

**TOWN OF PAYSON, ARIZONA
EMERGENCY OPERATIONS PLAN
INCIDENT ANNEXES**



(June, 2009)

Record of Changes

Change Number	Date of Change	Page or Section Changed	Summary of Change	Name of Person Authorizing Change
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Introduction

Specific incidents or hazards can present unique concerns and the need for specific information. This document is the Town of Payson Emergency Operation Plan (EOP) Incident Annex and provides much of the specific information that may be required.

Purpose

The purpose of these incident annexes is present information concerning specific hazards or types of incidents.

In accordance with Arizona Revised Statutes Title 26 Chapter 1 and Title 35, as amended, this portion of Town of Payson Emergency Operations Plan will be reviewed, revised, readopted, and reissued periodically or at least once every five years.

Scope

This plan and all its contents apply to all of the Town of Payson.

Personnel or partnering organizations who have a role in the execution of this plan will have access to and be knowledgeable of the EOP.

Annex 1 Fire & Explosions

SITUATION & ASSUMPTIONS

Situation

The Town may be confronted with a major fire or explosion that could potentially result in a large loss of life and property.

Assumptions

Code enforcement and other policy/procedures by the Fire Prevention division of the Fire Department, by the Building and Planning/Zoning Divisions of the Community Development Department, will actively work to reduce the potential for fires and explosions and their effects on the residents and property.

Town forces are capable of handling most fires and explosions that may occur. Mutual and automatic aid from fire services near and far from the Town will be required to control large, complex or multiple fires.

Catastrophic fires or explosions resulting in an extraordinarily high level of property damage and/or loss of life would require a greater degree of mobilization of Town resources and coordination with outside agencies.

MISSION

To provide the citizens of the Town of Payson with a high level of protection from potential fires and explosions through appropriate mitigation and preparedness efforts along with response and recovery planning.

EXECUTION

A. Concept of Operations

1. Fires and explosions are routinely handled by the Fire Department with support from Police, other Town departments and mutual/automatic aid fire services. The Fire Department maintains standard command and tactical operating procedures that shall apply.
2. The Emergency Operations Plan and EOC will be activated upon the determination that a fire and/or explosion is of disaster or catastrophic proportions.

B. Organization

1. The on-scene fire incident command system would be expanded and integrated into the Town EOP Incident Management System (NIMS). Refer to Basic Plan.

C. Tasks

1. Activate local mutual aid
 - a. Existing standard procedures will be used for activating local auto and mutual aid.
2. Activate county and state mutual aid
 - a. To activate the state mutual aid system the County Fire Resource Coordinator and Gila County Emergency Manager must be contacted.

You will need to provide the following information:

1. Type, location and size of incident
 2. Number and type of resources requested
 3. Staging (reporting) location, time, contact name and telephone number
 4. Radio frequencies if known
-
3. Activate ESF #6 Mass Care and the EOC as required

ADMINISTRATION AND LOGISTICS

Standard emergency administration and supply procedures will be used. See Basic Plan, ESF#4, ESF#5 and others as may be required.

Annex 2 Dam Failure/Flooding

Emergency Action Plan for Green Valley Park Dam

State ID Number: 04.15

Dam Owner: Green Valley Park Dam

Hazard Classification: High

Nearest Downstream Development: Payson

Distance to Downstream Development (miles): 0

Primary Emergency Responders: Town of Payson

EAP Coordinator: Curtis Ward, Assistant Town Engineer

Town of Payson Emergency Management Coordinator: Don Engler, Police Chief at (928) 474-5242
ext. 224

Revision Date: 09/27/06

PURPOSE

The purpose of this plan is to establish well-understood, readily applied procedures as defensive actions to prevent or minimize loss of life, injury, or property damage due to an emergency situation at the dam.

GENERAL IMPLEMENTATION SUMMARY

The Dam Owner is responsible for monitoring the dam to detect unusual, adverse, and emergency conditions.

In event of a Potential or Imminent Emergency Situation the Dam Owner must notify:

1. Local emergency responders (usually County Sheriff or local police),
2. ADWR Dam Safety Section, and
3. Residents and businesses located immediately downstream of the dam.

Inundation maps and descriptions of potentially affected areas are provided to assist emergency responders in identifying:

1. Residents and businesses requiring stand-by alerts or evacuation, and
2. Roads or highways requiring closure.

PLAN CONTENTS

- A. Dam and Reservoir Data
 1. Location Map
- B. Required Owner Performed Monitoring of the Dam
- C. Responsible Participants to the Plan
- D. Emergency Action Flowchart
 1. For Potentially Developing, Imminent and In Progress Dam Failures
 - a. Downstream Area to be Evacuated in the Event of Dam Failure
 - b. Dam Failure Inundation Map(s)

2. For Flooding from Unusual Outlet and Spillway Releases

- a. Downstream Area to be Evacuated in the Event of Unusual Outlet or Spillway Discharge
- b. Outlet and Spillway Discharge Inundation Map(s)

Dam And Reservoir Data

I GENERAL

ADWR Dam Name: **Green Valley Park Dam**

ADWR Reservoir Name (if different): _____

Year Constructed: **1995**

II LOCATION AND ACCESS – See Location Map on Next Page

Stream, Tributary, etc.: **American Gulch Wash**

Section: **8** Township: **10N** Range: **10E**

Latitude: **34.13.51** Longitude: **111.20.46**

Access Route to Dam: **West Main Street**

III PHYSICAL DESCRIPTION AND CHARACTERISTICS

Type of Dam: **Earth**

Height to Top of Dam (ft): **9.0**

Dam Length (ft): **1,005**

Width at Top of Dam (ft): **30**

Total Freeboard between Spillway Crest and Top of Dam (ft): **4.0**

Location and Width of Spillway: **The dam was designed for the 100-yr, 500-yr, and ½-PMF storm events. The spillway crest elevation for the 500-yr and ½ PMF is 4840.0 ft. The spillway crest elevation for the 100-yr storm is 4838.0 ft. The 500-yr and ½ PMF spillway crest is located at the left abutment near the boat ramp. The 100-yr spillway crest consists of gabions over the crest of the dam.**

The dam has a secondary spillway, called the "Primary Overflow Spillway." This spillway, located at approximately Sta. 7+00, is a 24" diameter RCP with Class A concrete bedding. The pipe length is approximately 100 ft. The inlet structure consists of concrete box that is approximately 4.5 ft. wide, 3.0 ft. deep, and 18 ft long. A trashrack with 2" x ½" bars on 8" centers are placed on the front of the structure and the outside has a masonry rock finish. The inlet inv. elevation is 4837.0 ft. and the outlet inv. elevation is 4832.0 ft.

Reservoir Volume to Spillway Crest (acre-ft): **138**

Normal Operating Reservoir Level: **4837**

Location(s) and Operation(s) of Low Level Outlet(s): **The outlet is located at Station 5+00, center of the dam. There is a 16-in. diameter cement mortar coated welded steel pipe with a concrete inlet headwall and a 16-in. sluice gate at Station 5+00. The gate is on the upstream slope.**

LOCATION MAP GREEN VALLEY PARK DAM

I. Required Owner-Performed Monitoring of the Dam

A License of Approval issued by the State of Arizona to operate a “High” or “Significant” hazard dam includes with it many serious responsibilities. The most serious of these is monitoring the dam for any adverse, unusual, or emergency conditions that might pose a threat to the downstream public.

I REQUIRED VISUAL OBSERVATIONS AND INSTRUMENTATION READINGS

LaRon Garrett, Public Works Engineer is responsible for monitoring the condition of the dam to detect any adverse, unusual, or emergency conditions.

During Normal Operations frequent, routine visual observations of the dam, outlet pipe, and emergency spillway must be made. The frequencies should be increased when the reservoir is full or nearly full. There are no measuring instruments associated with this dam.

During Major Storm Events the rising reservoir level, discharges the outlet pipe and emergency spillway, overall condition of the dam, must be closely monitored. There are no measuring instruments associated with this dam.

After a Significant Nearby Earthquake or Strong Ground Shaking at the Dam a general overall visual inspection of the dam must be made. There are no measuring instruments associated with this dam.

II TYPICAL EXAMPLES OF CONDITIONS TO BE WATCHED FOR

The following are typical examples, but not necessarily all, adverse, unusual, or emergency conditions that may occur at a dam and should be watched for.

- SEEPAGE PIPING OR INTERNAL EROSION evidenced by cloudy discharges, increases from “normal” seepage rates, appearance of new seepages or sinkholes on the crest or slopes.
- INSTABILITY OF THE DAM OR FOUNDATION evidenced by visible slumping or movement of the slopes, lowering of the crest, or appearance of new cracks.
- EROSION by wave action against of upstream face or across the top of the dam.
- DAM OVERTOPPING BY FLOOD WATERS

III GENERAL GUIDELINES FOR IDENTIFYING DEVELOPMENT OF A “POTENTIAL DAM FAILURE SITUATION”

Three feet does not apply to **Green Valley Park Dam.**

1. The crest of the Green Valley Dam is the spillway, this three foot guideline does not apply. The reservoir level reaches within three (3) feet of the crest of dam and is.....
2. Based on the anticipated runoff from an arriving major storm, the reservoir level is projected to rise within three (3) feet of the crest of dam.
3. The spillway or outlet works is plugged and the reservoir level is projected to rise within three (3) feet of the crest of dam.

IV GENERAL GUIDELINES FOR IDENTIFYING WHEN DAM FAILURE IS “IMMINENT”

These do not necessarily apply to **Green Valley Park Dam**

1. The crest of the Green Valley Dam is the spillway, this guideline does not apply. The reservoir level reaches within eighteen (18) inches of the top of dam and is projected to continue to rise, or at any time the reservoir level is projected to rise above the crest of the dam.
2. Based on anticipated runoff from an arriving major storm, the reservoir level is projected to rise above the crest of dam, this will not damage this dam.
3. The spillway is plugged and the reservoir level is projected to rise above the crest of dam, this will not damage this dam.

V ABNORMAL INSTRUMENTATION READINGS

This Dam Does Not Have Instruments.

1. A guide for the **reservoir level** may be an unexpected drop in the reservoir of two feet or more.
2. A guide for increased or decreased **seepage rates** may be fifty percent (50%) of “normal” flows previously established for the existing season and/or reservoir level.
3. A guide for increased or decreased **piezometer levels** may be a significant change (two feet or more) of “normal” levels previously established for the existing season and/or reservoir level.
4. A guide for **survey monuments** may be 6-inches vertical or horizontal per year.

RESPONSIBLE PARTICIPANTS TO THE PLAN

The **two included Action Flowcharts** for use during potential or imminent dam failures and unusual outlet or spillway discharges require actions and/or notifications to be performed by three entities: (1) The Dam Owner, (2) Designated Emergency Responders, and (3) The ADWR Dam Safety Section.

I THE DAM OWNER

The names and phones numbers of the persons within the Dam Owner's organization with responsibility to carry out the required actions and notifications are listed below:

Primary Responsibility

Name: Colin P. Walker

Position/Title: Assistant Public Works Director

Daytime Telephone Number: (928) 474-5242 ext. 289

After-hours Telephone Number:

Signature of Acceptance

Date

Alternate

Name: LaRon Garrett

Position/Title: Public Works Director

Daytime Telephone Number: (928) 474-5242 ext. 283

After-hours Telephone Number:

Signature of Acceptance

Date

II DESIGNATED EMERGENCY RESPONDERS

The Local Emergency Management Coordinator has identified the Police Chief Don Engler and the Payson Police Department as the emergency response agency that should be notified in the event of an emergency situation:

Daytime Telephone Number: (928) 474-5242 ext. 224

After-hours Telephone Number: Duty Officer @ (928) 474-5177

Position/Title

Signature of Acceptance

Date

Position/Title

Signature of Acceptance

Date

III ADWR DAM SAFETY SECTION

Primary Responsibility

Name: Darrell Jordan

Position/Title: Manager, Office of Dam Safety and Flood Mitigation

Alternate 1

Name: Michael Johnson

Position/Title: Assistant Manager for Dam Safety

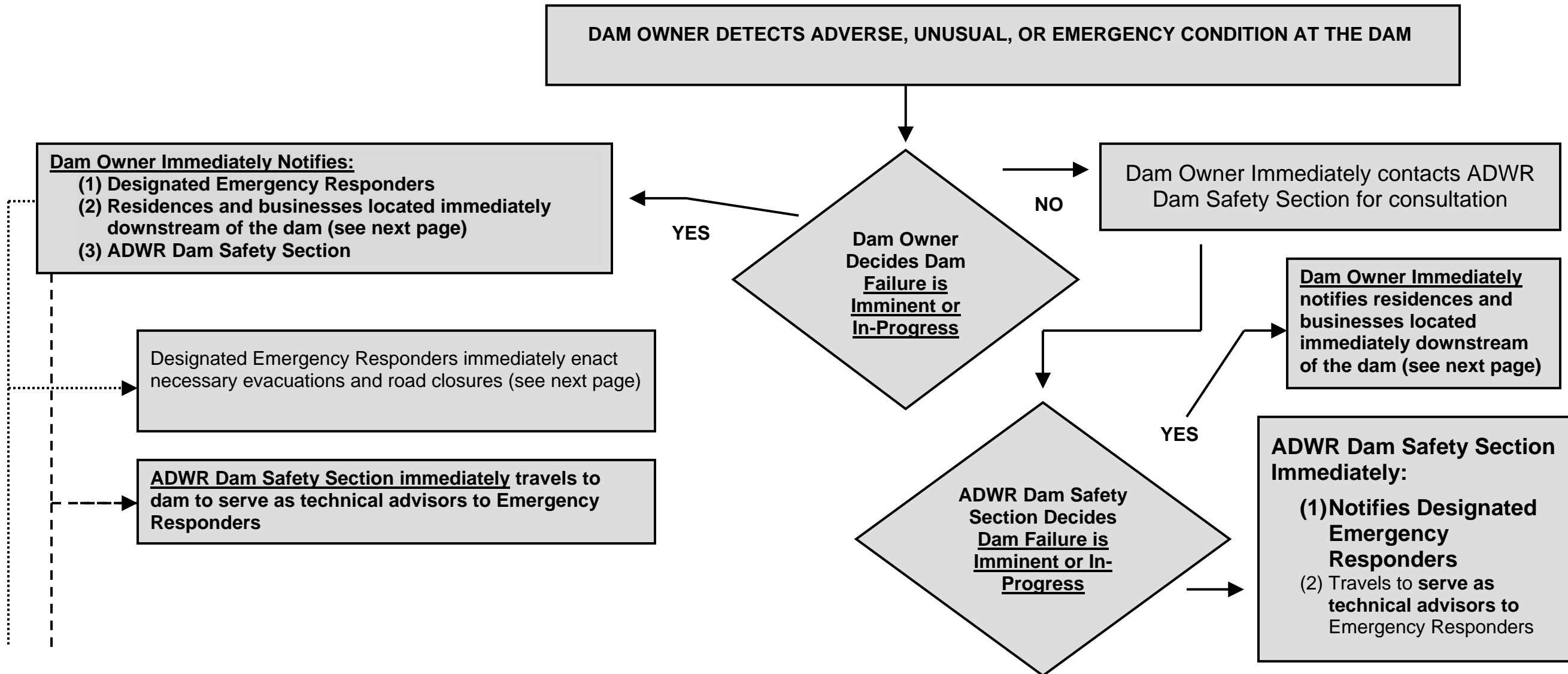
Alternate 2

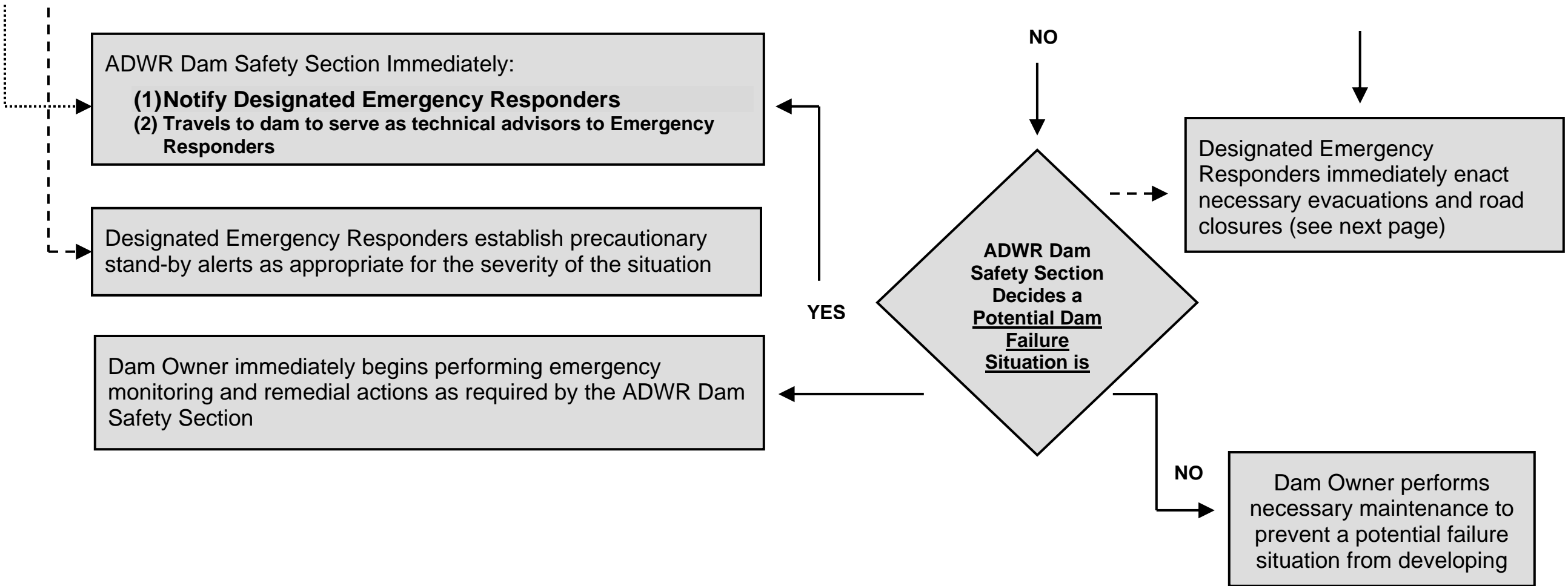
Name: Nicole Spence-Gibson

Position/Title: Assigned Engineer

Emergency Action Flowchart for Potentially Developing, Imminent, and In-Progress Dam Failures

The “Responsible Parties” Section (past two pages) gives names and numbers for the Responsible Parties to the EAP. The next page describes areas requiring warning or evacuation.





DOWNSTREAM AREA TO BE EVACUATED IN EVENT OF DAM FAILURE

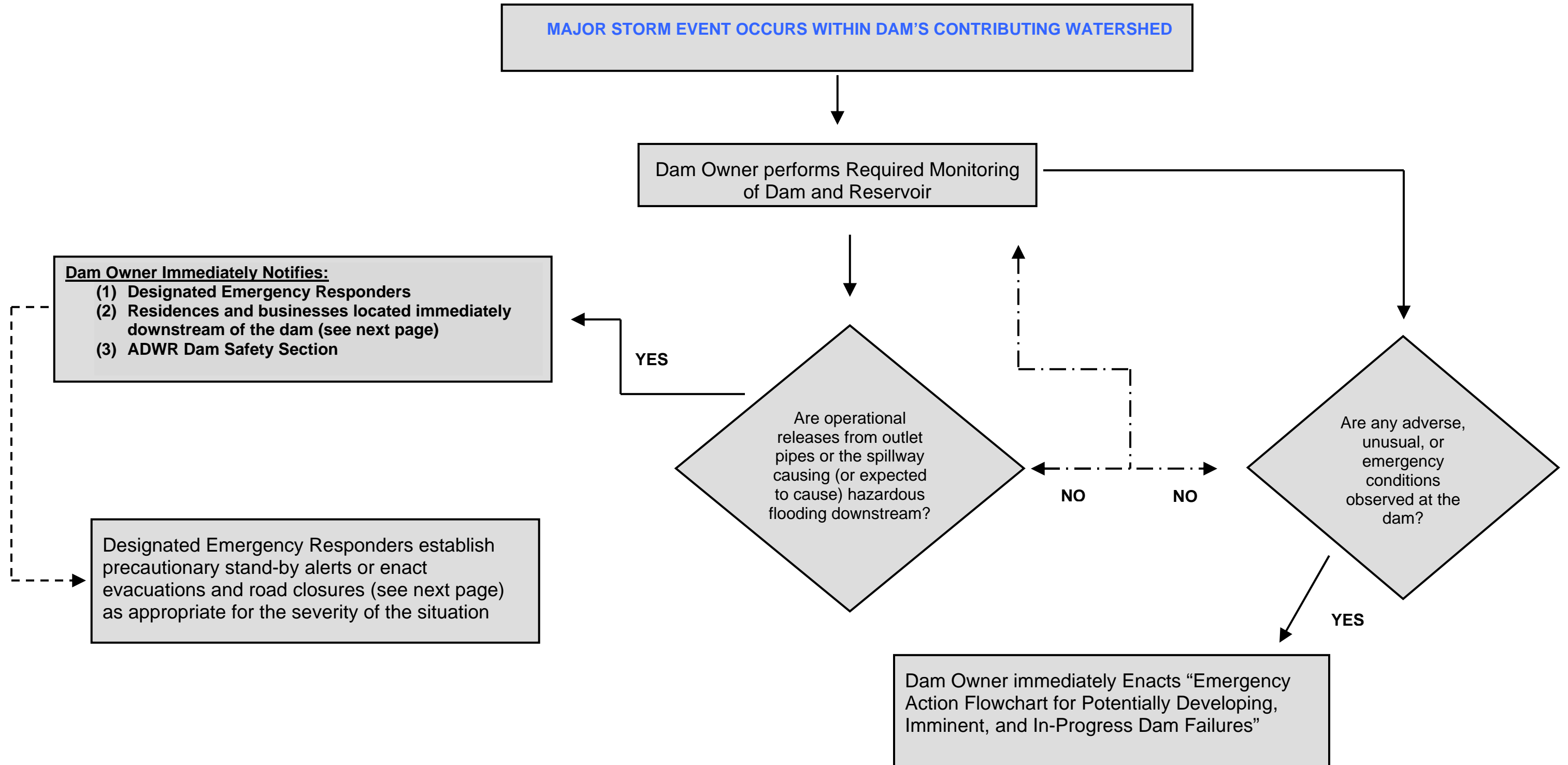
When **DAM FAILURE IS IMMINENT OR IN PROGRESS** these residences and businesses located immediately downstream of the dam where available warning time is very limited are contacted directly for evacuation by the Dam Owner:

- **Description of Potential Inundation Area:** 500 year flood plain
- **Approximate Number of Residences and Businesses to Evacuate:** 8
- **Roads and Highways Requiring Closure:** 1
- **Inundation Map(s) Attached:** 1

INSERT DAM FAILURE INUNDATION MAP(S)

Emergency Action Flowchart for Flooding from Unusual Outlet and Spillway Releases

The “Responsible Parties” Section gives names and numbers for the Responsible Parties to the EAP. The next page describes areas requiring warning or evacuation.



DOWNSTREAM AREA TO BE EVACUATED IN EVENT OF UNUSUAL OUTLET OR SPILLWAY DISCHARGES

When **UNUSUALLY LARGE DISCHARGES ARE IMMINENT OR IN PROGRESS** these residences and businesses located immediately downstream of the dam where available warning time is very limited are contacted directly for evacuation by the Dam Owner:

-
- Description of Potential Inundation Area: 100 year flood plain
 - Approximate Number of Residences and Businesses to Evacuate: 4
 - Roads and Highways Requiring Closure: 1
 - Inundation Map(s) Attached: 1



TOWN OF PAYSON, ARIZONA
EMERGENCY OPERATIONS PLAN
INCIDENT ANNEXES

INSERT OUTLET OR SPILLWAY DISCHARGE MAP(S)



TOWN OF PAYSON, ARIZONA
EMERGENCY OPERATIONS PLAN
INCIDENT ANNEXES

EMERGENCY RESOURCES

In an emergency situation, equipment, supplies and construction personnel will likely be needed on short notice. The table below lists general emergency resources, and also indicates how to access them.

Item	Contact/Telephone	Location
Earthmoving Equipment:		
General		
General		
General		
Bulldozers		
Excavators		
Excavators		
Sand and Gravel		
Sand and Gravel		
Sandbags		
Sandbags		
Pumps		
Pipe		
Laborers		
<u>Engineering Services¹LaRon</u>		

¹Professional Engineer with knowledge of dam technology



TOWN OF PAYSON, ARIZONA
EMERGENCY OPERATIONS PLAN
INCIDENT ANNEXES

Dam Failure Plan Updating and Distribution

I UPDATES

Curtis Ward, the Assistant Town Engineer, is responsible for reviewing the current Plan annually. This person is also responsible for providing revisions to the record copy-holders when major changes have occurred. Major changes include the following:

- Changes in assignments of personnel or telephone numbers.
- Changes in Equipment and Supplies information.
- Changes made to the dam.
- Changes in the flood inundation areas, downstream developments, or in the reservoir.
- Other items as applicable.

II DISTRIBUTION

This is the list of owner(s), agencies and entities that have record copies of this Plan.

- Provide all updates to each record copy-holder.
- Make a complete copy of the Plan available to all dam tenders, emergency service agencies and entities, and appropriate local officials.

Contact/Agency

Contact Person/Title

Telephone/Address



TOWN OF PAYSON, ARIZONA
EMERGENCY OPERATIONS PLAN
INCIDENT ANNEXES

Dam Safety Emergency Situation Report

(Photocopy and fill-out after termination of Emergency Situation. Complete ALL sections that are applicable to the situation. Distribute copies to Sheriff(s) and ADWR with five (5) days.)

Dam Name: Green Valley Park Dam ADWR Dam Number: 04.15

Dam Location: Payson, Gila County, American Gulch Wash
(City) (County)
(Stream/River)

Date: _____ Time: _____

Weather Conditions: _____

General Description of Emergency Situation: _____

Area(s) of Dam Affected: _____

Extent of Dam Damage: _____

Possible Cause(s): _____

Effect on dam's operation: _____

Effect on operational capabilities of outlet works: _____

Initial Reservoir Elevation: _____ Time: _____

Maximum Reservoir Elevation: _____ Time: _____

Final Reservoir Elevation: _____ Time: _____

Description of area flooded downstream/damages/injuries/loss of life: _____

Other Data and Comments: _____

Observer's name and telephone number: _____

Annex 3 Severe Storms

SITUATION AND ASSUPMTIONS

A. Situation

1. The Town of Payson may be subjected to a variety of storm and/or flood events with related property damage during any time of the year. The possible situations that may be encountered with this hazard are categorized as follows:
2. Floods
 - a. Heavy or continuous rain in the area may cause flooding of streets and low-lying areas, which result in increased congestion on traffic routes. Extreme rainfall carries the potential of flooding residential, commercial, and industrial property.
 - b. Wind and other related storm damage from high winds, tornadoes, hail, etc. may cause damage and problems including one or more of the following situations:
 - Downed power lines
 - Major power outages
 - Telephone outages
 - Structural damage
 - Traumatic injuries or death of citizens in severe instances

MISSION

Through mitigation and preparedness efforts along with response and recovery planning provide an appropriate level of protection to citizens and property from storm and flood emergencies or disasters.

EXECUTION

B. Concept of Operations

For typical storms, associated local flooding and wind damage, operations will be performed by normal Town departments that routinely handle such emergencies. Other Town departments will act independently within their normal operating procedures to address problems related to the emergency.

For large scale disasters, with major or catastrophic storm/flood situations, the Emergency Operations Plan will be activated including the EOC. If activated, the EOC will exercise primary direction and control during a storm or flooding disaster. For details see Basic Plan and ESF#5.

C. Tasks

See Basic Plan.



Notification and distribution of severe weather information will be available from the following sources:

- National Weather Service
- Gila County Emergency Management
- Gila County Sheriff's Office
- Arizona Department of Public Safety

The government of the Town of Payson will assume overall direction and control emergency response operations within its jurisdiction, to include warning, evacuation, and security of the affected areas. Determination of evacuation zones will be based on actual or projected conditions.

ADMINISTRATION AND LOGISTICS

Standard emergency administration and supply procedures will be used. See Basic Plan and Emergency Support Function Annex.



BEAUFORT WIND SCALE

Force	Explanatory Title	Specification for Use	MPH
0	Calm	Smoke rises vertically	<1
1	Light Air	Direction of wind shown by smoke drift, but not by wind vanes	1-3
2	Light Breeze	Wind felt on face; leaves rustle; ordinary vanes moved by wind	4-7
3	Gentle Breeze	Leaves and small twigs in constant motion; wind extends light flag	8-12
4	Moderate Breeze	Raises dust and loose paper; small branches are moved	13-18
5	Fresh Breeze	Small trees in leaf begin to sway; wavelets formed on inland waters	19-24
6	Strong Breeze	Large branches in motion; whistling heard in telephone wires; umbrellas used with difficulty	25-31
7	High Wind	Whole trees in motion; inconvenience felt when walking against the wind	32-38
8	Fresh Gale	Breaks twigs off trees; generally impedes progress	39-46
9	Strong Gale	Slight structural damage occurs	47-54
10	Whole Gale	Seldom experienced inland; trees uprooted; considerable structural damage occurs	55-63
11	Storm	Very rarely experienced: widespread damage occurs	64-72
12 13 14 15 16 17	Hurricane		73-82 83-92 93-103 104-114 115-125 126-136



FUJITA TORNADO SCALE

SCALE	WIND ESTIMATE (MPH)	TYPICAL DAMAGE
F0	< 73	<u>Light damage.</u> Some damage to chimneys; branches broken off trees; shallow-rooted trees pushed over; sign boards damaged.
F1	73-112	<u>Moderate damage.</u> Peels surface off roofs; mobile homes pushed off foundations or overturned; moving autos blown off roads.
F2	113-157	<u>Considerable damage.</u> Roofs torn off frame houses; mobile homes demolished; boxcars overturned; large trees snapped or uprooted; light-object missiles generated; cars lifted off ground.
F3	158-206	<u>Severe damage.</u> Roofs and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; heavy cars lifted off the ground and thrown.
F4	207-260	<u>Devastating damage.</u> Well-constructed houses leveled; structures with weak foundations blown away some distance; cars thrown and large missiles generated.
F5	261-318	<u>Incredible damage.</u> Strong frame houses leveled off foundations and swept away; automobile-sized missiles fly through the air in excess of 100 yards; trees debarked; incredible phenomena will occur.



