in responding to emergencies. If so, it may wish to state that in the current plan.

Review and updates: The Plan does not indicate how often it should be reviewed and by whom.

**Conclusion**: This Plan is a good start to a more comprehensive and complete plan that would be useful to the organization, its staff, and paid/volunteer drivers. There may be templates (less burdensome that the FTA template) that would be more useful to Vi-CAP.

## Women's Transition Project – 5310

No Emergency Response Plan for the Transit Program was provided by the agency.

## Santa Cruz County

## Santa Cruz Training Council – 5310

No Emergency Response Plan for the Transit Program was provided by the agency.

#### Patagonia Senior Services – 5310

The Senior Citizens of Patagonia provided an Emergency Plan (undated).

The agency is a non-profit organization providing a number of services including transportation. The Plan is developed around client safety and includes very basic information. The Board of Directors is to determine the roles and responsibilities for emergency response (not included in this Plan). The Center will be a shelter source providing meals and transportation as allowable. Cross training of employees allows for continuity of business and essential services. The agency keeps a list of volunteers and staff in their central office and on cell phones. A call-tree has been developed and distributed and the Center established as a central location for emergency command, supplying water, food, life sustaining items and first aid supplies as needed.

## Summary:

Comprehensiveness: The Plan provided by Senior Citizens of Patagonia is for the organization. It does not include an Emergency Response plan for its transportation services and paid/volunteer drivers. The Plan provides very basic information that is focused on basic emergency response requirements such as leadership, continuity, training, communications, contingency, and basic services such as transportation, food, water, shelter, supplies, etc.

**Completeness**: A more complete Plan should address emergency response protocols including: internal and external emergency sections, internal emergency policies, protocols, training, and forms/lists (some of these exist in minimal form or are mentioned in the current Plan); External Emergency agreements, MOUs, and contact lists if assets will be used to assist in local or regional emergencies; Accident and Incident policies, protocols, and forms for volunteer and paid drivers; a list of threats and vulnerabilities (external emergency may make it difficult or impossible for volunteer drivers to respond – what is the contingency plan?); and staff/volunteer training.

**Internal and External Emergency Response**: This Plan does not include external emergency response plans other than services to its clients. This may be sufficient if the organization does not plan to assist other local and regional agencies in responding to emergencies. If so, it may wish to state that in the current plan.

Review and updates: The Plan does not indicate how often it should be reviewed and by whom.

**Conclusion**: This Plan is a good start to a more comprehensive and complete plan that would be useful to the organization, its staff, and paid/volunteer drivers. There may be templates (less burdensome that the FTA template) that would be more useful to the organization.

## Horizon Health and Wellness – 5310

Horizon Health and Wellness provided an Emergency Management Plan updated April 2021.

While the agency serves registered clients, it will extend services to the general population as resources allow. The agency conducted a hazard vulnerability analysis and identified thirteen hazards or potential

emergencies for which it is prepared to respond and nine additional potential emergencies that are addressed in separate agency policies and procedures.

With the activation of the Emergency Management Plan, the CEO or designee will determine the extent the Plan will be activation, determine if outside authorities will be notified, establish a control center, initiate a recall roster as needed, establish communications, coordinate release of information, and maintain roster of all patients and their location. Roles and responsibilities for other key staff are indicated in detail.

Transit resources will be allocated to client services during an emergency. Transportation management is directed by the Chief Crisis Stabilization Officer.

Special procedures for Active Shooter and Bomb Threat/Suspicious Objects, Chemical or Hazardous Material Spill, Earthquake, Facility Damage or Mass Casualty, Flood, Hostage Situation, Medical Emergencies, Severe Storm, Terrorist Attack, Tornado, and Wildfire are included in the Plan.

Training in Emergency procedures is given to each new employee and annually, thereafter. Review and updates to the plan are conducted annually.

## Summary:

**Comprehensiveness**: The Plan provided by Horizon is focused on in-house emergencies within the organization. The Plan does outline the expected response for each potential hazard, who is responsible for which elements of emergency response, and how staff should respond and support clients. The Plan is easily understood and clearly written. The Plan identifies locations for Control Centers in four of the five counties it serves. Santa Cruz County is not included.

**Completeness:** The Plan does not include a separate Emergency Response plan for its transportation services and drivers (incident/accident response, driver training, on-board emergency, etc.) Nor does the Plan address how and under what circumstances the agency would provide mutual aid in the case of an external (local or regional) emergency. The Plan does say it will respond to external emergencies as resources allow. It may be beneficial to state under what circumstances this aid could be available and include any MOUs it has with emergency response organizations and first responders.

