

NOGALES WASH EMERGENCY RESPONSE PLAN

**SANTA CRUZ COUNTY, ARIZONA
NOGALES, SONORA, MEXICO**



UPDATED – APRIL 2018

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IF THIS IS AN EMERGENCY...

Most important – Protect yourself and others first! Then:

- Turn to the **Immediate Action Guide (Yellow Tab)** for initial steps taken in an incident at Nogales Wash. All Nogales Wash incidents should be managed as potential hazardous materials (HAZMAT) incidents.
- Make the initial notification to *Dispatch* by dialing 911. *Dispatch* will make operational notifications that will prompt formation of the Incident Command.
- Incident Command will make the following ***Mandatory Notifications***:

National Response Center	(800) 424-8802
Arizona Division of Emergency Management (ADEM)	(602) 244-0504
Santa Cruz County Office of Emergency Management	Day Time – (520) 375-8000 24 Hour – (520) 604-1786
State of Sonora Civil Protection	011-52-622-217-5430
Nogales, Sonora Civil Protection	011-52-631-162-5125

- After the ***Mandatory Notifications*** are made, use **Notification (Red Tab)** to implement the notification procedures described in the **Immediate Action Guide**.
- Use the **Nogales Wash Maps (Green Tab)** to pin point the location and surrounding geography of the incident site.
- Review the **Supporting Documentation** (White Tabs) for additional information needed during the response.

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ACKNOWLEDGEMENTS

The Nogales Wash Emergency Response Plan (Plan) was developed with guidance from the groups below as well as from members of the community:

Local Government:	Nogales City Attorney
	Nogales Finance Department
	Nogales Fire Department
	Nogales Police Department
	Nogales Public Works
County Government:	Santa Cruz County Attorney
	Santa Cruz County Finance Department
	Santa Cruz County Office of Emergency Management
	Santa Cruz County Public Health
State and Federal Government:	Arizona Division of Emergency and Military Affairs (ADEMA)
	Arizona Department of Environmental Quality (ADEQ)
	National / International Entities
	U.S. International Boundary and Water Commission (USIBWC)
	National Incident Management System (NIMS)
	National Response Framework (NRF)
	National Weather Service (NWS)
	U.S. Environmental Protection Agency (USEPA)

ACRONYMS

ADC	Arizona Dispatch Center
ADEMA	Arizona Division of Emergency and Military Affairs
ADEQ	Arizona Department of Environmental Quality
ADHS	Arizona Department of Health Services
ADOA	Arizona Department of Administration
ADHOS	Arizona Department of Homeland Security
ADOT	Arizona Department of Transportation
ADPS	Arizona Department of Public Safety
ADWR	Arizona Department of Water Resources
AZDEMA	Department of Emergency and Military Affairs
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CBP	Customs Border Protection
DPS	Department of Public Safety
EMS	Emergency Medical Services
EOC	Emergency Operations Center
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
HAZMAT	hazardous materials
ICP	Incident Command Post
ICS	Incident Command Structure
IMT	Incident Management Team
IOI	International Outfall Interceptor
JIC	Joint Information Center
JIS	Joint Information System
JRT	Joint Response Team

MGD	Million Gallons Per Day
NFD	Nogales Fire Department
NGO	Non-Government Organization
NIMO	National Incident Management Organization
NIWTP	Nogales International Wastewater Treatment Plant
NRC	National Response Center
NRF	National Response Framework
NIMS	National Incident Management System
NSFD	Nogales Sonora Fire Department
NWS	National Weather Service
PIO	Public Information Officer
Plan	Nogales Wash Emergency Response Plan
PPE	Personal Protective Equipment
TICP	Tactical Inoperable Communications Plan
USACE	U.S. Army Corps of Engineers
USCG	U.S. Coast Guard
USIBWC	U.S. International Boundary and Water Commission
USBP	U.S. Border Patrol
VIP	Very Important Person
VOAD	Volunteer Organization Active in Disasters
WWTP	Wastewater Treatment Plant

PLAN OVERVIEW (PURPLE TAB)

PURPOSE

The Nogales Wash Emergency Response Plan (Plan) identifies the information necessary for responding emergency entities and resources to be aware of the special considerations and hazards associated with the Nogales Wash. This critical information is necessary in order to maintain a high level of situational awareness and to conduct safe and efficient operations.