WINTER STORMS

SITUATION AND ASSUMPTIONS

Situation

The Town of Payson may be confronted with a severe winter storm that could potentially inundate the Town and cause disruptions in travel, communication, and normal activities including:

- Power lines down
- Major power outages
- Telephone outages
- Structural compromise and damage
- Stranded citizens
- Stranded motorists
- Traumatic injuries or death of citizens in severe instances

Assumptions

Typical snow and winter storm problems experienced by the Town of Payson are handled by normal Town resources and responsible utility entities. Available weather information and situation evaluations allow time for activation of the EOC prior to major winter weather events.

MISSION

Through mitigation and preparedness efforts along with response and recovery planning provide an appropriate level of protection to citizens and property from the effects of winter storms and snow emergencies.

EXECUTION

Concept of Operations

For typical winter storm events with associated snowfall, operations will be performed by normal Town departments that routinely handle such emergencies. Other Town departments will act independently within their normal operating procedures to address problems related to the emergency.

For large-scale disasters, with major or catastrophic winter storm/snow situations, the Emergency operations Plan will be activated, including the EOC. If activated, the EOC will

exercise primary direction and control during a winter storm or snow disaster. For details see Basic Plan.



Tasks

See Basic Plan.

Notification and distribution of severe weather information will be available from the following sources:

- National Weather Service
- Gila County Emergency Management
- Gila County Sheriff's Office
- Arizona Department of Public Safety

The government of the Town of Payson will assume overall direction and control emergency response operations within its jurisdiction, to include warning, evacuation, and security of the affected areas. Determination of evacuation zones will be based on actual or projected conditions.

The Payson Police Department will be responsible for the following tasks in addition to normal duties:

- a. Maintain constant communication with the EOC.
- b. Directs traffic control. Establish roadblocks to prevent entry into affected areas.
- c. Assumes responsibility for security of homes and property.
- d. Coordinates law enforcement assistance from outside the Town (GCSO, DPS, etc.), and law enforcement activities within the Town.

The Payson Fire Department will be responsible for the following tasks in addition to normal duties:

- a. Maintain constant communications with the EOC.
- b. Conduct rescue operations as needed to remove persons from the affected area.
- c. Coordinates outside assistance with regards to medical emergencies, fire fighting, and establish specific rescue operations.
- d. Arrange transport of sick and injured to appropriate facilities.

The Payson Public Works Department will be responsible for the following tasks in addition to normal duties:

- a. Keep roads open for traffic.
- b. Assist the Police Department and other Law Enforcement in establishing roadblocks and rerouting traffic.
- c. Preposition equipment for snow removal.



The Emergency Operations Staff will be responsible for the following tasks:

- a. Continually update and analyze information and direct agencies and personnel involved in mitigation procedures.
- b. Establish a system, procedures, and contacts for school closing or “employee stay home” announcements.
- c. Keep in constant communications with highway, fire, police, and other emergency services.
- d. Constantly evaluate the overall community situation.
- e. If conditions warrant, initiate or increase efforts to obtain specific information for public broadcast over TV and radio to inform the public of the storm situation and what actions should be taken.



Annex 4 Radiation Radiological Emergencies

SITUATION AND ASSUMPTIONS

Situation

Peacetime: A radiological hazard may occur as the result of naturally caused radiation or from a human or man caused incident.

War-related: The Town has been designated as a host area. It is likely that nuclear detonations in other areas of the State, or the County, could product fallout which would affect Town residents. (It is imperative that a local radiological protection system be developed consistent with the County/State Radiological Protection Plan in order to safeguard the lives of the public.)

Assumptions

Proper development and execution of a radiological hazard response program could significantly reduce the number of casualties which would otherwise result from a war related incident or a peacetime radiological accident.

Adequate means are available to collect and disseminate the data necessary for an effective Radiological Support System.

For peacetime incidents the Arizona Radiation Regulatory Agency (ARRA) and the Department of Public Safety's commercial Vehicle Safety Section (CVCC) will provide resource support services. (Contingency actions are included in the Hazardous Materials/Spill Response Plan.)

MISSION

The purpose of this Annex is to provide for an effective radiological response program designed to protect Town residents from the effects of a radiological hazard in either a war related or peacetime situation.

EXECUTION

Concept of Operations

General

Part of an effective radiological support program is the collection of information on nuclear weapons detonations or from peacetime related incidents which includes damage



assessment and radiological monitoring conducted on a continuous basis. Radiological incident emergency response procedures are consistent with those of other hazardous materials as outlined in the State of Arizona Hazardous materials

Response Plan. The decontamination procedure used to reduce the radiological health hazard involving a war-time situation or a peacetime incident is basically identical except for the magnitude of the war-time situation.

A. Phases of Management - (Where appropriate for war-time or peacetime incidents excepted as noted for war-time only.)

1. Mitigation

- a. Selection of radiological support officers
- b. Establishment of a radiological support program

2. Preparedness

- a. Establishment of a Radiological Support and Response System
- b. Training of radiological support officers
- c. Training of radiological support monitoring personnel
- d. Maintenance and upkeep of monitoring equipment
- e. Public education about radiological hazards and protective active
- f. Acquisition of sufficient monitoring equipment
- g. Establish priorities for decontamination of facilities
- h. Radiological support system exercises

3. Response

- a. Procedures as stated in the State of Arizona Hazardous Materials Emergency Response Plan for peacetime incidents
- b. Distribute radiological monitoring kits to prearranged locations *WR
- c. Activate Weapons Effects Reporting (WER) Network *WR
- d. Public information on radiation safety as required
- e. Public information on evacuation

4. Recovery

- a. Ground and aerial monitoring surveys
- b. Ground and aerial damage assessment surveys
- c. Public information about radiation safety as required
- d. Decontamination procedures



ORGANIZATION

A. Task Assignments - (Appropriate for war-time or peacetime incidents except as noted for war-time only.)

1. Executive

- a. Coordinate all radiological activities
- b. Appoint and assign radiological support personnel
- c. Establish a WER system *WR
- d. Establish a data analysis and damage assessment capability
- e. Establish a distribution system for monitoring equipment (in coordination with ADES)
- f. Establish a comprehensive radiological training program on a local level as assisted by ADES.
- g. Establish a decontamination system
- h. Establish an evacuation plan.

2. Fire Services

- a. Assist in decontamination activities
- b. Provide monitoring personnel
- c. Provide alternate communications
- d. Distribute monitoring equipment as required.

3. Law Enforcement

- a. Department of Public Safety commercial Vehicle Safety Section (CVSS) provides intermediate resources support for peacetime incidents.
- b. Provide alternate communications for WER system *WR
- c. Distribute monitoring kits as directed
- d. Provide monitoring personnel
- e. Perimeter and access control for peacetime incidents
- f. Coordinate and provide control for evacuation as required.

4. Military Support

- a. Provide assistance in all aspects of Radiological Protection and Support.
- b. Assist in decontamination procedures
- c. Assist in evacuation as required.
- d. Assist in perimeter and access control as required

5. Agricultural Services

- a. Inspection and decontamination of crops, land, and livestock
- b. Provide monitoring personnel

*WR For war-related incidents



6. Public Works and Engineering
 - a. Assist in decontamination activities
 - b. Provide for monitoring capabilities
 - c. Damage Assessment
 - d. Provide monitoring personnel
7. Health Department
 - a. Inspect food and water supplies for contamination
 - b. Provide monitoring personnel
 - c. Damage Assessment
 - d. Provide monitoring personnel
8. Medical Services
 - a. provide for emergency response
 - b. Provide medical care for radiation related injuries
 - c. Provide monitoring personnel
9. Radiological Services
 - a. The Arizona Radiation Regulatory Agency (ARRA) provides additional technical support and expertise as required.

DIRECTION AND CONTROL

For peacetime incidents/accidents the Arizona Radiation Regulatory Agency (ARRA) will coordinate its activities through the Division of Emergency Services at the State EOC. The initial response to peacetime accident/incidents will be directed thru the Arizona Department of Public Safety's Duty Officer in Phoenix.

The ADES Radiological Protection Officer is responsible for coordinating all Radiological Monitors, reporting decontamination and radiological support activities when the EOC has been activated *WR.

CONTINUITY OF GOVERNMENT

Lines of succession to each department head are according to Basic Plan, ESF#5 and the standard operating procedures established by each department.

*WR For war-related incidents



ADMINISTRATION AND LOGISTICS

- A. Organization
The radiological support organization chart follows.
- B. Reporting System
Procedures and forms for reporting RADEF war-related information are also presented in the State Radiological Defense Plan.
- C. Decontamination
Decontamination operations follow.
- D. Training
Emergency response staff training programs are discussed in the Basic Plan.
- E. Aerial Monitoring
Procedures for conducting Aerial Radiological Monitor (ARM) and damage assessment surveys are detailed in the handbook for Radiological Monitors, CPG 2-6.2.3. ARM surveys are conducted by Civil Air patrol (CAP) thru the State EOC as requested by the counties.
- F. RADEF Equipment
Radiological equipment is available thru the Arizona Division of emergency Services maintenance and calibration shop which is responsible for maintenance and repair. The equipment is stored in the EOC and distributed as outlined in the following pages.

Additional radiation monitoring support is available through ARRA upon request.

Monitoring Procedures

All monitoring will be performed in accordance with the Handbook for Radiological Monitors, SM 5.1. and the State WERS Reporting Manual. Peacetime monitoring will be in accordance with the State Hazardous Materials Response Plan.

PLAN DEVELOPMENT AND MAINTENANCE

The Emergency Coordinator will be responsible for working closely with the State/County Radiological Protection Officer (RPO), ARRA, DPS CVSS and support agencies in the development of the Radiological Support programs systems and response.



AUTHORITIES AND REFERENCES

A. References

Defense Civil Preparedness Agency, 1978, Radiological Defense Preparedness, CPG 2-6.1., Washington DC.

DCPA, 1977, Radiological Defense Manual, CPG 2-6.2., Washington, DC.

DCPA, 1977, Handbook for Aerial Radiological Monitors, CPG 2-6.3., Washington, DC.

Federal Emergency Management Agency, 1981, Guide for the Design and Development of a local Radiological Defense Support System, Washington, DC.

National Council on Radiation Protection and Measurements, 1974, Radiological Factors Affecting Decision-making in a Nuclear Attack, Washington, DC.

Office of Civil Defense, 1963, Handbook for Radiological Monitors, FG-E-5.9., Washington, DC.

Host Area Plan for Gila County.

State of Arizona Emergency Response Plans (Peacetime and Nuclear)

State of Arizona Hazardous Material Emergency/Spill Response Plan

State of Arizona Radiological Defense Plan

State of Arizona, County of Maricopa, Fixed Nuclear Facility Off-site Emergency Response Plan

Organizational chart

RADIOLOGICAL ORGANIZATIONAL CHART

Peacetime and War Related

Executive Group
Emergency Coordinator

Arizona Radiation Radiological * Regulatory Agency Officer

AZ DPS CVSS HAZ MAT Teams	Agricultural Service (County)	Law Enforcement (Town)	EOC * (Town)	Fire Service (Town)	Public Works (Town)	Health Dept. (County)
		*	*	*		
MonitoringCrops, Communications	Land Livestock Inspection	Weapons Effects Reporting Stations	EOC Plotters EOC Analysis	Warning and Communications	Documentation Teams	Food & Water Monitoring
Assessment	Monitors	*	*	Rescue Units	Monitors	Food & Water
-----	-----	RADEF Kit Distribution Teams	Aerial Monitoring Teams	Suppression Units	-----	Diagnostic Tests
		Monitors	-----	Documentation Units		Hospital Aid Facilities
		*		Monitors	-----	Waste Disposal Monitors
		Warning & Communications Teams				Mortuary Services

_____ denotes primary authority and task responsibility- - - - - denotes support/mutual aid responsibility

* War-related condition



Radiological Defense Reporting System * War Related

General

If a nuclear attack takes place, Increased Readiness Actions and Reports (IRR) are no longer required. Instead, new types of operations and reporting are immediately needed. These new reports tell where nuclear weapons have detonated, where damage has occurred and where fallout hazards exist.

All reporting stations should report to the local Emergency Operating Center where reports will be consolidated and transmitted in a single report to the County and State Emergency Operating Centers.

Communication of reports should be by the best available voice circuits. If the communications of any reporting station is broken with the local Emergency Operating Centers, the reports should be made to the next higher EOC until communications can be reestablished with the local EOC. These reports are made to the Emergency Operating Center and analyzed. The analysis staff of the EOC will evaluate the information received from the reporting stations and furnish fallout warnings and projections to their local jurisdiction, and to those adjacent jurisdictions that will be affected. The State Emergency Operating Center will furnish summaries and analyses to officials within the State EOC and to the local Emergency Operating Centers.

The flow of information must be in all directions, up, down and laterally to all echelons of government. The State Emergency Operating Center will provide information to all local Emergency Operating Centers which will be affected by the situation and upon request by others.

MESSAGE FORMATS SHOULD BE STRICTLY ADHERED TO, AS THEY ARE ESSENTIAL ELEMENTS OF BOTH AND INTRA-STATE AND INTER-STATE FLOW OF EMERGENCY INFORMATION. ALL REPORTS ARE MADE AT THE TIME OF ORIGINATION.

I. Reports

Five types of reports are needed by the RADEF staff at the Emergency Operating Center. They are:

A. Readiness Report

Submitted when a minimum of 50 percent of the WERS and shelters and the local EOC's are operational for radiological defense purposes.



B. Sighting Reports

1. All WERS will report sighting of nuclear detonations (NUDETS). Sighting reports are based on observation of the light flash or the resulting cloud. The report contains the time of occurrence and the direction to the NUDET.
2. The following is a sample **NUDET SIGHTING REPORT: "STATE EOC, THIS IS GILA COUNTY EOC NUDET SOUTHWEST AT 9:40 A.M.**

C. Damage Reports

All reporting stations will submit a Damage Report whenever weapon blast causes damage to the immediate vicinity of the reporting station.

This report should be sent when the event occurs, giving the local time, of the occurrence.

The reports are not intended to provide detailed damage assessment, but rather should enable the local County and State EOC's to determine the location and size of the area damaged by a nuclear detonation.

1. Report structural damage if the observed damage at, or in the immediate vicinity of the reporting station is as described below or worse.
2. In general most building are standing but visibly damaged (i.e., doors and windows gone).
3. In office and commercial buildings most suspended or false ceilings, such as acoustical tile ceilings, are down or many interior partitions are down or some exterior walls are down.
4. In industrial buildings, corrugated asbestos siding is shattered; corrugated steel and aluminum siding is blown in.
5. In residential housing, separation of wall panels at joints is observed, framing is cracked with visible displacement, roofs are caved in, and possibly a few houses are down.
6. Automobiles generally have broken windows and dished-in panels but still can be driven.
7. Report glass breakage if the only observable damage is characterized by broken windows.
8. The following are samples of Damage Report Messages:

"COUNTY EOC, THE TOWN EOC--STRUCTURAL DAMAGE AT 10:33 A.M."