Evidence of updates, training, and drills might also be included or referenced (where can such evidence be found) as a means to monitoring expected outcomes.

**Conclusion**: Horizon Health and Wellness is a non-profit organization operating regionally across five counties. The Plan includes roles and responsibilities for emergency response activation that is clear and detailed. Efforts to include more information on how staff should address emergencies while in transit, and any information available on the conditions by which the agency would assist outside first responders in larger local and regional emergencies would enhance the Plan.

## Pinal Hispanic Council – 5310

No Emergency Response Plan for the Transit Program was provided by the agency.

#### Graham County

#### Easter-Seals Blake Foundation – 5310

No Emergency Response Plan for the Transit Program was provided by the agency.

#### Mount Graham Safe House – 5310

No Emergency Response Plan for the Transit Program was provided by the agency.

Graham County Rehabilitation – 5310

No Emergency Response Plan for the Transit Program was provided by the agency.

#### Mary's Mission – 5310

No Emergency Response Plan for the Transit Program was provided by the agency.

#### Greenlee County

No providers located in Greenlee – See Graham County

## **Findings Summary**

## State and County

The State and County Plans are primarily Hazard Mitigation Plans and not Emergency Response Plans. As such, there is little information on the details of emergency response logistics and protocols. These Plans do, however; provide information on the types of hazards that jurisdictions believe are most relevant to their areas and provide data as to the probability and severity of such hazards and ensuing emergency conditions. This information will be useful to transit organizations in determining the types of emergencies they may experience both internally and as part of a response team to local and regional emergencies outside of their organizations. These Plans also provide information on the roles and responsibilities of jurisdictions in preparing and planning for crisis and provide contact information so that transit organizations can engage in planning updates, develop MOUs for mutual aid, and determine if their transportation resources would be useful for these external emergencies. No plan utilized or listed public transit agencies as a source for mutual aid, particularly when evacuation/transportation was expected to be needed.

## Transit Organizations

Each Transit Organization listed in this workpaper was contacted via email and through coordination council meetings to determine if an emergency plan existed and, if so, asked that the plan be provided for review.

Of the fourteen organizations contacted, five provided their emergency plans. Only one provided a Plan that was specific to its Transit Program (Douglas) using an FTA template.

Based on information provided, none of the five Plans received had been updated since its creation.

While some of the plans acknowledged an organizational role as a potential source of assets for local or regional emergencies, none exhibited MOUs or agreements in how that engagement would be managed.

The FTA template (used by Douglas) was supplied as a model for larger 5307 providers and could be construed as burdensome for most 5311 and all 5310 providers. While it is most comprehensive and serves as a model for what should be included in an emergency plan, it may be more useful if reduced to essential information that would be easily accessed during trainings, drills, and implementation.

Overall, it appears that transit organizations have not had the staff time or capacity to develop comprehensive, complete emergency plans that address internal (within the organization) and external (local and regional) emergencies, nor plans specific to their transit programs.

# Future Tasks and Working Papers

This project's scope of work encompasses five additional tasks.

Task 4 – Analysis of the capacity of rural transit providers to respond to emergencies as part of a state, local, or county-wide coordinated response plan.

Task 5 – Analysis of the capacity of rural transit providers to respond to emergencies within their organizations.

# These tasks will be report in Working Paper 2 - Rural Transit Providers' Capacity to Address Emergencies in the SEAGO region

Task 6 – Identify potential priorities and protocols to address gaps in emergency planning for transit organizations.

Task 7 – Identify steps, activities, and policies needed to create or improve regional rural transit providers' capacity to address emergencies within their own organization and as important partners in broader, coordinate, community/county-based emergency response.

# These tasks will be reported in Working Paper 3 – Gaps in Emergency Planning and Steps to Mitigate Them

Task 8 – Final report, will summarize the project, its findings, and working papers along with public comments and TAC meeting reports.

# EMERGENCY SERVICES PLANNING FOR TRANSIT ORGANIZATIONS

## SEAGO – 3/2022

Working Paper 2 – Rural Transit providers' capacity to address emergencies in the SEAGO Region.

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## **Project Overview**

## Introduction

Resiliency in the face of hazards, threats, and events is the hopeful outcome of any emergency planning. As the prospect of these emergency situations continues and even grows, rural transit agencies in southeastern Arizona are more likely to be tasked to implement their own internal emergency plans or work with larger, coordinated efforts to address emergencies faced by one or more communities.