Components of the Plan are organized into essential categories of information (the colored tabs) required for emergency management coordination and integration of all functions assigned to an incident at Nogales Wash. All Nogales Wash incidents should be managed as potential hazardous materials (HAZMAT) incidents.

It is important that stakeholders and all levels of emergency responders have an awareness of the dynamics and infra-structure of the Nogales Wash. An incident may be defined by a change in the overall dynamic of how the Wash functions or is predicted to function. For example, a buckle of a side panel would be of concern as this individual failure may lead to cascading events. Likewise, since the IOI runs beneath or within the Wash, any compromise of the IOI could have significant impacts on public health and safety in the region. Weather impacts are also of concern. For example a cut off low or a tropical depression could have predictive impacts on the Wash and areas surrounding the wash. Thus an “Incident” in the Nogales Wash is a subjective decision based on facts, probabilities, and possibilities for a particular event.

PLAN OBJECTIVES

The following are Plan Objectives that layout the response framework for response to an incident at Nogales Wash:

- Present the overall emergency response organization for incidents occurring within Nogales Wash.
- Delineate the responsibilities of local, county, state and federal agencies in the event of an incident within Nogales Wash.
- Establish lines of authority and coordination for incidents.
- Facilitate mutual aid to supplement local resources.

INCIDENT OBJECTIVES

The following are General Control Objectives for incidents and are considered critical to management of a Nogales Wash incident:

- Maintain as the highest priority throughout this incident the protection of human life and the safety of the Emergency Response Personnel and the public. This priority also includes the safety and protection of the environment;
- Protect the International Outfall Interceptor (IOI) and provide for timely mitigation and restoration of incident-related IOI failures;

- Accurate and timely information dissemination to the media and public;
- Maintain an effective cost containment strategy throughout the incident period; and
- Facilitate a positive and respectful learning environment with all interagency and international partners.

OPERATIONAL OBJECTIVES

The following are operational objectives during an incident:

- Ensure the safety of Incident personnel and the public.
- Provide and assist with rescue and evacuations of people in danger.
- Reduce the effects of contaminated water in the City of Nogales and Santa Cruz County.
- Contain hazardous materials.
- Reduce damage to the city, county and state infrastructure.
- Contain all water to the Nogales Wash channel.
- Minimize damage and interruptions to public utilities.
- Assist local law enforcement with maintaining transportation corridors and security.
- Protect and maintain flow in the IOI.
- Protect the Union Pacific railroad tracks and maintain Union Pacific rail traffic.
- Protect the Nogales International Wastewater Treatment Plant (WWTP).

IMMEDIATE ACTION GUIDE (YELLOW TAB)

How to Use the Immediate Action Guide

IF YOU ARE NOT QUALIFIED TO ACTIVATE THIS PLAN:
DIAL 911 AND ASK FOR ASSISTANCE

Complete the following steps to activate the Nogales Wash Emergency Response Plan:



Make Initial Mandatory Notifications



Review General Information Regarding HAZMAT Response



Public Information/Press Release

This is only a guide:

Nothing in this section shall supersede the experience, initiative, and ingenuity of the experienced responders in overcoming the complexities that exist under actual emergency conditions.



Make Immediate Notifications

When any party is notified of an actual or threat of a HAZMAT incident conforming to this plan, the following information should be provided:

a. Reporting party (name of functionary or responder, telephone number, and address)/	b. Suspected responsible party (name, telephone number, and address)
c. Description of incident	
d. Date and time of incident	
e. Location	
f. Specific identifiers (e.g., cross road, railroad milepost)	
g. Hazardous substances involved	h. Quantity
i. Spill or release to air, soil, or water: Where is it going? How much to water?	
j. Corrective actions taken	
k. Roads closed	
l. Number of deaths, injuries, or evacuations	
m. Other notifications made/	

Refer to the **Red Tab for the Emergency Notification Guide** and the Contact Number List to make additional notifications



Review General Information Regarding HAZMAT Response

Critical Threshold Criteria

The following have been identified as critical threshold criteria to be considered for the mobilization of an Incident Management Team (IMT) and supporting structures and facilities. The IMT will support local authorities in their emergency management response to a persistent chronic or catastrophic event associated with compromise and resulting spill of the IOI or flooding of the Nogales Wash corridor. As the incident subsides, the same critical threshold criteria could be used as a basis for demobilization of IMT, emergency facilities and resources.