"COUNTY EOC, THIS IS THE TOWN EOC--GLASS BREAKAGE AT 10:36 A.M."



9. Make no report if neither structural nor glass damage occurs. However, other signs of nuclear detonations, such as length of flash, length of time between flash and sound if observed, should be noted in the log of the reporting station to assist in answering possible questions from the EOC. The County/State EOC may interrogate any reporting station on an as-needed basis for additional information on observable nuclear weapons effects.

D. Fallout Reports

All reporting stations should include the location (Town and/or County), the radiation intensity being reported, and the local time the reported intensity occurred. The reporting station should also indicate whether a rising or falling dose rate exists. All reporting stations will submit to their local DOC fallout reports at the time of observation of the following indicated dose rate readings.

1. Fallout arrival (0.5 R/hr)
2. 50 R/hr (when the dose rate rises above this level)
3. Peak dose rates (if greater than 50 R/hr for the initial peak and any subsequent peaks)
4. 50 R/hr (when radiation decays below this level)
5. 0.5 (1/2 R/hr) (when radiation decreases below this level)

THE LOCAL EOC WILL CONSOLIDATE THESE REPORTS AND MAKE ONLY ONE REPRESENTATIVE REPORT TO THE COUNTY EMERGENCY OPERATING CENTER.
(Examples are given below.)

Report Type (Event)	Example Voice Message
a. Fallout Arrival (0.5 R/hr)	"COUNTY EOC THIS IS THE TOWN EOC FALLOUT POINT 5 AND RISING AT 11:10A.M."
b. Above 50 R/hr	"COUNTY EOC THIS IS THE TOWN EOC FALLOUT 50 AND RISING AT 11:26A.M."
c. Peak (if above 50 R/hr)	"COUNTY EOC THIS IS THE TOWN EOC FALLOUT PEAK 185 AND FALLING AT 12:00P.M."
d. Subsequent Peak	"COUNTY EOC THIS IS THE TOWN EOC FALLOUT 50 AND FALLING AT 10:45P.M."
e. Below 0.5 R/hr	"COUNTY EOC THIS IS THE TOWN EOC FALLOUT PINT 5 AND FALLING AT 1:10P.M."



Additional periodic reports are required locally for the construction of fallout history curves and to forecast future radiation intensities. These dose rates will not be reported to the State EOC unless requested.

E. Fire Reports

All Weapons Effects Report Stations will submit a fire report whenever large fires are observed in the immediate vicinity of the station. An example report follows:

"COUNTY EOC, THIS IS THE TOWN EOC, FIRE REPORTED BY WERS 33-2 AT 10:35A.M."

The message form will be utilized for transmission and receipt of Weapons Effects Reports. All reports must be submitted as soon as possible after occurrence.

II. Fallout Recording/Reporting Form

Each Emergency Operating Center should have a pre-designed form to record fallout information. The information to be required from the shelters and monitoring station should be determined by the Radiological Defense Staff and the local Emergency Coordinator.

Information, in addition to that required by the County/State Emergency Operating Center, will be helpful to the local Radiological Defense Staff. The average dose total received by the shelter occupants is also of vital concern to the local RADEF staff. Other information may be required as needed by the local Emergency Coordinator.

An example form is provided to show how a Fallout Recording/Reporting form should be used, and when information should be sent to the local Emergency Operating Center.

IV. Reporting Station Log

All reporting stations should maintain a log. This log should be a time-oriented record of all observations and all communications. The reporting station log should be maintained continuously from the time the EOC is initially manned until it is secured in each exercise or emergency.

V. Individual Dose Rate Records

It is important that individual dose rate records be maintained on all persons in shelters, WERS, critical facilities and EOC's. Care should be taken to ensure that the dose received by personnel engaged in outside emergency operations is recorded and furnished to appropriate service chiefs for use in determining future assignments.



Report Distribution

TOWN TO	STATE TO COUNTY	REGION TO REGION	COUNTY TO STATE	TOWN
Readiness Report	X			
Sighting Report	X	X	X	X
Damage Reports				
Structural Damage	X	X		
Glass Breakage	X	X		
Damage Summary		X	X	X
Fallout Reports				
Fallout Arrival 0.5	X	X		
Above 50	X	X		
Peak above 50	X	X		
Subsequent peak	X	X		
Below 50	X	X		
Fallout Forecast			X	X
Fallout Warning			X	X
Fire Report	X	X		



WEAPONS EFFECTS MESSAGE FORM

FROM: _____

DATE: _____

TO: _____

MSG: TIME: _____

_____ Location
_____ Readiness Report
_____ NUDET Sighting--WERS No. _____ Direction _____ At: _____
_____ Damage--WERS No. _____ Structural _____ Glass _____
_____ Major Fire
_____ Fallout

_____ .5 R/hr and rising at _____
_____ 50 R/hr and rising at _____
_____ Peak _____ R/hr at _____
_____ 50 R/hr and falling at _____
_____ .5 R/hr and falling at _____
_____ New Fallout arrival _____

_____ R/hr at _____

_____ Hourly reading _____

Comment: _____



Event Record

Date/Time	Event	Time Received Or Sent
(Enter the local time that the entry is made in the log.)	(Describe the event being recorded e.g., an exposure rate reading taken, a report sent, a message received, or an internal station operational event such as a communication loss/restoration.)	(Enter the local time sent/received for out- going/incoming communications.)
9-10	Fallout arrival (0.5 R/Hr Notified local EOC 9:12A.M.)	



INDIVIDUAL DOSE RATE RECORDS

Radiation Exposure Record

Date(s)
Exposure(s)

Daily
Dose(s)

Total Dose
do Date

Name: _____

Address: _____

Age: _____

Doc. Dec. No: _____

Date(s) of Exposure(s)	Daily Dose(s)	Total Dose to Date
---------------------------	------------------	-----------------------

6/6/62	15	15
--------	----	----

6/7/62	5	20
--------	---	----

6/7/62	25	45
--------	----	----

6/8-10/62	5	50
-----------	---	----

Date _____

FRONT SIDE

SAMPLE FORM

BACKSIDE



Radiological Instrument/Kit Distribution System

(to be developed)



Radiological Support Instruments

Radiation can only be detected and measured with specialized instruments. A number of such instruments were purchased some years ago by the Federal government. Most of them have been granted to the states. About two-thirds of the instrument inventory has been issued to local governments. The remaining one-third is stockpiled for issue to local governments during the Increased Readiness Period. Arizona has a distribution plan for these stockpiled instruments. This plan is based on population and geography and provides for an equitable distribution of the total State inventory. This distribution, when completed, will reduce by one further step, the placement of instruments in the hands of the ultimate users, the radiological monitors.

Current emphasis is on determining realistic local requirements for instruments. Criteria have been developed for determining these requirements. It recognized that:

- Population totals and distribution have changed since the last procurement of instruments.
- The original procurement of instruments was based primarily on the survival (in-shelter) phase of FADEF operations and did not adequately fulfill recovery phase needs or peacetime needs.
- Requirements for reporting and for self-protection have changed due to recent studies and evaluations.
- Recommended use of the various instruments available in the inventory has changed with time.
- A current instrument requirement must be developed to determine exact local needs.

RADIOLOGICAL SUPPORT INSTRUMENTS

Types of Instruments - The list on the following pages provides a summary of the radiological monitoring instruments available as sets for use in fallout shelters, monitoring stations, self-protection monitoring by emergency services and vital facilities. All instruments use standard "D" batteries. A limited number of batteries are furnished with each instrument set. A brief description of each instrument is as follows:

Low Range Survey Meter (CDV-700) - The CDV-700 radiation survey meter is a sensitive, low-range instrument that can measure gamma radiation and detect beta radiation. It has an effective range of 0 to 50 milliroentgens per hour and has uses a Geiger tube for detecting radiation.

This instrument is designed for radiation measurements at low intensity and this is not useful in areas of high contamination. Its major operational application is for evaluating the effectiveness of decontamination procedures, personnel monitoring, and peacetime Radiological Emergency Incidents.



RADIOLOGICAL INSTRUMENTS

High Range Survey Meter (CDV-715) - This instrument is a high range survey meter of general use. It measures gamma radiation within a range of 0 to 500 Roentgens per hour. It utilizes an ionization chamber for detecting radiation.

The instrument is the standard operational instrument for use in shelters, monitoring stations, emergency services, vital facilities and EOC's during the trans and post-attack periods. It was designed for use by radiological monitors for the major part of their operation in the period during and following the attack. The instrument is intended for ground survey, but it can serve as substitute equipment for aerial measurements.

Dosimeter and Charger (CDV-742 and CDV-750) - Dosimeters are instruments designed to measure cumulative radiation exposure. The accumulated exposure can be read directly at any time. By recharging, these dosimeters can be used again. The dosimeter provided for general operational use is the CDV-742 which has measurement range of 0 to 200 Roentgens. Until these were available in sufficient quantity, the CDV-730 with a range of 0 to 20 Roentgens and the CDV-740 with a range of 0 to 100 had been furnished. They are still usable. Dosimeters resemble a fountain pen in size and shape. The CDV-742 can be identified by its bronze or gold colored pocket clip.

The CDV-742 high range dosimeter is the standard for use in shelter, monitoring stations, emergency service organizations and vital facilities. Peacetime usage would be in conjunction with the CDV-138 Low Range dosimeter to provide low and high exposure ranges. The CDV-138 can be identified by its black colored pocket clip.

The CDV-750 dosimeter charger is the device utilized to recharge or "zero" dosimeters so they can be reused.

Remote Survey Meter (CDV-711 and CDV-717) - There are essentially two remote survey meters.

The CDV-711, remote sensor radiation meter, is a high range instrument for use in EOC's and other protected facilities. It has a detector that is blast resistant in excess of 50 psi overpressure for use in conjunction with facilities that can withstand the high overpressures associated with nuclear weapons. It was designed to measure gamma radiation from 0 to 1000

Roentgens per hour. The detecting element is an ionization chamber and can be located up to 300 feet from the readout.

The CDV-717, remote survey meter, is essentially a CDV-715 gamma survey meter with a removable detector unit for making measurements at distances of up to 25 feet between the detector and the readout. This instrument was designed for use by radiological monitors in



monitoring stations during the early period following a nuclear attack. The purpose of the instrument is to decrease the radiation exposure to monitors by making it unnecessary for the monitor to leave his shelter in order to obtain an outside measurement.

Aerial Survey Meter (CDV-781) - The aerial survey meter is designed for general post attack surveying by light aircraft after fallout has been deposited. The instrument consists of an indicating unit, an interconnecting cable and detector unit. The instrument operates from a battery power supply. A tape recorder with associated throat microphone and a remote control switch permits in-flight recording of necessary data. The unit also includes a means for simulating a radiation environment for use in training flights.

Instrument Sets - Radiological instruments are issued as sets comprised of several different types of instruments. There is a separate set configuration for each capability.

Shelter radiation Set (CDV-777-2) - This set is composed of one CDV-715, high range radiological survey instrument; six CDV-742, radiological dosimeters and one CDV-750, dosimeter charger. A minimum of one set is needed for each public shelter specified for use in the community shelter plan.

Monitoring Station Set (CDV-777A) - This set is composed of one CDV-715, high range radiological survey instrument; one CDV-700 low range radiological survey instrument; six CDV-742, radiological dosimeters; and one CDV-750 dosimeter charger. This set is used in the monitoring station. One set is recommended for each monitoring station established in the community.

Self-Protection Sets (CDV-777 and CDV-777-1) - There are two sets for self-protection:

The CDV-777 is composed of two CDV-715, high range radiological survey instruments; one CDV-700, low range radiological survey instrument; six CDV-742- radiological dosimeters, and one CDV-750, dosimeter charger. One set is issued to each self-protection location, such as emergency services, vital facilities and essential industries.

The CDV-777-1, alternate set, is the same as the CDV-777 except that it has only one CDV-715, high range radiological survey instrument. These sets are used for self-protection monitoring by emergency services, vital facilities and essential industries. The CDV-777-1, alternate set, is issued when more than one set is needed at a location and for use on emergency service vehicles (police, fire, rescue, ambulances, etc.).

Peacetime Radiological Emergency Response Sets (CDV-777 P/H) - This set is composed of two CDV-700's, low range radiological survey instruments; one CDV-715, high range radiological survey instrument; four CDV-138, low range radiological dosimeters; four CDV-742 high range radiological dosimeters; one CDV-750, dosimeter charger. This set is used by hospitals and first responders (fire, police, rescue, ambulances, etc.) for peacetime



emergencies. The CDV-777 P/H set has been specifically allocated for first response units and should be used for peacetime emergency responses with the CDv-777-1 used as backup if more than one set is needed at a location.

Storage - The preferred method of storing shelter monitoring sets is in bulk repositories located within the jurisdiction. In low risk areas, shelter sets may be stored in the shelter facility if proper secure storage is available. The self-protection monitoring sets should be prepositioned with self-protection and mobile monitoring units such as i.e., fire stations, police stations, hospitals or water pumping stations. A sufficient number of additional self-protection sets and monitoring sets should be stored in local bulk repositories to allow for expansion, as necessary, of each capability during an Increased Readiness Period.

The use of bulk repositories has several advantages over storing all the radiological sets in scattered facilities:

- Simple distribution plans can provide for their rapid distribution during an Increased Readiness Period for either shelter in-place or crises relocation.
- Sets stored in bulk repositories are usually more secure against pilferage.
- The bulk repository can offer better storage conditions in respect to temperature and humidity.
- It is less costly to inspect and maintain sets in bulk repositories than in individual shelters.

Maintenance and Calibration - Arizona, under contract with The Federal Emergency Management Agency (FEMA), operates a 100 percent federally funded Radiological Instrument Maintenance and Calibration Facility. Instruments are periodically inspected and cycled through the facility and are repaired and recalibrated as required.

Batteries - All emergency services survey meters use standard 1.5 volt "D" cell batteries. Bulk quantities of batteries are routinely furnished to local jurisdictions through the Maintenance and Calibration Facility. Until replaced, the batteries are reserved for exclusive use in the radiological instruments.

Peacetime Use of Instruments - Emergency Services instrumentation is designed to measure the gamma radiation emitted by radioactive fallout. Some of these instruments will also detect high energy beta radiation if present in sufficiently detectable quantities. Although Emergency Services instruments do not adequately fulfill all of the requirements for peacetime radiological incident/accident monitoring, most of the instruments granted to the states could be useful in the event of peacetime incidents involving the accidental release of radioactive materials to the environment.

However, problems can arise when emergency services instruments are used for the measurement of radioactivity from peacetime incidents, because of the large number of diverse



types of radioactive materials that may be released. These materials can vary considerable in their types and amount of radioactivity; thus, peacetime incidents result in more complex radiological measurement and interpretation problems than are expected for the radiological situation resulting from a nuclear attack. The complexity of measurement and hazard evaluation in a peacetime release of radioactivity to the environment occurs when contamination is airborne, either gaseous or particulate, and inhalation or ingestion may create an internal hazard greater than the external exposure hazard.