Phase 1 of an ADOT funded planning effort seeks to identify gaps in emergency preparedness among 5310 and 5311 providers in the SEAGO region. This working paper describes the capacity of transit organizations to respond to emergencies, both internal (within the organization) and external (outside the organization) within their service area (Tasks 4 and 5 of funded scope of work).

## Previous Working Paper(s)

Working Paper 1 reviewed the State, County, and local emergency response plans within the SEAGO region to determine existing roles for transit organizations and their assets. It also reviewed and evaluated the existing emergency plans for transit providers.

The findings summary in Working Paper 1 found that there is little information on the details of emergency response logistics and protocols among State and County Plans. Most municipalities relied on their County plan for emergency response. None indicated use of transit assets in their response protocols. Only one MOU for mutual aid existed between Greenlee County and the regional transit organizations, however, that MOU had expired, and no transit provider was aware of its participation in the MOU.

Of the fourteen transit organizations contacted, only five provided emergency plans, however, each was found to be insufficient, and none had active review, training, or practice schedules. These insufficiencies can be related to the lack of staff time and capacity to develop comprehensive, complete emergency plans that address internal and external emergency response.

Working Paper #1 was shared with the TAC members for this study where participants were encouraged to review the findings, share comments, and make recommendations. The Working Paper was shared with each member by email and was posted to the SEAGO website. No comments or recommendations were received.

# Project Objectives for Working Paper 2

# Task 4 – Analysis of the capacity of rural transit providers to respond to emergencies as part of a State, local, or county-wide coordinated response plan.

The purpose of this task is to determine if and how regional rural transit providers are able to play an active role in coordinated emergency response plans and identify where coordinated response plans include public transit without the transit agencies awareness.

# Task 5 – Analysis of the capacity of rural transit providers to respond to emergencies within their organizations.

The purpose of this task is to determine if and how regional rural transit providers can respond to internal emergencies.

## Effort & Outcomes from Survey

The first activity was to determine a transit organizations capacity to respond to emergencies as part of a State, local or county-wide coordinated response. Transit providers were asked if they had any formal agreements with emergency responders that would allow access to assets and/or personnel in the event of an emergency, particularly those that required evacuation of persons or special populations outside of the transit organizations' own consumers or constituents, or events that required moving emergency responders, supplies, materials, food, etc. to and from an emergency site.

Of the transit organizations contacted in the four-county SEAGO region, none were aware of any formal agreement(s) with outside emergency responders though most agreed that if called upon, they would try and help within the limits or confines of organizational capacity and policy. When asked about internal policies for using assets and or personnel for non-mission activities, including insurance requirements, agreements for use of personnel, damage, or fuel reimbursements, etc., transit organizations responded that no policies, protocols, or agreements were in place.

Task #2, was to determine the capacity of rural transit providers to respond to emergencies within their organizations. For this task, participants were asked to utilize a baseline survey initially developed by the Red Cross and adapted by SEAGO for this study. This readiness assessment was adapted for transit providers in a Word template format that allowed responders to check boxes and provide organizational information (see Appendix A for a sample assessment tool).

Survey data is considered baseline in that it indicates areas for improvement. SEAGO will use this data in creating technical assistance tools and templates for agencies to consider in building their emergency response and readiness programs.

Survey responses were provided by four 5311 organizations (Bisbee, Benson, Douglas, and Willcox); one 5307 (Sierra Vista); and nine 5310 organizations – six with active grants (Town of Huachuca City, ViCap, Santa Cruz Training Program, Senior Citizens of Patagonia, and Easterseals Blake Foundation) and three without (Echoing Hope Ranch, Mt. Graham Safe House, Graham County Rehabilitation Center). Additionally, the Graham County Government completed a survey though they provide no transit

services. Each organization that responded did so as part of their Coordination Council activities through the Mobility Management program at SEAGO.

The survey document assured transit providers that participation was entirely voluntary, that no individual data would be made available to the public, and that participation in the survey in no way committed the responding agency to take part in any emergency readiness programs. For this reason, Working Paper 2 data will show agency names redacted prior to publication.

Of the 15 respondents, only five reported the existence of an Emergency Response Plan though several include activities that would be part of a plan in their organizations' emergency readiness activities. Overall, 5310 organizations appeared to be better prepared for emergencies as indicated by their positive responses to the survey questions. This may be an indication of requirements from other funding and licensure requirements.

Each respondent did best in the Facilities and Equipment section of the survey which may indicate compliance with OSHA and other workplace requirements.