INCIDENT COMPLEXITY ANALYSIS	Yes	No
Incident Behavior		
A current pre-monsoon inspection of Nogales Wash Infrastructure identified three or more “fractures or compromises” of concern located close to historical problem areas of the Nogales Wash.		
Compromise of the IOI has occurred without successful mitigation (pump around).		
There are existing or expected continuous emergency operations within Nogales Wash for the next 48 hours.		
Overflow of the Nogales Wash appears imminent or is occurring.		
Weather forecasts are predicting no significant relief or worsening conditions for the next 48 hours.		
Responder Safety		
Performance of incident personnel resources is affected by cumulative fatigue.		
Incident management (overhead) is over-extended mentally or physically.		
Communications with tactical resources or support agencies are ineffective.		
Incident Management		
Operations management personnel are at the limits of their span of control (six or more direct reports) in a complex extended emergency response.		
Incident Action Plan or briefings are missing or poorly prepared.		
Incident control is using a variety of specialized operations, support personnel, or equipment.		
Incident management is unable to properly staff air operations.		
There are limited local resources available to handle additional incidents.		
Existing forces have worked for 24 hours without successfully controlling incident.		
There is a heavy commitment of local resources to logistical support.		

INCIDENT COMPLEXITY ANALYSIS	Yes	No
Current incident resources are unfamiliar with local conditions or control tactics.		
Values at Risk		
There is a potential for (or additional) evacuation.		
The incident is or shortly will impact multiple jurisdictions with differing or conflicting management objectives. There may be a need for a unified command.		
Public health and safety impacts are imminent and beyond the capacity of local emergency responders.		
There are ongoing political concerns, heavy media involvement, or controversial incident control policies		
Total		

The incident complexity analysis is a guide to assist incident managers in determining appropriate incident response measures including mobilization or de-mobilization of incident management teams and resources (?).

Five or more “**yes**” answers at the beginning or through the course of the incident suggest mobilization of appropriate support structures, facilities, resources, and another level of Incident Management is appropriate. **Fifteen** or more “**No**” answers during the course of the incident may indicate a need to demobilize some resources and drop down a level in incident management.

The Incident Complexity Analysis should be reviewed daily by the Agency Administrator, which is the Mayor, City of Nogales/Designate or the Incident Commander, to determine incident status and the appropriate level of Incident Management that is necessary to manage the incident.

Incident Command and Scene Security

1. Establish an Incident Command Post (ICP) and fully implement the Incident Command System (**Incident Command Structure - Blue Tab**).
2. Isolate the scene and deny entry to all unauthorized personnel, vehicles and equipment (establish a perimeter).
3. Notify appropriate emergency response agencies (**Notification - Red Tab**).
4. Ensure qualified personnel perform the items on the checklist.
5. Review the following guidelines:

Immediate Action Guidelines
• If needed, refer to Incident Complexity Checklist
• Notify Santa Cruz County Public Health
• Notify Duty Officer at AZDEMA and open WebEOC incident
• Activate Santa Cruz County Emergency Operations Center (EOC)
• Ensure Incident Command is established at the incident
• Support Isolation Zones- road closures, traffic restriction, etc.
• Determine whether Additional Resources are required at the scene

Immediate Action Guidelines	
•	Determine the Lead Agency
•	Support lead Public Information Office/public health with public emergency
•	Request AZDEMA Liaison Officer for the EOC
•	Request support for the EOC to staff Planning, Safety, and Operations; Doc Unit
•	Forecast EOC operational periods and staff rotation
•	Conduct a situation brief with experts in critical infrastructure
•	Notify the National Response Center of the spill 1-800-424-8802
•	Determine Communications Needs - Toad, Bullfrog, etc.
•	Support Entry-Level Personal Protective Equipment (PPE)
•	Anticipate bee activity and have bee suits on hand
•	Complete Other Notifications - Red Cross, ADEQ, Public Works, EMS
•	Determine Need for additional Public Notifications
•	Develop Incident Action Plan for the EOC



Public Information

To release information to the public/media:

1. Establish a Lead Public Information Officer (PIO) or Joint Information Center (JIC). All releases of information to the public and/or the media must be approved by Incident Command/Unified Command.
2. Determine the following information for inclusion into a press release and/or press conference.
 - Nature of the incident
 - Precautions for the public and possible symptoms of exposure (High Hazard)
 - Determine need for additional public notifications such as boil water advisories to kill biological contaminants
 - Date and time of incident
 - Approximate location where the incident happened (city, county, state)
 - Hotline number for public inquiries
 - Traffic patterns affected by spill
 - Number of injuries and property damage
 - Product name and normal uses
 - Response agencies involved
 - Any mitigation efforts underway
 - Evacuation instructions if incident is considered High Hazard
 - Mass care information if High Hazard

NOTIFICATION (RED TAB)

NOTIFICATION OVERVIEW

The chart below shows the flow of notifications that must be made in a hazardous material, petroleum product, or other contaminant emergency.