Other major differences between peacetime and attack contingencies would be the lower levels of radiation to be measured, requiring instruments having a compatible range or measurement, and the operating constraints which limit exposure of the populace to much lower levels in peacetime incidents than those acceptable in an attack situation where the primary mission is to prevent death or acute radiation sickness.

Radiological assistance in peacetime emergencies is available through the Arizona Department of Public Safety (DPS), Duty Officer. Designated agencies within the state provided support to DPS as required. These agencies have trained individuals and the specific radiation detection equipment necessary to measure and evaluate the existing type of radiation hazard.

The use of emergency services resources for emergency response to peacetime radiological incidents must be in accordance with state and local government emergency response plans and performed by properly trained authorized personnel.



Decontamination

I. Purpose

To formulate a decontamination plan for reducing and removing radioactive material from structures, areas, objects, and person with the lowest feasible expenditures and materials, and with radiation exposure to decontamination personnel held to a minimum commensurate with the urgency of the task.

II. Situation and Assumption

A. Situation

Decontamination must be based on a careful and sound estimate of the situation utilizing all aspects of the radiological monitoring system. The need for the decontamination of areas, buildings, and resources depends upon the need for the particular area contaminated and the length of time which the contamination would remain. Decontamination is performed for the purpose of supporting the overall emergency response mission. Thus, any decision to carry out a decontamination procedure must be based upon careful evaluation of the expense in materials, time and labor compared with the inconvenience and hazard involved in avoiding the decontamination.

In general, the principles of radiological decontamination are that:

- (1) Radioactivity cannot be destroyed;
- (2) the surface contaminated dictates the method of decontamination to be used;
- (3) decontamination personnel must proceed from the easy to the most difficult method; and
- (4) monitoring should be done frequently for effectiveness.

B. Assumptions

1. That trained radiological officers and teams exist, or will exist, in state agencies and in each political subdivision of the State.
2. That specific guidance for livestock and agriculture has been furnished to local USDA officials and farmers.
3. That maximum use of community shelter for persons and protective covering for equipment and resources will be affected prior to any attack to reduce personnel contamination.

III. Concept of Operations

As in the case of natural disasters, community action is by far the best way to do all that must be done to recover a radiological threat. Local governments have many organized units available to serve as a nucleus for decontamination teams including Fire and Police Departments County Health Services, and public utility crews.



In order to utilize these basic organizations to the best ability a series of priorities should be established using the information available to the local Emergency Operating Center from the radiological monitoring teams. In addition, the following time factors should be considered before adopting a decontamination procedure:

- (1) The time which the contamination would remain if left alone;
- (2) the time which contamination may be allowed to remain as permitted by the situation; and
- (3) the time required for the decontamination procedure; this time factor should not be greater than either of the former.

As stated in paragraph 1 above, decontamination is performed for the purpose of supporting the overall emergency response mission.

IV. ORGANIZATION AND ASSIGNMENT OF RESPONSIBILITIES

A. State

The Arizona Radiation Regulatory Agency is responsible for coordinating plans and programs for decontamination. The State Radiological Protection Officer will furnish technical advice and support. The Arizona Department of Public Safety's Commercial Vehicle Safety Specialist will coordinate on-scene response activities.

B. State Agencies and Departments

To develop plans and programs and conduct such decontamination activities as are inherent to normal responsibilities or assigned by proper authority and prepare political subdivisions in accordance with established priorities.

C. Local Governments

The governing authority of each County and municipality is responsible for the preparation of plans to cope with contamination which may occur within its respective areas of responsibility. These plans should be prepared in accordance with the concepts and operational guidelines as stated in this plan, and coordinated with the next higher echelon of government. Further, priorities should be established for decontamination of those areas and resources that are most vital to saving lives and to the community as a whole.

The Arizona Wing of the Civil Air Patrol (CAP) is responsible for decontamination of their aircraft. CAP units located within a County would require support from the local airfields for decontamination facilities.

D. The Public

It is incumbent on each person to:

1. Decontaminate themselves and the equipment used with materials on hand to the best of their ability.



2. Make themselves available for community projects as established by the governing authority and in accordance with the priorities given.
3. Become as knowledgeable on procedures for decontamination as possible and adhere to safety criteria.

V. DIRECTION AND CONTROL

The establishment of priorities for decontamination must be weighed carefully. The first consideration must be given to immediate protection from bodily injury and death. The next consideration is that the total radiation hazard is a composite due to several causes, including contamination of the surrounding areas, contamination of skin areas, and ingestion and inhalation of radioactive materials. The following is a list which gives general priorities:

- A. Personnel and clothing
- B. Food and water to be consumed
- C. Vehicles and equipment and other essential resources
- D. High radiation areas in essential locations or areas
- E. Structures and buildings to be used after emergence from shelters *WR
- F. General areas such as schools, shopping centers, parks, etc.

The method of decontamination will vary with the surface of the material to be decontaminated. In some cases the radioactive material is removed by brushing, wiping, or washing. In other cases it may be covered over with some shielding material. It is possible that removal of the contaminated item to an isolated area until the radiation has decayed may be the best decontamination procedure. The following are common methods of decontamination:

A. Wet Processes

1. Water (scrubbing, with detergents)
2. Steam
3. Complexing agents (polyphosphates, sodium versenates, citric acid, citrates)

*WR War related

4. Caustics (sodium hydroxide or lye, trisodium phosphate)
5. Organic Solvents (kerosene, gasoline, alcohol, ether, turpentine, carbon tetrochloride, commercial paint remover)
6. Acid mixtures
7. Inorganic acids

B. Dry Processes

1. Vacuum
2. Abrasions (vacuum or sand blasting, chipping, filling or grinding)
3. Aging
4. Sealing
5. Disposal



TABLE 1

COMMONLY USED EMERGENCY SERVICES RADIATION MONITORING INSTRUMENTSPage 1 of 2

<u>MODEL NUMBER</u>	<u>DETECTOR</u>	<u>RANGE OF READINGS</u>	<u>DESCRIPTION AND USE</u>
CD V-700	G-M Probe	0-50 mR/HR	Low range survey instrument for training and late post-attack recovery use. Measures gamma and detects beta radiation.
CD V-715	ION Chamber	0-500 R/HR	High range survey instrument. Gamma radiation only.
CD V-717	ION Chamber	0-500 R/HR	Similar to the CD V-715 but with a remote detector extending out to a distance of 15 feet. Gamma radiation only.
CD V-711	ION Chamber	0-1000 R/HR	Remote sensor instrument designed for the continuous measurement of radiation at an outside location and displaying this information up to 300 feet away. The ION detector unit is designed to withstand blast over-pressures up to 50 pounds per square inch. For use with EOC's Gamma radiation only.
CD V-138		0-200 mR	Self-reading dosimeter for training and peacetime use. Uses CD V-750 charger. Gamma radiation only.
CD V-742		0-200 R	Diometer for use in shelter, Monitoring stations, and for emergency workers during nuclear attack, postattack, and peacetime conditions. Uses CD V-750 charger. Gamma radiation only.
CD V-750	Battery-Operated Charger	-----	Dosimeter charger for use with the Model CD V-138, CD V-742, CD V-730 and CD V-740 dosimeters.
CD V-705	Pulse Amplifier	-----	Loudspeaker attachment for the CD V-700, GM survey meter. Used as a training aid.



CD V-781	ION Chamber	0-25 R/HR	Provides a measurement system for use in low flying aircraft for aerial monitoring under nuclear attack and postattack conditions. Gamma radiation only.
CD V-700M	Special End Window G-M Probe	0-30,000	An end window probe assembly attached to a modified CDV-700. Detects alpha, beta and gamma radiation. May be used in connection with peacetime radiological incidents/accidents. Limited distribution.

R - Roetgen
MR - Milloroentgen
R/HR - Roentgen per hour



TABLE 2

COMPOSITION AND RECOMMENDED USE OF RADEF INSTRUMENT SETS

<u>SET TYPE</u>	<u>TYPE AND QUANTITY OF INSTRUMENTS IN SET</u>					
	CD V-700 Low Range Survey Meter	CD V-715 High Range Survey Meter	CD V-717 High Range Survey Meter w/Remote Sensor	CD V-742 Dosimeter	CD V-750 Dosimeter Charger	
CD V-777	1	2	0	6	1	Standard set use in self-protection monitoring by personnel in emergency services, vital facilities and essential industries.
CD V-777A	1	1	1	6	1	Standard set for use in Monitoring stations.
CD V-777-1	1	1	0	6	1	Alternate set for use in self-protection monitoring.
CD V-777-2	0	1	0	6	1	Standard set for use in public shelters.
CD V-777P/H	2	1	0	4 4 CD v-138	1 <u>1/</u>	Peacetime Emergency Set for First Responders and Hospitals.

1/ CD V-777 P/H contains 4 CD V-138's



Standing Operating Procedures (SOP) for Radioactive Material Accidents/Incidents

I. General

- A. This SOP provides general guidance for responding to any incident, accident, or emergency in which radioactive materials or a machine source are involved, except for an accident involving Palo Verde Nuclear Generating Station (PVNGS) reactors.
- B. The ARRA Emergency Response Program Manager has the primary responsibility for the coordination of all emergency responses. This central point of contact has been established to ensure a smoother, more unified response mechanism. To this end, the ARRA Emergency Response Duty Officer will be designated to provide a response capability during nonworking hours. This duty will be performed on a rotating basis by designated Health Physicists. The Department of Public Safety's commercial Vehicle Safety Specialist will coordinate on-site emergency response.
- C. Two emergency response kits are available from the Emergency Response Program. They contain identical items of equipment and each is capable of supporting a two-man response team. Contents may be changed periodically as emergency response needs dictate. A packing list, showing contents by item and quantity, is included in each kit. A third kit is available to carry a single-channel analyzer, shielded well counter, zinc sulfide alpha counter, beta scintillation probe and counting stand, should those items be deemed necessary.
- D. The Director or ARRA will be advised of all incident reports and response contemplated before responders depart for the incident scene. The Director shall advise the Deputy Director and the Administrative Officer of the incident and assure the Agency staff is alerted if required.
- E. All incidents are considered to be undefined radiological situations. Responders should take standard precautions for self-protection as follows:
 - 1. If outdoors, always approach from the upwind direction. Approach the area with two operative survey meters. One must be an unsaturable type (ion chamber - "high" range) and the other should be a sensitive unit (e.g., a GM instrument which saturates)
 - 2. Wear protective clothing and respiratory protection if the need is indicated.
- F. The responders' responsibility includes protection of emergency service workers (police, fire, ambulance, etc.) from the hazards of radiation. Advise them as to the hazard, when you complete the evaluation. Recommend safe procedures. If there is a possibility that emergency service personnel and/or their equipment may be or will become contaminated, the individual and the equipment must be surveyed and wipe tested before clearance to return to assigned duty stations.



II. Response Guide

A. General

1. Whenever ARRA is apprised of an accident, incident, or emergency, a response is required. This response may be in the nature of soliciting and providing information over the phone, scheduling an inspection at a later time, or it may involve an immediate on-site response. If there is any possible risk to public health and safety, an immediate on-site response shall be made.
2. An on-site response shall be made in the following situations:
 - a. If ARRA is requested to do so;
 - b. If radioactive material, e.g., a source, is lost (other than a gas release) or involved in an accident;
 - c. If there is an actual or potential hazard to public health and safety;
 - d. If the mass media should notify ARRA of any real or suspected incident a response is automatic.
3. When receiving a notification of an incident, the ARRA Emergency Response Coordinator (Duty Officer after hours) should complete a Radiological Incident Report (Enclosure 1) to obtain pertinent background information.
4. The Emergency Response Coordinator should then verify telephone reports of incidents. This may be done by dialing the number given on the Radiological Incident Report, or in the case of a licensee, by checking the file to validate the information given.
5. Based on the circumstances, use the most expedient means of transport available--car, helicopter, fixed-wing aircraft. Automobile transportation is the mode of last resort for distances greater than 100 miles. If air transport is deemed to be the most expedient mode of travel for a given situation, the ARRA Emergency Response Coordinator (Duty Officer after hours) shall request helicopter transportation from DPS. If the DPS helicopter is not available, a request shall be made of the Arizona Division of Emergency Services for helicopter or fixed-wing transportation, whichever is available. If air transport is provided, service may be one-way. The return trip may be made by commercial transport or State vehicle.
6. During the response, normal office and inspection routines will be maintained unless the ARRA Director orders otherwise.
7. Upon arrival at the scene, responders will:
 - a. Identify the local, County or State On-Scene Coordinator, if present.
 - b. Evaluate the situation.
 - c. Take corrective action immediately, if necessary, to protect public health and safety. In this regard, the administrative guidelines contained in reference (a) will be followed.
 - d. Advise the ARRA Director of the evaluation as soon as possible (within 30 minutes if possible). Contact with the ARRA office will be maintained throughout the response and the on-scene responders shall periodically update the Director regarding development of the event.



- e. Advise local, County and/or the State On-Scene Coordinator of the evaluation and the complete/intended actions.
 - f. Protect yourself if other hazardous materials are involved and consult the cognizant local, County or State officials present. If there is any doubt, do not approach the accident scene or enter the affected area; wear protective clothing and respiratory protection.
 - g. Attempt to determine whether or not items of noncompliance led or contributed to the incident or accident.
8. Licensees are responsible for corrective actions. The licensee Radiation Safety Officer should remain with the responders until the situation is stabilized.
 9. If any individual is known or suspected to be contaminated and/or overexposed, the following policies apply:
 - a. One responder will accompany the individual(s) to the hospital to advise attending physicians as to health physics requirements and to oversee any necessary decontamination;
 - b. Physicians will be advised that trauma should be treated first;
 - c. If there is known or suspected overexposure, the physician should be placed in phone contact with a Radiation Emergency Assistance Center ((REAC) physician (no charge for this consultant service);
 - d. Survey and assist/supervise decontamination of the transport vehicle;
 - e. Insure hospital is fully aware that the Agency in no way assumes responsibility for medical costs.
 10. Emergency Telephone Numbers, is provided so that responders may call and request information. Only the Director or his designee may request additional on-scene assistance.
 11. Always respond in pairs (site response only).

B. Working Hours

1. All telephone calls relating to a radiological incident, accident or emergency should be referred to the Emergency Response Program Manager or to a member of that program. If no one is available, the call should be directed to the Program Manager of the Radioactive Materials Program, which is designated the secondary response element.
2. The Emergency Response Program Manager will coordinate response efforts with other Agency programs with a support capability.
3. In addition to the response kits, the Emergency Response Program has additional instrumentation and protective equipment.
4. The staff member(s) responding to an incident shall prepare a follow-up report and submit it to the Director with copies to the Deputy Director, the PIO, and the Emergency Response program. The report should be submitted within three (3) working days following the incident. The Emergency Response Program Manager will prepare for the Director's submission all reports required by reference (b) and will maintain a master file of all reported incidents.