Training and Exercise questions were a mix of yes and no indicators with two 5310 organizations showing better responses than most. *See Table 1, Survey outcomes* 

#### 0 ORGANIZATIONAL READINESS FOR INTERNAL EMERGENCIES

2022

	2022				Со	chise Cou	Santa ( 5310	Cruz Co. 5310	Graham County								
<b></b>		5311															
1	Participant	e	5	as	City of Sierra Vista	ŏ	Town of Huachuca City	U	e		Santa Cruz Training Program	s of	Safe	₹ ±	Graham County Rehabilitation	Easterseals Blake Foundation	
2		City of Bisbee	City of Benson	City of Douglas	ra /	City of Willcox	, act	Douglas ARC	Echoing Hope Ranch	4	am a	Senior Citizens Patagonia	e n	Graham County Government	Cour	tterseals Bla Foundation	
3		of B	of B.	fD	Sier	ρŧν	of Hu. City	glas	oing Hc Ranch	Vi-CAP	ı Cruz Tra Program	Citi	iraham House	ern 0	bilit	seal nda	
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	Emergency Planning										5						
7	We have an emergency response planning committee																
_	Stakeholders are represented on emergency planning																
8	committee																
9	Emergency response planning committee meets at least twice annually																
10	Organization's insurance needs have been reviewed in the																
	past twelve months																
11	Committee annually reviews vulnerability to different types of emergencies																
12	Emergency response team has been formed to implement																
	the emergency response plan																
13	Emergency response team positions assigned to staff members																
14	Volunteers have been recruited from staff/others to work																
	with the emergency response team during a crisis																
15	Arrangements are in place to accommodate the needs of people with disabilities during an emergency																
16	There is a procedure for alerting those onsite to a																
10	disruption during normal work hours																
17	There is a procedure for responding to disruptions that																
	occur outside normal working hours. If needed, there is a way to notify those offsite of																
18	disruptions that impact facilities																
	Emergency contact information (staff, clients, key																
19	vendors, utilities, etc.) is update at least annually																
20	The emergency response plan provides guidelines on how																
20	to respond to different types/levels of emergency																
	The emergency response plan covers the loss of key																
21																	
	partners, etc.) The emergency response plan includes a variety of safety		┢														
	and security considerations (zero tolerance for onsite																
22	violence, cyber bullying, harassment) while at the work									***							
	facility																
	, ,																

		Cochise County										C <mark>ruz Co.</mark>	Graham County				
		5311 5311 5311 5307 5311 5310 5310 5310										5310					
1 2 3	Participant	of Bisbee	enson	ouglas	City of Sierra Vista	Villcox	Town of Huachuca City	s ARC	Hope ch	٩P	Santa Cruz Training Program	izens of onia	am Safe se	County ment	County tation	ls Blake ation	
5 4 5		City of E	City of Benson	City of Douglas	ty of Sie	City of Willcox	wn of Hu City	Douglas ARC	Echoing Hope Ranch	Vi-CAP	nta Cruz Tra Program	Senior Citizens Patagonia	Mt. Graham House	Graham County Government	Graham County Rehabilitation	Easterseals Blake Foundation	
6			_	Ŭ	Cit		To				Saı	š	2	0	0 -	ŭ	
23	The emergency respone plan addresses how to protect all physical and digital vital records during a crises																
24	All aspects of the emergency response plan are reviewed at least annually																
25	Relevent sections of the emergency response plan are shared with key stakeholders																
26	Emergency response plan has been reviewed by local first responders																
	Facilities and Equipment																
27	All facilities undergo a safety inspection at least annually																
28	Life-saving equipment is quickly accessible in all facilities Facility-wide warning systems are routinely tested																
29 30	Facilities are equipped with all required fire suppression equipment																
31	Personal protective equipment is available at all locations where dangerous products or processes exist																
32	All exits are easily seen from inside each facility Evacuations routes leading to safe assembly areas located																
33	inside or outside are clearly visible from within each																
34	All exits are clear of blockage																
35	Shelter in place areas are prepared (sized and provisioned) to support the expected number of users																
36	The facilities meet or exceed local safety requirements as it pertains to emergency lighting																
37	Training & Exercises medical /emergency response training (CPR, 1st Aid, AED,																
38	etc.)	$\left  - \right $															
39	First aid emergency drills are held onsite at least annually Facility-wide emergency training exercises (evacuation,	$\left  - \right $															
	shelter-in-place, etc.) are held at least annually																
40	Management participates in these exercises																
41	All emergency response team members are given ongoing emergency response training																
42	New staff members are briefed on their role in the emergency response plan																