First On-Scene
(Fire, Law, EMS, Public, etc.)
*will notify local **Dispatch** (via 911 or radio)*
Dispatch will make operational notifications. Operations will initiate incident command
A list of Dispatch Centers can be found on page R-3 of this plan

Incident Command will make Mandatory Notifications

National Response Center	800-424-8802
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Incident Command may also consider notifying the following Affected or Adjacent Agencies

Santa Cruz County Public Health 24-hour Emergency Numbers	520-604-7468 or 877-202-0586
Santa Cruz County Office of Emergency Management	520-375-8000
Pima County Office of Emergency Management	520-724-9300
Cochise County Office of Emergency Management	520-432-9550
Arizona Department of Environmental Quality (ADEQ)	
Emergency 24/7 Response Number	602-390-7894
Arizona Division of Emergency and Military Affairs (AZ DEMA)	602- 244-0504
State of Sonora Civil Protection	011-52-662-217-5430
Nogales Sonora Civil Protection	011-52-631-162-5125

Federal Mandatory Spill Notification Requirements

Chemical Spills:

Originally published in 1985 under the authority of Section 102 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), the Designation, Reportable Quantities and Notification regulation stipulates the following:

- Designates specific substances as hazardous under CERCLA;
- Identifies the quantity of substances which, when released, requires notification; and
- Sets forth the notification requirements for releases of these substances.

The reportable quantities apply to the waste itself, not merely to the toxic contaminant. Unlisted hazardous wastes which exhibit toxicity are also covered under this regulation and have been assigned a reportable quantity of 100 pounds.

The notification requirement applies to any person in charge of a vessel or an offshore or an onshore facility, who must notify the National Response Center if any release of a hazardous substance equal to or exceeding the reportable quantity occurs at their vessel or facility.

The list of hazardous substances and reportable quantities is available at: <http://www.epa.gov/swercepp/web/docs/er/302table01.pdf>

Follow the procedures listed to ensure that all affected agencies/organizations are notified:

1. First on the scene will take command and notify Dispatch. (Page R-3 for List of Dispatch Centers)
2. Dispatch will make operational notifications. Operations will initiate formation of Incident Command.
3. Incident Command will make the ***Mandatory Notifications***.
4. Use the **Emergency Notification Guide** (**Notification – Red Tab**) to contact additional agencies/organizations.
5. Use the **Contact Number Lists** (**Notification – Red Tab**) to find emergency phone numbers.
 - a. Contact Number List Sorted by City/County/State/Federal/Private.
 - b. Contact Number List Sorted Alphabetically by Name in each category.

LIST OF DISPATCH CENTERS

Dispatch Center	Phone Number	Area of Dispatch	Agencies Notified
Law Enforcement and Fire/Emergency Medical Services			
Nogales, AZ	520-287-9111	City of Nogales	Nogales, Police Nogales, Fire
Santa Cruz County, AZ	520-375-8000	Santa Cruz County	Santa Cruz S.O. Patagonia Marshall Rio Rico Fire Nogales Suburban Tubac Fire Patagonia Fire Sonoita/Elgin Fire
Nogales, Sonora C-5	011-52-631-311-2205	Nogales, Sonora	All First Responders

Law Enforcement Only			
Arizona Department of Game and Fish	623-236-7201	Arizona	Arizona Game and Fish officers or local law enforcement
Arizona Department of Public Safety	520-746-4500	Arizona	Arizona Department of Public Safety

EMERGENCY NOTIFICATION GUIDE

Emergency Notifications are made in accordance with the area plan developed by the appropriate Regional and County Offices of Emergency Services.

Use the following checklist as a guide to contact additional agencies and organizations not listed in the Mandatory Notifications table above.