C. Nonworking Hours

1. The Duty Officer will be notified of an incident by means of the pager. The pager also permits a 10-second voice message. The Duty Officer must remain in the Phoenix area during the tour of duty - the pager's range is about 40 miles (65 km).
2. Upon hearing the pager, the Duty Officer should check for any voice message and then call the Department of Public Safety Duty Officer (262-8011) to determine incident specifics. If, for any reason, the ARRA Duty Officer cannot be contacted, the next man on the watch list or the Director and Deputy Director, shall be called.
3. The Duty Officer shall contact one of the Emergency Response Coordinators and request support. In all cases, the Director is to be apprised of the incident before responding and contacted periodically after arrival at the scene (if at all possible to do so).
4. The Agency designated emergency response vehicle should be used to respond to incidents for which use of a vehicle is deemed appropriate.
5. Reporting requirements for any incidents responded to are shown in paragraph II.B.4.
6. The Emergency Response Program Manager will publish monthly a roster of Emergency Duty Officers and will maintain an up-to-date Emergency Assistance Telephone Call List (Enclosure 3). Enclosure 3 will not be provided to anyone outside the Agency.
7. The Duty Officer will obtain the pager and its charging device from the Emergency Response Program on Monday before 1630 hours and return it upon reporting for work the following Monday (Tuesday if the Monday is a designated holiday).
8. The Duty Officer's normal tour will be Monday through Sunday from approximately 1630 to 0800 hours on week days, and 24 hours on weekends and holidays.

D. Press

1. The following guidelines apply:
 - a. Press releases will be provided by the Agency's PIO. The completed Radiological Incident Report from will provide the PIO with the basic information with which to prepare a preliminary release. Further information for media will be followed by subsequent releases as needed.
 - b. If a source is lost or unaccounted for, all appropriate media and local television stations, if necessary, will be accessed for the purpose of public safety as well as assistance in locating the lost source. DPS media alert may also be used.
 - c. Responders on the scene may provide a short synopsis of what they found but should not engage in long discussions or speculation with media representatives. There will be one spokesperson (as previously designated) for the responders. Any information provided to the media



should be provided in coordination with local, County or State officials at the scene. The Agency PIO should also be apprised of the information provided as soon as possible.

- d. There will be no staging or reenactment of the accident or response solely to accommodate a media desire to have "live" coverage.

III. USE OF VEHICLES

- A. A State vehicle has been designated as the emergency response vehicle. It should be used for that purpose and, although it may be used for other official business, it should remain within 30 minutes driving time of the Agency offices. Note: Exceptions to this rule are to be made on an individual case basis by the Director.
- B. When responding to an emergency and returning to the ARRA or to Phoenix, always observe all traffic and parking regulations.

IV. TRAINING

- A. All designated Emergency Response Duty Officers will under go an initial orientation on the response kits, equipment available and its use and emergency response procedures. Yearly refresher training will be conducted (as workload and need dictate).
- B. In addition to equipment and procedure training, periodic training will be conducted regarding the type of equipment and sources most likely to be encountered in an accident. This training will include reviews of past response activities and "lessons learned".

V. LABORATORY

Whenever a response is made during non-working hours, the Laboratory Manager is to be advised. The Lab Staff must be available to receive and count samples on one hour's notice.

VI. ADMINISTRATIVE SERVICE STAFF

Members of the Administrative Service Staff may be recalled after-hours upon reasonable notice to provide any required office support.

VII. DISTRIBUTION

Each technical staff member is to receive a copy of this SOP. The SOP is to be retained in the staff member's home for reference. A copy is to be placed in the station wagon and a copy carried whenever a response is made.



RADIOLOGICAL INCIDENT REPORT

* Information needed initially; rest can follow

*TIME _____ *DATE _____ *PERSON CALLING _____

*PHONE _____ *ORGANIZATION _____

*ADDRESS _____

*INCIDENT DATE _____ *Time _____

*LOCATION _____

RADIOACTIVE MATERIALS INVOLVED

	1	2	3
*A. Isotope	_____	_____	_____
*B. Physical State (gas, liq., solid)	_____	_____	_____
*C. Sealed/Unsealed	_____	_____	_____
*D. Activity (Curies/Becquerels)	_____	_____	_____
*E. Source Serial Number	_____	_____	_____

EQUIPMENT INVOLVED

*A. Items(s) Make/Model/SN# _____

*B. Vehicles(s) Make/Model _____

*ON-SCENE CONTACT/PHONE _____

*OTHER PERSONNEL AT SCENE/PHONE _____

*DESCRIPTION OF INCIDENT _____

*NO. INJURED _____ INJURED EVACUATED? _____ WHERE _____

RSO & RADIOACTIVE LICENSE NO. (if applicable) _____



OTHER MATERIALS INVOLVED

	1	2	3
A. Chemical Name	_____	_____	_____
B. Physical State	_____	_____	_____
FIRE/EXPLOSION _____ CONTAINED _____ AREA SEALED _____			
CONDITIONS (Leaks, Fumes, Etc.) _____			
EMERGENCY CREWS NOTIFIED/ON HAND _____			

FOLLOW-UP INFO

TIME: _____

INFO: _____

TIME: _____

INFO: _____

TIME: _____

INFO: _____



Emergency Telephone Numbers

Agency

Telephone No.

See contact numbers for hazardous materials incidents for more contacts.



Annex 5 Civil Disturbance

SITUATION AND ASSUMPTIONS

Situations

- A civil disturbance emergency could develop at any time.
- Well organized unlawful activities can be expected to be directed towards governmental agencies, public utilities, and the private sector.

Assumption

- The Police Department has the capability to preserve the peace and to suppress civil disturbances.
- Assistance from outside agencies may be required to support Police Department efforts.

MISSION

To coordinate emergency operations and resources to save lives, protect property and restore order in the event of a civil disturbance.

EXECUTION

Concept of Operations

- The Mayor has the overall responsibility for actions taken to control civil disturbances including demonstrations, and unlawful acts ranging from passive disobedience to mass insurrection.
- The Chief of Police will assume control of operations and will prescribe operational procedures.
 - The plan will consist of two distinct phases:
 - Phase I: Notification of a pending or active civil disturbance. It is designed to be a partial commitment of forces to cope with the situation or to prepare the organization for a Phase II alert.
 - Phase II: Begins when the disturbance is serious enough to require the application of massive counter forces or the situation becomes too critical for the forces already on hand to control.
- The execution of Phase I will be upon direction of the Chief of Police or the Police Incident Commander.
- The execution of Phase II will be upon direction of the EOC.
 - Operational control will be retained at normal locations in Phase I.
 - Operational control under Phase II will be from the EOC.
 - The Police Department will maintain operational control throughout the duration of the emergency, assigning specific tasks for supporting agencies.



Organization

The on-scene Police Incident Command System will be expanded and integrated into the Town EOP Incident Management System. Refer to Basic Plan.

Tasks

- See Basic Plan and ESF#13.
- The Town Council will establish policy and pass emergency legislation to suppress any civil disturbance; declare an emergency; meet with disaffected leaders to negotiate differences; formulate office public information, and request assistance as needed. See the Basic Plan Appendix 10 Emergency Declaration Appendix 12 for Curfew Proclamation.
- Police Department:
 - Initiate Phase I of this plan and notify the Town Manager.
 - Provide warning to the public.
 - Control access to, and prevent looting in affected areas.
 - Control all assisting forces deployed at the site of the emergency.
 - Collect and disseminate information and intelligence.
 - Establish holding areas for processing of violators along with transportation of prisoners to Court.
 - Furnish liaison personnel to other agencies as required.
 - Advise Mayor and Town Manager when Phase II should be initiated.
 - Provide law enforcement and security protection for the personnel and equipment of supporting units.
 - Provide security at water treatment plants, pumping stations, tanks, electrical substations, and other locations as required.
 - Notify court system of situation.
- Public Works Department
 - Provide barricading.
 - Remove barricades erected by rioters.
 - Conduct debris clearance.
 - Provide assessment of damage and emergency repairs to Town property.
 - Be prepared to assist in traffic control and evacuation.
- Other departments
 - Provide support functions as outlined in the Basic Plan.

ADMINISTRATION AND LOGISTICS

Standard emergency administration and supply procedures will be used. See Basic Plan.



Annex 6 Earthquakes

SITUATION AND ASSUMPTIONS

A. Situation

Most of Arizona can expect LOW to MODERATE damage in the event of an earthquake, of all natural disasters, earthquakes can inflict the greatest loss of life and property, and require the greatest mustering of resources to mitigate their effects. See Tab E, Seismic Zone Map.

B. Assumptions

1. The Town of Payson may experience the effects of an earthquake, and they may occur without warning.
2. There may be secondary effects of fire and disruption of gas, water, and electrical services.
3. After-shocks may delay or hamper recovery efforts.
4. There may be a need for Law Enforcement, fire fighting, search and rescue, mass shelter, increased medical services, food and water distribution, emergency utilities, evacuation and damage assessment.

MISSION

To ensure a rapid response at the disaster area in order to minimize the loss of life and initiate prompt recovery efforts.

EXECUTION

A. Concept of Operations

Earthquakes present a unique challenge to emergency responders. There is usually no warning, and it is difficult to determine the area involved and extent of damage. Two critical tasks must be performed immediately following an earthquake to ensure the most effective and efficient operations by emergency response personnel:

1. A rapid damage assessment survey of the Town must be performed and reported.
2. A status check of all emergency forces and equipment should be completed as soon as possible. Emergency personnel must be prepared to conduct emergency communications on a unit to unit basis (relay if needed) due to damaged communications equipment.

B. Organization

Significant earthquakes will likely require the full activation of the Town Emergency Organization. Refer to Basic Plan and Annex A, Direction and Control.



C. Tasks

See Basic Plan.

ADMINISTRATION AND LOGISTICS

Standard emergency administration and supply procedures will be used. See Basic Plan.



Annex 7 Aircraft Incidents

SITUATION AND ASSUMPTIONS

A. Situation

1. The skies above Payson experience a significant volume of air traffic from military, commercial carrier, and private sector aircraft.
2. An aircraft incident as a result of a lack of fuel, collision, or pilot error could occur in Payson at any time.
3. Regardless of their nature or location, aircraft incidents involve both local and Federal agencies. Because of this involvement and the immediacy of the control problem, it is important that Town personnel be cognizant of their department's role and the responsibilities of other concerned agencies as well. Aircraft incidents occurring on the airport will follow procedures outlined in the current Airport Certification Specifications.
 - a. National Transportation Safety Board (NTSB). By law, the NTSB has responsibility for investigating civil aircraft incidents. The primary purpose of their investigation is to determine the facts, conditions, circumstances, and probable cause of the incident.
 - b. Federal Aviation Administration (FAA). The FAA is concerned with every aircraft incident and investigates to determine if there has been any violation of Federal aviation laws or regulations.
 - c. United States Military. The investigation of incidents involving only military aircraft is under the jurisdiction of military authorities. However, they may request that the NTSB or FAA conduct an investigation.
 - d. Pima County Medical Examiner. The Pima County Medical Examiner directs and coordinates the recovery, collection, identification, and processing of the dead and their personal effects.

B. Assumptions

1. The Town will experience an aircraft incident either on or off the Payson Airport in the future.
2. An aircraft incident can cause extensive property damage, injuries, and deaths.
3. Secondary effects of fire and disruption of gas, water, and electrical distribution in the immediate area may occur.
4. Activation of the Emergency Operations Center to coordinate the response activities may be required.



MISSION

To assure a comprehensive and rapid response in the disaster area in order to minimize loss of life and expedite recovery efforts.

EXECUTION

A. Concept of Operations

1. Because aircraft incidents occur without warning, initial response must come from those departments that maintain a 24-hour capability within the Town. Response priorities will be the protection of life, care of the injured, preservation of property, estimation of the extent and severity of the disaster, and mobilization of the town's Emergency Services Organization, and the EOC.
2. The Police Department will assume responsibility for coordination of Town forces and will direct all activities, except fire fighting and rescue operations, until the EOC is staffed and functioning when an aircraft incident has occurred.
3. As soon as possible, County, State, and Federal authorities will be informed of the following information:
 - a. Location of incident.
 - b. Number of injuries or deaths, if known.
 - c. Military or civilian aircraft.
 - d. Type of aircraft (passenger, cargo, helicopter, etc.).
 - e. Best available ingress and egress routes for emergency vehicles.
 - f. Additional assistance required (Police, Fire, Medical, Military, etc.).

Subsequent reports should include:

- g. Aircraft identification number.
 - h. Owner of involved aircraft.
 - i. Name and address of pilots.
 - j. Property damage.
 - k. Location of known survivors.
 - l. Brief statement of circumstances surrounding the incident.
 - m. If military aircraft, was it carrying weapons.
 - n. If civilian aircraft, was U.S. Mail aboard.
4. Mutual aid agreements will be implemented as soon as it is apparent that effective response to the disaster will be beyond the capability of Town resources and/or if the accident site is near or crosses jurisdictional limits.



5. If necessary, liaison will be maintained with utility companies serving that portion of the Town and mutual priorities established for shut-down and/or restoration of service.
6. Damage assessment teams from the Town or the American Red Cross will be utilized, as required.

B. Organization

See the Basic Plan

C. Tasks

1. Executive Group. See Section II, Direction and Control.
2. Operations Group. See Section III, Direction and Control
3. Police Department
 - a. Perform rapid survey of accident scene and damaged areas.
 - b. Report findings immediately to the Town Manager with recommendations on required mobilization of forces.
 - c. Establish traffic and personnel access control procedures, establish perimeter, preserve accident scene intact (to include all debris).
 - d. If necessary, restrict air traffic over the scene by calling Albuquerque Center and requesting that they issue an FDC NOTAM (U.S. NOTAM Office 1-888-876-6826).
 - e. If necessary, recall off-duty personnel.
 - f. Establish a joint Police/Fire Command post at scene.
 - g. Send a knowledgeable representative with radio communication to the EOC when it is activated.
 - h. Insure that emergency vehicles responding to the accident site have well-defined and maintained ingress and egress routes that will enable them to reach and exit the scene without undue delay.
 - i. Direct teams to make a detailed search of the area noting pieces of wreckage, luggage, and other debris; bodies and parts of bodies will be covered and guarded until removed by the Medical Examiner or other authorized department. Report findings to the EOC.
 - j. Conduct required operations such as search and rescue, traffic movement, and evacuation of buildings immediately adjacent to the accident site whether damaged or not.
 - k. Recommend evacuation, if required, and establish evacuation assembly areas until mass care facilities can be arranged.
 - l. Make situation reports to the EOC on a regular basis.
4. Fire Department
 - a. Dispatch necessary personnel and equipment to cope with the disaster.
 - b. Establish a joint Police/Fire Department Command post at the site.



- c. Alert and/or recall personnel of the Fire department, as necessary.
- d. Send a knowledgeable representative with radio communications to the EOC when activated.
- e. In coordination with the Police department, recommend any evacuation from the disaster area when deemed advisable.
- f. Control all fire, EMS and direct support personnel deployed at the site of the disaster.
- g. Coordinate firefighting and other hazard control activities.
- h. Coordinate emergency medical triage, treatment and transportation activities.
- i. Assign search and rescue teams to search for and remove casualties from the crash scene.
- j. Designate open areas close to the scene for medical triage, treatment and transportation areas.