		Cochise County										Cruz Co.	Graham County			
		5311	5311	5311	5307	5311	5310	5310		5310	5310	5310				
1	Participant	e	Ę	as	Vista	×	uca	0	a		ning	đ	Safe	t ť	ξç	Blake on
2		sbe	osu	ßn	a <	Willcox	achu	ARC	Hope h	<u> </u>	a i	ens		ount	ounty ation	Bl
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5		City	City	City	City o	city	owr	ă	Ec		I	e	Mt.	Grah: Gov	Grah: Reha	as
6					Ci		Ĕ				Sar	Š	2	Ŭ	Ľ	ш
44	Staff knows how to respond to news media inquiries															
44	during an emergency															
45	After-action reports are completed for every emergency															
45	incident/exercise															
46	Management takes part in after-action report debriefings															
47	A date for the next update for readiness program has															
47	already been scheduled															

RED INDICATES A NO ANSWER GREEN INDICATES A YES ANSWER WHITE INDICATES NO ANSWER GIVEN

\*\*\*ViCap has no plan but does have this information in another document

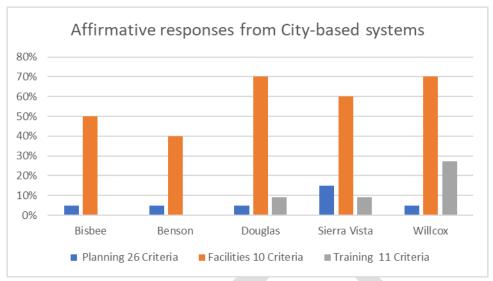


Figure 1 City Transit Positive Readiness Responses

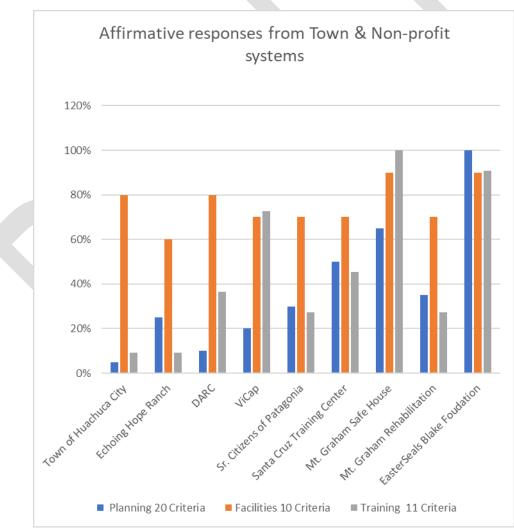


Figure 2 Town and non-profit Positive Readiness Responses

## Cochise County Findings

## 5311-07s – Benson, Bisbee, Douglas, Willcox, Sierra Vista

Of the transit agencies responding to the survey, the 5311s and 5307 scored less than 15% in positive responses to the preliminary survey for emergency readiness for planning. Only Sierra Vista scored more than 10%. *See Figure 1.* 

Because of OSHA requirements, most city-based transit agencies scored better in the facilities section in a range between 40% and 70% affirmative answers.

Affirmative answers for training questions scored less than 10% for all respondents except Willcox which scored 27%.

Bisbee and Benson did not answer a number of their questions bringing down their affirmative answer score and percentage.

Overall, the city-based transit agencies responded with far fewer affirmative responses (considering the lack of response for some questions) than the Town and non-profit responders. It appears that none of the Cities have a current formal emergency plan.

## 5310s – Town of Huachuca City, Douglas ARC, ViCap

Of the transit agencies responding to the survey within Cochise County, organizations scored higher in every category when compared to the city-based systems responding. This may be attributed to more stringent requirements from licensing and regulatory requirements. Again, planning and training responses had the lowest scores overall with facilities and equipment ranging between 60% and 80%. Non-profits scored higher than the single Town, another possible indication of more stringent requirements. None of the responding non-profit organizations in Cochise County are affiliated with a larger multi-regional organization. Lack of staffing and administrative planning resources may be a mitigating factor in their ability to plan and train their staff in emergency response.

## Capacity of Cochise County cities, towns, and non-profits to address external emergencies

None of the Cochise County respondents have an active plan to address external emergencies for their organization as a whole. This is not an indication of their ability to respond but rather their efforts to plan and train employees on how to address requests for assistance in the case of an external emergency. Plans and training curriculum are absent though it is apparent that organizations would be willing to provide aide in an external emergency situation.

The capacity of these organizations to address external emergencies is highly likely once a plan is developed and training is provided.

## Capacity of Cochise County cities, towns, and non-profits to address internal emergencies

As indicated in the survey, most Cochise County respondents do not actively plan and train for internal emergencies. Nearly all respondents indicated efforts to review insurance needs and requirements and make concerted efforts to comply with state and federal requirements for their facilities. Non-profit

organizations are much better prepared with some training for medical emergencies such as CPR, 1<sup>st</sup> Aid, AED, etc., while Cities may rely on their employed first responders (fire and police) to aid in handling internal emergencies.