- Document the time of contact and estimated time of arrival (ETA).
- Notifying the agencies downstream of the release may be mandatory or may have priority.
- Consider notifying other agencies listed when appropriate.
- Checklist may be used to identify agencies that can provide additional resources.

The following notification procedures for spills that may impact Mexico are described in the Mexico – United States Joint Contingency Plan, March 2009.

When the National Response Center receives an incident report about a spill that may impact Mexico they will notify the following United States and Mexico Contacts:

United States Contacts

- U.S. EPA On-Scene Coordinator for U.S. EPA Region 9 (800) 300-2193
- Department of State - International Boundary and Water Commission (520) 262-2494 (Nogales Office)
- U.S. Joint Response Team (JRT) Co-Chair, U.S. EPA Office of Emergency Management, Emergency Operations Center (EOC) (202) 564-3850

Mexico Contacts

- National Communications Center (CENACOM)
cenacom@segob.gob.mx (*email only*)
- Center for the Orientation of Emergencies (COATEA)
coatea@profepa.gob.mx (*email only*)
- Federal Attorney General for Environmental Protection (PROFEPA)
coatea@profepa.gob.mx (*email only*)

CONTACT NUMBER LIST

Agency	Emergency/ 24 hours	Daytime/office	Title	Level
City of Nogales, AZ Public Works Dept.	---	(520) 287-6571	Public Works Director	Municipal
City of Nogales, AZ: Fire Dept	(520) 287-9111	(520) 287-9111	Dispatch	Municipal
City of Nogales, AZ: Police & Central Dispatch	(520) 287-9111	(520) 287-9111	Chief of Police	Municipal
Tubac Fire Department	(520) 404-2852	(520) 398-2255	Captain	Municipal
Santa Cruz County Office of Emergency Management	(520) 604-1786	520-375-8000	Emergency Manager	County
Santa Cruz County Sheriff's Office	(520) 761-7869	(520) 761-7869	Dispatch	County
Cochise County Sheriff's Office	(520) 432-9502	(520) 432-9502	Dispatch	County
Pima County Sheriff's Office	(520) 432-9502	(520) 432-9502	Dispatch	County
Pima County Office of Emergency and Military Affairs (AZDEMA)	(520) 724-9301	(520) 724-9300	Emergency Manager	County

Agency	Emergency/ 24 hours	Daytime/office	Title	Level
AZ Dept of Administration (ADOA)	---	(602) 542-1500	Director	State
AZ Dept of Environmental Quality Office of Border Protection	---	(520) 628-6710 (520) 628-6711	Director Staff	State
AZ Dept of Game & Fish	(623) 236-7201	(623) 236-7201	Dispatch	State
Arizona Dept of Homeland Security (ADHOS)	---	(602) 542-1500	Director	State
AZ Dept of Public Safety	(520) 746-4500	(520) 746-4500	Dispatch	State
AZ Corporation Commission	---	(602) 542-0787	Director	State
AZ Dept of Corrections	(602) 364-0652	(602) 542-5225	Director	State
AZ Dept. of Environmental Quality (ADEQ)	(602) 390-7894	(602) 390-7894	Emergency Response Unit - Dispatch	State
AZ Dept. of Health Services (ADHS)	(480) 303-1191	(480) 303-1191	Bureau Chief	State
AZ Division of Emergency Management (ADEM)	(602) 469-0504	(602) 469-0504	Duty Officer	State
AZ Division of Emergency Management (ADEM)	(602) 469-3402	(602) 469-3402	Deputy Duty Officer	State
AZ State Forestry	(800) 309-7081	(800) 309-7081	Dispatcher	State
Department of Public Safety (DPS)	520-746-4600	(520)746-4600	Dispatch	State
Federal Emergency Management Agency (FEMA) National Response Coordination Center		(800) 621-3362		Federal
National Response Center (NRC)	(800) 424-8802	(800) 424-8802	Watch Stander	Federal
U.S. Customs – Nogales Operations Center	(520) 375-5785	(520) 375-5785	Dispatch	Federal
U.S. Army Corps of Engineers (USACE)	(213) 452-3444	(213) 452-3444	Chief, Emergency Management Office	Federal
U.S. Border Patrol	(520) 761-2517	(520) 761-2517	Duty Supervisor	Federal