5. Public Works

- a. Provide a knowledgeable representative to the EOC, with radio communications, to advise on capabilities and to coordinate departmental activities, and other staff personnel as shown in Appendix 3 to Annex A.
- b. Assist the Police Department with traffic control, perimeter security, and evacuation, as required.
- c. Furnish lighting for night operations.

6. Parks and Recreation

- a. Provide a knowledgeable representative to the EOC to advise on capabilities and coordinate departmental activities, and other staff personnel.
- b. Assist the Police department in traffic control and evacuation.
- c. Assist Public Works in debris clearance.

7. Community Development

- a. Provide a knowledgeable representative to the EOC, with radio communications, to advise on capabilities and to coordinate departmental activities, and other staff personnel.
- b. Provide Damage Assessment Teams.
- c. Recommend priorities for reestablishing water and sanitary services, if required.

8. Other Town Departments

- a. Provide personnel to staff the EOC.
- b. See Paragraphs III and IV, Basic Plan.



- c. If the department or its employees participate as an element of the emergency force, an after-action report will be submitted to the Emergency Operations Chief.

D. Support

1. Medical Examiner. Establish procedures for management of mass casualties, as required.
2. American Red Cross
 - a. Maintain liaison with the EOC, furnishing a representative if necessary.
 - b. Provide emergency mass care and emergency family services for victims of the disaster, as required.
 - c. Provide assistance to affected families.
 - d. Provide psychiatric/other mental health assistance to families and emergency workers.
3. Other Agencies
 - a. The Federal Aviation Administration (FAA) and/or the National Transportation Safety Board (NTSB) and/or the military will conduct the investigation as to the cause of the incident. The Payson Police Department will maintain tight security of the scene and relinquish control only after a representative of the NTSB, FAA, or military is ready to assume control.
 - b. The FAA, NTSB, and military investigators have no police powers and must rely on local law enforcement agencies, or in the case of federal violations, the FBI for law enforcement.



Annex 8 Hazardous Materials Incidents

SITUATION AND ASSUMPTIONS

A. Situation

1. A hazardous material is any material or substance, which in normal use can be damaging to the health and welfare of humans. Such materials cover a broad range of types, which may be classified as follows:
 - a. Toxic agents including drugs, chemicals, either natural or synthetic that in normal use are in any way harmful, ranging from poisons to skin irritants and allergens.
 - b. Corrosive chemicals such as sodium hydroxide or sulfuric acid that destroy or otherwise damage the skin and mucous membranes on external contact or inhalation.
 - c. Flammable materials including organic solvents, finely divided metals or powders, some classes of fibers, textiles, or plastics, gases and chemicals that either evolve or absorb oxygen during storage, thus constituting a fire risk in contact with organic materials.
 - d. Explosives and strong oxidizers such as peroxides and nitrates.
 - e. Materials in which dangerous heat build-up occurs in storage, either by oxidation or microbiological action.
 - f. Radioactive chemicals or substances that emit ionizing radiation.
2. Hazardous materials are dangerous to health and property, if not properly controlled.
3. Throughout the Town of Payson, businesses, industries, residences, etc., store and use a wide variety of hazardous materials on a regular basis.
4. Hazardous materials are transported throughout the area via streets and highways, pipelines, and air.
5. An accident may result in emergency response personnel encountering dangerous conditions requiring immediate corrective action to protect themselves, accident victims, and citizens.
6. Fire Department personnel have received hazardous materials response training. Additional assistance may be obtained from specialists and agencies as indicated in Appendix 1 of this annex.

B. ASSUMPTIONS

1. Disasters involving hazardous materials are usually confined to a localized area. Actions should be taken to contain the spill as promptly as possible.



2. Rapid communications channels must be utilized to inform responsible officials for emergency response.
3. Depending on the magnitude, nature, and threatened area, the resources of industry, local, state, and federal government, separately or in combination, may be required to cope with the situation.

MISSION

To provide the citizens of Payson with a high level of protection from the effects of hazardous materials involved in a transportation, storage, or usage accident, through appropriate mitigation and preparedness efforts along with response and recovery planning.

EXECUTION

A. Concept of Operations

1. Reporting

- b. Persons arriving at the scene of a hazardous materials incident are expected to immediately communicate with the Town of Payson Fire Department for mitigation, response, and recovery activities. The Fire Department will control operations and be in charge of the incident.
- c. If the situation obviously requires immediate action to cordon off the area or evacuate nearby residents or building occupants (i.e., if there is a danger of immediate explosion or release of toxic gases), the first officer on the scene (either Police or Fire) should initiate such action immediately. Adjustment in the size of the evacuation zone can be made later by the Incident Commander.

2. Notification

- a. The initial Incident Commander will evaluate the situation and determine if a hazardous materials release has occurred or there is a threat of a release. He/she will then notify dispatch and other incoming units. Dispatch will notify and advise all necessary personnel of the situation.
- b. The initial Incident Commander will also determine a safe route of entry into the area of the incident, provide staging directives, and begin isolating the area.
- c. Other departments and agencies will be notified and will assist as needed, following the Fire Department's direction.

3. Control of Hazardous Area

- a. Hazard Zone (Hot Zone)



The Hazard (Hot) Zone is the area which personnel are potentially in immediate danger to life and health from the hazardous condition. Access to this area is rigidly controlled and only personnel with proper protective equipment and an assigned activity will be allowed to enter. The Hazard Zone should be geographically described to all units on the scene, when possible.

b. Evacuation Zone (Cold Zone)

The Evacuation (Cold) Zone is the larger area surrounding the Hazard Zone in which a lesser degree of risk to personnel exists. All civilians will be removed from this area. The limits of this zone will be enforced by the Police Department, based on the distances and directions determined by the Fire Department. The area to be evacuated depends on the nature and amounts of the material(s) and type of risk presented to unprotected personnel (toxic, explosive, etc.). In some instances it is necessary to completely evacuate a radius around a site for a certain distance (i.e. potential explosion). In other instances evacuation only needs to be downwind, following paths where toxic or flammable vapors may be carried.

B. Organization

The on-scene Incident Command System would be expanded and integrated into the Town EOP. Refer to Basic Plan.

C. Tasks

1. Fire Department

- a. Take immediate action to identify the type, amount, and nature of the hazardous material and request technical assistance.
- b. Establish a Command Post at a safe location near the incident, and coordinate all agencies assisting in the operation. The Incident Commander is responsible for the direction and coordination of all aspects of the incident, from initial response through stabilization.
- c. Isolate, and determine hazard and evacuation zones.
- d. Determine necessary levels of Personal Protective Equipment.
- e. Set up a decontamination zone.
- f. Accomplish air monitoring of the incident if needed.
- g. Recommend and initiate evacuation if indicated.

2. Police Department

- a. Clear scene of all unnecessary personnel.
- b. Carry out evacuation as recommended by the Incident Commander.
- c. Control access to evacuated areas and prevent looting of damaged or evacuated areas.
- d. Provide traffic and crowd control.
- e. Provide levels of security where needed at the scene (i.e. keep onlookers away from contaminated patients).



3. Public Works

- a. One Public Works official will report to the Incident Command Post and assist with appropriate heavy equipment for rescue, recovery operations, diking, or clearing access for emergency vehicles, etc.
- b. Provide barricades around the hazard and/or Evacuation Zones, as required.
- c. Provide sand for building dikes to contain and absorb liquids and for use in blocking run-off into storm drains or sanitation systems.
- d. Assist in traffic control with the appropriate signs, barricades, directional arrows, etc.
- e. Give appropriate assistance and support to public utilities in checking for damage to their facilities and restoring services to normal where required.
- f. Coordinate with Police and Fire in gathering evidence from personnel clearing or moving debris.

4. Utility Providers

- a. Assist in determining the identity of the material and establish the type and degree of the hazard involved.
- b. Provide assistance or advice on actions required.
- c. Support on-scene Incident Commander by filling requests for deployment of heavy or specialized equipment.

ADMINISTRATION AND LOGISTICS

Standard emergency administration and supply procedures will be used. See Basic Plan.



ASSISTING AGENCIES

The following are resources for advice and emergency response in the event of a major hazardous materials incident:

1. PAYSON FIRE DEPARTMENT: 911 for emergencies. Station 11: 474-5242x300.
2. DEPARTMENT OF PUBLIC SAFETY WATCH COMMANDER: (602) 223-2000. This is a 24 hour number. If State assistance is required, this number starts the chain-of-command for outside assistance and other State agencies will be contacted for you. The DPS Commercial Vehicle Safety Specialists have the authority to be the State's "On-Scene Commander".
3. DEPARTMENT OF PUBLIC SAFETY HAZMAT COORDINATOR: 602-223-7389, cell 602-309-5311, 928-701-6587. Call the DPS Watch Commander first.
4. PAYSON POLICE DEPARTMENT: 911 for emergencies. Non-emergencies call 474-5177
5. U.S. AIR FORCE: Luke Air Force Base: (623) 856-1110 (24 hours) for any incident involving military explosive devices.
6. GILA COUNTY SHERIFFS OFFICE: Payson Office: 474-2208, 474-0614 or 1-866-866-4452, Globe Office (928) 425-4449 or 1-800-635-5674.
7. ARIZONA RADIATION REGULATORY AGENCY: Anytime there is a question, concern, or problem with radioactive materials: (602) 255-4845 x222 during normal business hours. After hours contact 602-223-2212 or the DPS Watch Commander (#2 above).
8. CHEMTREC: 1-800-424-9300, 24 hour number for leak, fire, exposure, or accident.
9. ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY: For spills and releases. ADEQ will provide assistance in cleaning up the material, and ensuring proper disposal procedures are followed. 1-800-234-5677, 602-390-7894.
10. ARIZONA DEPARTMENT OF TRANSPORTATION: Traffic Operations Center, 602-257-1563, 1-800-379-3701.
11. ARIZONA DEPARTMENT OF EMERGENCY MANAGEMENT: State EOC coordinator 602-215-5718.
12. ARIZONA DEPARTMENT OF HEALTH SERVICES: 602-542-1188.
13. NATIONAL RESPONSE CENTER (EPA): For oil or chemical spills, the National Response Center is the sole federal point of contact. 1-800-424-8802.
14. POISON CONTROL: Good Samaritan Poison Control Center (24 hours), (602) 253-3334 or 1-800-362-0101.
15. PHOENIX FIRE DEPARTMENT ALARM ROOM: To activate the State Fire Mutual Aid System for hazardous materials response teams 602-262-7496.



Annex 9 Terrorism Incidents

MISSION

To provide the Town of Payson with a concept of operations for management of response to a terrorist incident that defines coordination with other government agencies and provides response and recovery procedures to protect citizens and property should an incident occur.

SITUATION AND ASSUMPTIONS

A. Situation

1. The Town of Payson may be subjected to a terrorist incident with the primary goal of destroying the public's confidence in the government's ability to protect its citizens. Terrorists often use threats to create fear among the public, to try to convince citizens that their government is powerless to prevent terrorism, and to get immediate publicity for their cause.
2. Potential targets for terrorism threats include political leaders at all levels of municipal, county, state, and federal government, high profile events with media coverage, large crowds, critical and accessible facilities or any facility or person of interest to the terrorist cause.
3. Tactics used by terrorists to obtain their goals may include bombing, arson, hijacking, kidnapping, creating ecological disasters, occupation of a building, attacks on facilities, sabotage, hostage taking, assassination, and perpetration of hoaxes.
4. Terrorists method may include conventional weapons or, for more effect, CBRN (chemical, biological, radiological, nuclear) devices and weapons.
5. In a terrorist incident, the area of operations could potentially span a number of political boundaries and involve several jurisdictions.

B. Assumptions

1. The Federal Bureau of Investigation (FBI), as the lead agency for counter-terrorism, will be able to prevent most terrorist incidents, where legally possible, and to react effectively after incidents occur.
2. Local law enforcement agencies have the capability to respond to suspected terrorist incidents and make the determination as to whether or not the incident should be classified as a terrorist act.

EXECUTION

A. Concept of Operations

1. The overall response to a terrorist incident, whether domestic or international, includes two major components.



- a. Crisis management response involves measures to identify, acquire, and plan the use of resources to anticipate, prevent, mitigate and/or resolve a terrorist threat or incident. Crisis management response is implemented under the primary jurisdiction of the law enforcement agencies at all levels of government.
 - b. Consequence management response involves measures to alleviate the damage, loss, hardship or suffering caused by emergencies. It includes measures to protect public health and safety, restore essential services, and provide emergency relief to affected agencies and organizations. Consequence management response is implemented under the primary jurisdiction of the affected political subdivision, with support from the Federal government.
2. Technical operations constitute an important support component to both crisis management and consequence management response to a terrorist incident involving weapons of mass destruction (WMD). Technical operations address aspects of WMD material that are not encountered in standard law enforcement disaster operations. Technical operations involve measures to identify the WMD agent or device; assess the potential threat posed by the WMD agent or device; provide consultation to decision makers concerning the implications of the WMD agent or device for crisis and consequence management; render safe, transfer, and/or dispose of a WMD agent or device; and decontaminate response workers and the affected population and environment.
 - a. Weapons of mass destruction are categorized into four major areas which include chemical, biological, radiological, and nuclear (CBRN).
 - (1) Chemical weapons are defined as compounds which, through their chemical properties, produce lethal or damaging effects and are classified by their effects: nerve (Tabun, Sarin, Soman, VX), blood (hydrogen cyanide, cyanogen chloride, arsine), choking (phosgene⁰, or blister agents (mustards, Lewisite).
 - (2) Biological weapons are regarded as infectious agents that are replicating (having the ability to produce a replica of itself) such as bacteria, viruses and fungi or toxins (non-replicating), which are poisons produced from agents, other living organisms and plants which are pathogenic to man.
 - (3) Radiological or nuclear terrorism ranges from the actual detonation of nuclear weapons or devices to acts of nuclear threat or extortion. For example, it can take the form of the release of radioactive substances, such as the radioactive contamination of the drinking water, to acts of sabotage in and against nuclear power plants.



3. The lead agency for crisis management response for terrorist incidents within the United States is the Federal Bureau of Investigation of the Department of Justice (DOJ-FBI). The FBI coordinates crisis management response operations throughout a terrorist incident.
4. The Arizona Radiation Regulatory Agency (ARRA) is the State lead agency in terrorist activities involving nuclear material. The Department of Energy, the lead Federal agency for radiological incidents, will implement the Federal Radiological Emergency Response Plan to coordinate radiological responses. ARRA will assist in assessing the situation, developing protective action recommendations, coordinating the release of public information regarding the event, and serving as the primary State resource of technical information regarding on-site conditions and off-site radiological effects.
5. The Department of Health and Human Services (DHHS) is a supporting federal agency in terrorist incidents involving biological or chemical material. DHHS will assist in threat assessment, consultation, agent identification, epidemiological investigation, hazard detection and reduction, decontamination, public health support, medical support, and pharmaceutical operations.
6. The U.S. Environmental protection Agency (EPA) is a supporting agency in terrorist incidents involving hazardous materials as defined under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). The EPA will implement the national Oil and hazardous Substances Pollution Contingency Plan to coordinate the environmental response, which provides environmental monitoring, decontamination, and long-term site restoration operations.
7. Operational boundaries may be used to control access to an affected area, target public information messages, divide operational divisions among responders, and facilitate assessment of the potential effects on the population and environment. These operational boundaries may include the following:
 - a. The Crime Scene Boundary. The Crime Scene Boundary defines the law enforcement crime scene. Access to the crime scene may be restricted on authority of the FBI, DPS, and local law enforcement.
 - b. The Hazardous Materials Boundary. The Hazardous Materials Boundary defines the hazardous materials site, which may be referred to in technical operations as the “working point” (nuclear), or the “hot zone” (biological/chemical). Depending on the spread of contaminants, the hazardous materials site may include some portions of the crime scene and the surrounding community. Access to the area may be restricted to response personnel wearing protective clothing and using decontamination procedures.