## Graham County Findings

## 5310s Mt. Graham Safe House, Graham County Rehabilitation, Easterseals Blake Foundation

There are no 5307 or 5311 transit agencies in Graham County. Of the four respondents, one, Easterseals Blake Foundation, a 5310 transit provider, is part of a multi-regional organization that is affiliated with a national organization. Easterseals Blake scored the highest of any respondents in the survey achieving scores above 90% in all three categories (Planning, Facilities, and Training). Graham County Government also responded (because they are not a transit provider, the data for Graham County Government was not included in the summary charts of Figures1 or 2). along with two smaller non-profit organizations that are unaffiliated with larger, higher-capacity, regional organizations. All four respondents scored higher, on average, than either Cochise or Santa Cruz County respondents.

Easterseals Blake Foundation answered affirmatively to every question they answered. They did not answer four questions, creating the highest score overall for all respondents. This may be attributed to support from its national parent organization and to the significant capacity of a multi-regional organization that supports emergency response and has the staffing to conduct planning, training, and facilities management with regard to emergency preparedness and response. The organization serves persons with developmental disabilities with residential and day programs, jobs training, and job placement.

Mt. Graham Safe House is a shelter for victims of domestic violence. As such, the organization is much more cognizant of the dangers posed to their clients and staff and provided significant affirmative answers in all three categories of the survey. The majority of their "no" answers fell in the planning category. They scored second highest in both Graham County and across the region.

Graham County Rehabilitation Center serves clients with additional needs with vocational training, day programming, and an after-school program. GCRC scored similarly to other non-profits across the region with lower scores in planning and training while still higher overall than the city-based transit providers across the region.

## Capacity to address external emergencies

As with Cochise County, Graham County transit providers had no active plans in place to respond to external emergencies other than a willingness to provide aid when called upon. Use of vehicles, training of drivers, and coordination with insurers were not included in existing emergency response protocols. The capacity for Graham County organizations to respond to external emergencies is predicated on planning and training. Easterseals Blake has the highest capacity for such a response in that they are a large organization with planning and training capabilities. Each of the Graham County organizations responding to the survey serve clients with special or additional needs. Organizations would utilize resources first to support their clients during an external emergency. Capacity to address emergency needs outside of their own organizations may be limited by this factor, however; it is likely that each

could assist with non-evacuation efforts in support of a larger emergency response once their clients were deemed safe.

## Capacity to address internal emergencies

Capacity among Graham County providers to address internal emergencies is relatively sound. Organizations may wish to develop more robust plans and training efforts to fill gaps indicated on their survey responses.

While Easterseals Blake Foundation has a remarkably high score for internal emergency readiness, Mt. Graham Safe House and Graham County Rehabilitation may have limited staff to dedicate to planning and training efforts. Utilization of planning and training tools provided as part of Working Paper 3 will be useful when paired with direct technical assistance in developing plans and training protocols needed.

## Santa Cruz County Findings

## 5310s Senior Citizens of Patagonia, Santa Cruz Training Center

There are two transit providers in Santa Cruz County; both being 5310 funded organizations. Senior Citizens of Patagonia operates in Patagonia and Santa Cruz Training Center, operating in Nogales. In Patagonia, the Senior Center provides a variety of services including transportation to communities including Nogales, Sierra Vista, and Tucson. Santa Cruz Training provides residential, day programs, and job training and jobs along with transportation to its clients with developmental disabilities.

Both organizations fell within the average response rate for non-profit organizations in emergency planning, facilities, and training categories with the biggest gaps in planning and training. Like other non-profits, licensing and regulatory compliance requirements help the agency, particularly SCTP, to be prepared for emergencies.

## Capacity to address external emergencies

Patagonia is located 17 miles west of Nogales and 43 miles east of Sierra Vista. The organization is volunteer driven and has three vehicle resources. Should an emergency in Patagonia require evacuation, the organization could respond if volunteer drivers are available, and vehicles are not already dispatched to neighboring communities. SCP has no active plan or agreements for responding to external emergencies, but like others, is willing to respond when and how possible.

Santa Cruz Training Center, located in Nogales, has numerous vehicles which can be utilized in an external emergency once clients in their residential, day, and job programs are made safe. Like SCP, SCTC does not have an emergency plan or agreement for responding to external emergencies.

## Capacity to address internal emergencies

Both SCP and SCTC have reasonably good emergency readiness protocols for facilities and equipment for any internal emergency. Both also have elements of good planning and training in place. As with the other county non-profits, a more robust plan and training schedule would be useful in shoring up emergency preparedness for these to agencies.

SCTP has a large staff of case workers and a healthy administrative staff. Incorporating a more thorough emergency plan is within the capacity of the organization with the help of templates and training materials. SCP is largely a volunteer driven organization with modest capacity to take on a significant planning project and will likely rely on technical assistance in furthering its planning and training elements.

## Summary

In reviewing the survey grid, it is apparent that city-based transit providers have the greatest need for assistance in developing or enhancing an emergency readiness plan. As mentioned in the body of this workpaper, Cities' may be relying heavily on their public safety programs (police and fire) to manage all emergency responses both externally and internally. However, Working Paper #1 identified no Transit Emergency Plans among most of the city-based systems, little facilities/equipment protocols, and few training schedules and curriculum. Transit programs in this category do not have active external emergency response plans or agreements.

Non-profits are in a much better position to manage internal emergencies, but like city-based systems, are not prepared to respond to external emergencies.

Non-profit transit providers that are part of larger regional organizations have the built-in staff capacity and parent-organization support for developing robust emergency readiness plans and training. This is apparent in the survey data where larger responding organizations scored higher in their affirmative responses. Smaller non-profits are more limited in staff capacity making it more difficult to set aside the time to develop plans, policies, and protocols without technical assistance, use of templates, and training.

Staffing among the small cities and towns is also limited so, while cities may rely on public safety departments for overall emergency response, transit programs will need to have transit-related emergency plans for both internal and external emergency events. Like small non-profits, cities will likely need and rely on technical assistance, use of templates, and training to build their emergency response plans, policies, and protocols.

SEAGO, in its capacity for planning and program development is best suited to provide the needed technical assistance, template building, and training needed for both non-profit and city-based transit programs in the region. Coordination meetings may be a mechanism for relating preliminary information and scheduling of training for use in templates. Individualized technical assistance will be most beneficial in making sure that transit providers are filling the gaps in their current practices and are prepared to maintain and update their plans while regularly training staff and new hires in the transit departments.

## Next steps

Working Paper 2 will be posted on the SEAGO website for comments after it is presented to the TAC committee for review. This will allow any agency to revise or update its survey responses and to see how they compare to other transit agencies in the region with regard to emergency readiness.

The TAC meeting will also provide agencies an opportunity to share resources with regard to elements of emergency plans, protocols, policies, and training materials.

The final tasks of the planning study, Tasks 6 and 7 will identify potential priorities and protocols to address gaps in emergency planning and identify steps, activities, and policies needed to create or improve regional rural transit providers' capacity to address emergencies within their own organization and as important partners in broader coordinated, community/county-based emergency response.

Task 6 will look at the types of emergencies most likely faced by transit organizations including such emergencies as pandemics, fire, flooding, active shooters, vehicle accidents, chemical accidents, threats to drivers and passengers, medical emergencies, and others. Emergency types will be prioritized for the region and for each transit provider. A standard list of protocols will be developed as the first step in developing an emergency readiness and response plan template.

Task 7 will document a comprehensive outline of steps, activities, and policies required to develop a responsive emergency plan at the transit organization level for both internal and external emergencies.

These efforts will be documented in Working Paper #3 Gaps in Emergency Planning and Steps to Mitigate Them.

## Appendix A

Safety and Emergency Readiness Transit Program Self-Assessment – Base Line (before development of readiness program) SEAGO 2022

Please complete and return form no later than February 18, 2022

## Participant

- 1. The name of your organization: Click or tap here to enter text.
- 2. The name of your safety/emergency readiness contact: Click or tap here to enter text.
- 3. Email address for readiness contact: Click or tap here to enter text.
- 4. Phone number for readiness contact: Click or tap here to enter text.
- 5. Mailing address for organization: Click or tap here to enter text.

Click or tap here to enter text.

6. Name and email address of CEO or Executive Director: Click or tap here to enter text.

Click or tap here to enter text.

## **Emergency Planning**

## 7. We have an emergency response planning committee

□Yes □No

8. The interests of all key stakeholders are represented on the emergency response planning committee

□Yes □No

9. The emergency response planning committee meets at least twice annually

□Yes □No

10. The organization's insurance needs have been reviewed in the past twelve months.

□Yes □No

11. At least annually, the emergency response planning committee reviews our vulnerability to different types of emergency situations (e.g., fires, floods, cyber-attacks, medical emergencies, etc.) and identifies the top five threats facing the organization.