B. The Disaster Boundary.

The Disaster Boundary defines the community-at-risk which may need to take protective measures such as sheltering, evacuation, or quarantine. Access into this area may or may not be restricted on the authority of the State or County Health Department.

C. Organization

1. Terrorist incidents are unpredictable in nature and size and may require the activation of the Town emergency response organization and EOC. Refer to basic Plan and Annex A, Direction and Control.
2. It can be expected that a number of Federal and State agencies will assist local authorities in responding to the incident.
3. The on-scene Police incident command system would be expanded and integrated into the Town EOP Incident Management System (see Basic Plan and ESF#5). The Town EOC will be primarily responsible for interagency coordination in addition to their primary function of setting priorities for response, concentrating on preservation of life and property and the establishment of security.
4. During a terrorist event, operational transition from crisis management to consequence management, and the corresponding shift in lead agencies, may be complex. Transition should be immediate and clearly defined, or both crisis management and consequence management operations could overlap.

D. Planning Factors

1. Response to a CBRN terrorist site closely resembles a response to a HAZMAT situation with the following modifications:
 - a. Law enforcement is the lead agency for terrorist incidents, but the fire service is the best equipped for HAZMAT situations. Close coordination will be required. The precedence of law enforcement activities may be displaced by significant health and safety concerns.
 - b. The site control distances (Appendix 2) for some of the chemical agents may have a radius distance in excess of several miles.
 - c. Mass decontamination may be required before some victims can be transported for medical care.
 - d. Increased attention will be required to detect physiological clues about the nature of the hazard and to recognize and react to signs and symptoms.



- e. Biological agents may be difficult to diagnose until symptoms appear, which could result in delays of several days until the disease is detected.
 - f. Protection from some chemical and biological agents can be accomplished by evacuation or sheltering-in-place.
2. The FBI has procedures in place to mobilize federal assets, including consequence management organizations, such as the Department of Defense, EPA, U.S. Public Health Service of the Department of Health and Human Services, and others as needed at the first sign of a WMD incident. Response time for federal consequence management organizations should be planned for 6-18 hours.
 3. The Department of Energy and Department of Defense can provide, through the FBI, their Nuclear Emergency Search Team (NEST) with the capabilities to measure radiation, identify radiation sources, identify weapons, render safe nuclear weapons and devices, limit radiation damage as the result of an explosion, and to decontaminate contaminated areas.

E. Tasks

1. Police Department

Pre-incident

- a. Identify potential terrorist capabilities and intentions, as well as conducting an evaluation of general or specific vulnerabilities.
- b. Maintain liaison with State and Federal law enforcement agencies that can provide information regarding potential or known terrorists, potential or expected targets, and methods normally used against these type targets.
- c. Develop a standard operating guideline to identify whether an incident is a terrorist act.
- d. Contact the FBI (602) 279-5511 if there is a threatened terrorist act with FBI jurisdiction.

Post-Incident

- a. Ascertain whether the incident is a terrorist act. If the incident is identified as a terrorist act, initiate notification procedures necessary to activate the Federal response.
- b. Establish an on-scene command post and, with support from the Fire Department, establish an on-site control plan.
- c. Recommend activate of the EOC.
- d. Control access to the affected area(s).
- e. Provide warning to the public.
- f. Collect and disseminate information and intelligence.



- g. Provide law enforcement and security protection for the personnel and equipment of supporting units.
- h. Be prepared to secure the scene, awaiting specialized equipment if necessary. Federal response to a terrorist incident may take several hours.

2. Fire Department

- a. Dispatch first responders, assess situation, call for appropriate assistance and establish a command post.
- b. Conduct operations at the scene with consideration to a contaminated environment and decontaminate victims before transport if practical. Notify hospitals which patients were contaminated.
- c. If the incident involves radiological, chemical, or biological agents, utilize self-contained breathing apparatus and proper protective clothing per standard operating guidelines.
- d. Advise Police department to clear the scene of all persons not protect by such equipment and secure the evacuation hot zone as determined by the Fire Department.
- e. Establish a contamination reduction corridor at the edge of the hot zone for suspected contaminated persons and equipment.
- f. Segregate clothing and equipment used near the scene until they can be monitored for contamination.
- g. When removing injured persons from the incident scene, do it rapidly and avoid contact whenever possible. Open wounds should be covered immediately.
- h. Injured persons suspected to be contaminated should be wrapped in blankets to avoid contamination of other persons or equipment.
- i. Notify the Gila County Department of Emergency Management and request mutual aid, if necessary.
- j. A terrorist incident location as a crime scene, and removal of material or persons from the area should be cleared through the Police Incident Commander.

4. Public Works.

Close coordination with law enforcement to prevent disturbance of the crime scene and with the fire department to ascertain contaminated or other unsafe areas will be necessary before continuing with the following:

- a. Provide barricading.
- b. Conduct debris clearing.
- c. Provide assessment of the damage and emergency repairs to Town property.
- d. Be prepared to assist in traffic control and evacuation.

5. Other departments will provide support functions as outlined in the Basic Plan.



DIRECTION AND CONTROL.

Refer to Section II, Direction and Control.

ADMINISTRATION AND LOGISTICS

Standard emergency administration and supply procedures will be used. See Basic Plan.



SITE CONTROL PLAN

EPA Terms Other Common Terms

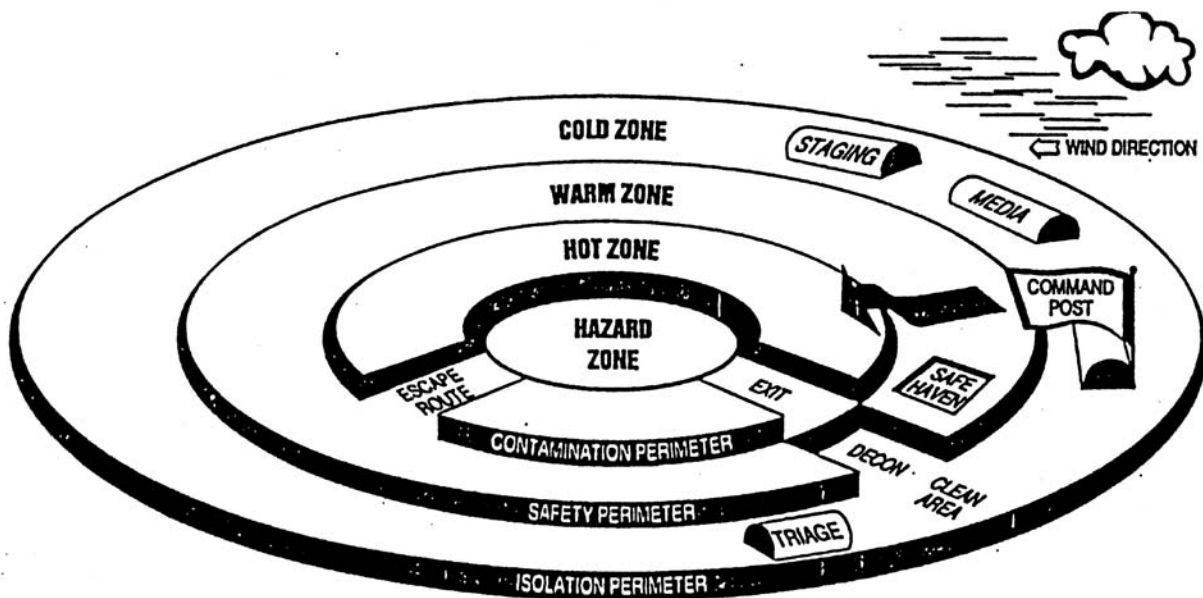
Exclusion Zone = Hot, Red, or Restricted Zone

Contamination Reduction Zone = Warm, Yellow, or Limited Access Zone

Support Zone = Cold or Green Zone

Hot Line = Contamination Perimeter

Contamination Control Line = Safety Perimeter



TOXICITY OF SELECTED CHEMICAL AND INDUSTRIAL AGENTS

CHEMICAL AGENT TYPE AND NAME	MILITARY SYMBOL	TWA/PEL ¹ (ppm)	TWA/PEL (mg/m ³)	IDLH ⁴ (ppm)	IDLH (mg/m ³)	Median Lethal Dose (mg-min/m ³)	Median Incapacitating Dose (mg-min/m ³)	Vulnerability Zone ⁵ 1/10 IDLH	Vulnerability Zone IDLH
Nerve Agent -- Nerve agents are chemical agents which affect the transmission of nerve impulses by reacting with the enzyme cholinesterase, permitting an accumulation of acetylcholine and continuous muscle stimulation. The muscles tire due to overstimulation and begin to contract.									
Tabun	GA	0.000015	0.0001	ND	ND	200-400 40,000 (skin)	100-300	.1 miles 500 lbs	<.1 miles 500 lbs
Sarin	GB	.000017	0.0001	ND	ND	70-100 12,000 (skin)	35-75	2.4 miles 500 lbs	.6 miles 500 lbs
Soman	GD	ND ²	ND	ND	ND	70-100 10,000 (skin)	25-35		
Agent VX	VX	0.0000009	0.00001	ND	ND	36-100 1,000 (skin)	5-50		
Blood Agent -- Blood agents are chemical agents which act upon the enzyme cytochrome oxidase. It allows the red blood cells to acquire oxygen but does not allow them to transfer oxygen to other cells. Body tissue decays rapidly due to lack of oxygen and retention of carbon dioxide.									
Cyanogen Chloride	CK	0.3	0.75 (C) ³	ND	ND	11,000	7000		
Hydrogen Cyanide	AC	4.7	5.0 (C)	50	56	ND	ND	2.7 miles	.6 miles
Arsine	SA	0.05	0.16	3	10	3200	1600	7.0 miles	1.1 miles
Blister Agent -- Blister agents are chemical agents that affect the eyes, respiratory tract, and skin, first as a cell irritant, and then as a cell poison.									
Mustard	HD	0.00045	0.003	ND	ND	1500 10,000 (skin)	150 200 (eye), 2000 (skin)	<.1 mile	<.1 mile
Lewisite	L	0.00035	0.003	ND	ND	1200-1500 100,000 (skin)	<300 (eye) >500 (skin)	<.1 mile	<.1 mile
Choking Agent -- Choking agents are agents that irritate the alveoli in the lungs. This irritation causes the alveoli to secrete fluid constantly into the lungs. The lungs slowly fill with this fluid, and the victim dies from lack of oxygen, or "dryland drowning."									
Phosgene	CG	0.1	0.40	2	8	3200	1600	>10.0 miles	2.0 miles
Industrial Compounds -- Refer to the North American Emergency Response Guidebook for evacuation distances and other response measures.									
Chlorine	N/A	0.5	1.5	10	29.5	ND	ND		
Hydrogen Chloride	N/A	5.0	7.5 (C)	50	76	ND	ND	1.3 miles	.4 miles
Hydrogen Sulfide	N/A	10	14	100	142	ND	ND	.7 miles	.2 miles
Methyl Isocyanate	N/A	0.02	0.047	3	7.11	ND	ND	.9 miles	.2 miles

¹TWA/PEL: Time Waited Average/Permissible Exposure Larger; ²ND: Not Determined; ³C: Ceiling; ⁴IDLH: Immediate Danger to Life and Health. ⁵Vulnerability Zone based on 3.35 mph wind, open country, climate stability F, 150 lbs of substance unless otherwise noted and 10 minute release.



HOMELAND SECURITY ALERT DESCRIPTIONS & RECCOMENDED ACTIONS

Low Condition (Green)

This condition is declared when there is a low risk of terrorist attacks. Departments should consider the following general measures in addition to the agency-specific protective measures they develop and implement:

1. Refining and exercising as appropriate preplanned protective measures;
2. Ensuring personnel receive proper training on the Homeland Security Advisory System and specific preplanned department or agency protective measures; and
3. Institutionalizing a process to assure that all facilities and regulated sectors are regularly assessed for vulnerabilities to terrorist attacks, and all reasonable measures are taken to mitigate these vulnerabilities.
4. Monitor intelligence and maintain situational awareness.

Guarded Condition (Blue)

This condition is declared when there is a general risk of terrorist attacks. In addition to the protective measures taken in the previous Threat Condition, departments should consider the following general measures in addition to the agency-specific protective measures that they will develop and implement:

1. Checking communications with designated emergency response or command locations;
2. Reviewing and updating emergency response procedures; and
3. Providing the public with any information that would strengthen its ability to act appropriately.
4. Monitor intelligence and maintain situational awareness.

Elevated Condition (Yellow)

An Elevated Condition is declared when there is a significant risk of terrorist attacks. In addition to the protective measures taken in the previous Threat Conditions, departments should consider the following general measures in addition to the protective measures that they will develop and implement:

1. Increasing surveillance of critical locations;
2. Coordinating emergency plans as appropriate with nearby jurisdictions;
3. Assessing whether the precise characteristics of the threat require the further refinement of preplanned protective measures; and
4. Implementing, as appropriate, contingency and emergency response plans.
5. Monitor intelligence and maintain situational awareness.

High Condition (Orange)

A High Condition is declared when there is a high risk of terrorist attacks. In addition to the protective measures



taken in the previous Threat Conditions, departments should consider the following general measures in addition to the agency-specific protective measures that they will develop and implement:

1. Coordinating necessary security efforts with Federal, State, and local law enforcement agencies or any National Guard or other appropriate armed forces organizations;
2. Taking additional precautions at public events and possibly considering alternative venues or even cancellation;
3. Preparing to execute contingency procedures, such as moving to an alternate site or dispersing their workforce; and
4. Restricting threatened facility access to essential personnel only.
5. Monitor intelligence and maintain situational awareness.

Severe Condition (Red)

A Severe Condition reflects a severe risk of terrorist attacks. Under most circumstances, the protective measures for a Severe Condition are not intended to be sustained for substantial periods of time. In addition to the protective measures in the previous Threat Conditions, departments also should consider the following general measures in addition to the agency-specific protective measures that they will develop and implement:

1. Increasing or redirecting personnel to address critical emergency needs;
2. Assigning emergency response personnel and pre-positioning and mobilizing specially trained teams or resources;
3. Monitoring, redirecting, or constraining transportation systems; and
4. Closing public and government facilities.
5. Monitor intelligence and maintain situational awareness.