□Yes □No

12. An emergency response team has been formed to help implement the emergency response plan.

□Yes □No

13. Management has assigned key positions on the emergency response team to staff members.

□Yes □No

14. Volunteers have been recruited from staff, clients, and constituents to work with the emergency response team during a crisis.

□Yes □No

15. Arrangement are in place to accommodate the needs of people with disabilities during an emergency.

□Yes □No

16. There is a procedure for alerting those onsite to a disruption during normal work hours.

□Yes □No

17. There is a procedure for responding to disruptions that occur outside normal work hours.

□Yes □No

18. If needed, there is a way to notify those offsite of disruptions that impacts our facility.

□Yes □No

**19.** Emergency contact information (staff, clients, key vendors, utilities, etc.) is updated at least annually.

□Yes □No

20. The emergency response plan provides guidelines on how to respond to different types/levels of emergency.

□Yes □No

21. The emergency response plan covers the loss of key services (e.g., telecom, internet, utilities, supply chain partners, etc.)

□Yes □No

22. The emergency response plan includes a variety of safety and security considerations (e.g., zero-tolerance for onsite violence, cyber bullying, harassment, etc.) while at the work facility.

□Yes □No

23. The emergency response plan addresses how to protect all physical and digital vital records during a crisis.

□Yes □No

24. All aspects of the emergency response plan are reviewed at least annually.

□Yes □No

25. We share relevant sections of the emergency response plan with key stakeholders.

□Yes □No

26. We have reviewed our emergency response plan with local first responders.

□Yes □No

## **Facilities and Equipment**

27. All facilities undergo a safety inspection at least annually

□Yes □No

28. Life-saving equipment (e.g., AEDs, 1<sup>st</sup> Aid Kits, emergency radios, etc.) is quickly accessible on-site.

□Yes □No

29. We have a tested facility-wide warning system.

□Yes □No

**30.** Our facility is equipped with all required fire suppression equipment (e.g., fire extinguishers, smoke alarms, exit lighting, etc.)

□Yes □No

31. Personal protective equipment (e.g., eye-protection, rubber boots, eye-wash signs, etc.) is available at all locations where dangerous products or processes exist.

□Yes □No

32. All exits are easily seen from inside the facility.

□Yes □No

33. Evacuation routes leading to safe assembly areas located inside or outside are clearly visible from within the facility.

□Yes □No

34. All exits are clear of blockage.

□Yes □No

35. Shelter in place areas are prepared (sized and provisioned) to support the expected number of users.

□Yes □No

36. The facility meets or exceeds local safety requirements as it pertains to emergency lighting.

□Yes □No

## **Training & Exercises**

**37.** At least 10% of our workforce has received emergency medical emergency response training (e.g., CPR, AED, 1<sup>st</sup> Aid, protection against blood-borne pathogens, etc.).

□Yes □No

38. First aid emergency drills are held onsite at least annually.

□Yes □No

**39.** Facility-wide emergency training exercises (evacuation, shelter-in-place, etc.) are held at least annually.

□Yes □No

40. Management participates in these exercises.

□Yes □No

41. All emergency response team members are given ongoing emergency response training.

□Yes □No

42. New staff members are briefed on their role in the emergency response plan (e.g., how to report an emergency, how to safely evacuate, etc.)

□Yes □No

43. Management has been trained on how to manage news media inquiries during an emergency.

□Yes □No

44. Staff knows how to respond to news media inquiries during an emergency.

□Yes □No

45. After-action reports are completed for every emergency incident/exercise.

□Yes □No

46. Management takes part in after-action report debriefings.

□Yes □No

47. A date for the next update for our readiness program has already been scheduled.

□Yes □No

This report is voluntarily submitted to SEAGO for purposes of developing an action plan to develop or enhance an existing safety/emergency readiness program for this agency.

No individual data provided with this survey will be shared or made public.

SEAGO personnel may contact those individuals listed in the Participant section for clarification or additional information.

Providing answers to this survey in no way commits the responding agency to take part in any emergency planning or readiness programs.

By signing below, I acknowledge these statements and agree to submit the survey for its intended purpose.

Click or tap here to enter text.

Authorized person's signature (by typing full name, one has signed the document)

Date Click or tap to enter a date.

For assistance in completing this form, contact Melanie Greene, SEAGO, 520-255-3274 melanie@mgreeneprd.com

This form may be returned to SEAGO via email to <u>melanie@mgreeneprd.com</u> or by mail to Emergency Preparedness Program Transportation Division SEAGO 1403 W. Hwy. 92 Bisbee AZ 85603