Agency	Emergency/ 24 hours	Daytime/office	Title	Level
U.S. EPA	(800) 300-2193	(800) 300-2193	Duty Officer	Federal
U.S. Section of the International Boundary and Water Commission (USIBWC)	(520) 262-2494	(520) 262-2494	Asst. Area Operations Manager	Federal
American Red Cross	---	(520) 318-6740	Tucson Chapter	Private
Carondelet Holy Cross Hospital - Nogales	(520) 665-1272	(520) 281-9669	Emergency Management Manager	Private
Carondelet Holy Cross Hospital - Tucson	(520) 349-2882	(520) 872-2486	Emergency Management Coordinator	Private
Nogales High School		(520) 377-2021	Alternate ICP	Private
Unisource Energy	(877) 837-4968	(877) 837-4968	Call center	Private
Americana Quality Inn	---	(520) 287-7211	Lodging	Private
Candlewood Suites	---	(520) 281-1111	Lodging	Private
Holiday Inn Express	---	(520) 281-0123	Lodging	Private
KE & G Construction	(520) 940-6239	(520) 748-0188	Construction materials	Private
Mobile Mini Tank & Pump Solutions	---	(602) 275-8822	Pumps	Private
Motel 6	---	(520) 281-2951	Lodging	Private
Rio Rico Utilities/Liberty Water Company	(520) 281-7000	(520) 281-7000	Automated notification service	Private
Salvation Army	---	(602) 267-4174	Disaster Services Director	Private
Union Pacific Railroad	(888) 877-7267	(888) 877-7267	Critical Call Response Center Dispatch	Private

*For current Mexico contact information, consult
Santa Cruz County Office of Emergency Management.*

PUBLIC INFORMATION

Depending on the extent of the crisis, public information will be coordinated and disseminated through a localized Joint Information System (JIS) until the scope of the emergency exceeds the local agency's ability to respond effectively, and multiple agencies/jurisdictions are involved in the response.

The JIS provides the mechanism to organize, integrate and coordinate information collection and dissemination to ensure timely, accurate and consistent messaging across multiple jurisdictions and/or disciplines including the private sector and nongovernmental agencies.

Since disasters are considered to be local in nature before growing larger, a Nogales Wash incident would likely trigger an initial response from the City of Nogales, which would be expected to be the lead agency for public information efforts, with multiple agencies responding as the disaster grows.

When public information officers from a variety of jurisdictions collocate to a single location, the JIS is transformed into a JIC. Once established, the JIC becomes the recognized source for the news media and other partners and stakeholders to get official information on the incident.

The JIC provides the following:

- Is a physical location used to coordinate critical emergency information, crisis communications, and public affairs functions.
- May be established at each level of incident management, as required.
- Should include representatives from all stakeholders.
- Provides an organized, integrated, and coordinated mechanism to ensure the delivery of consistent information to the public in a crisis.
- Includes the plans, protocols, and structures used to provide the public information.
- Encompasses all public information operations, including all Federal, State, local, tribal, and private organization Public Information Officers (PIOs), staff and JICs established to support an incident.

Care should be taken to place the JIC as physically close to the ICP as feasible in order to best facilitate its myriad needs with various incident command staff, media members, elected officials and other Very Important Persons (VIPs).

Although the JIC facility will have high infrastructure needs – as much as or even in excess of – other operational groups (such as access to electricity, telephone, Internet, computer network, etc.) public information officers should be afforded physical access to operational staffers and material. This includes access to the Incident Commander in order to most effectively collect and disseminate information.

RADIO FREQUENCIES (AQUA TAB)

Communications at a hazardous materials incident occurring in the area will typically involve normal modes of communications, including telephones, cell phones, VHF radios, UHF radios, etc. A list of important phone numbers is provided in the Notification section (Red Tab) of this Plan. In addition, law enforcement agencies, fire departments and other emergency response groups operating in the area have FCC-assigned radio frequencies for conducting their normal operations. For security purposes, a decision was made not to list all of the agency-assigned frequencies in this plan; however, these frequencies may be obtained by contacting the agency of interest directly.

Radio communications within the area are complicated by the fact that the area encompasses two countries, several fire districts and law enforcement agencies. During a significant incident that involves multiple jurisdictions, it will likely be necessary to develop an incident-specific communications plan. Typically this is accomplished with the use of an Incident Radio Communications Plan (ICS 205 form). A list of potential common VHF frequencies, which could be considered for use in an incident-specific communications plan, will be available on Form 205 of the Incident Action Plan once developed by Incident Command.

Individual agency-assigned frequencies (not identified in this plan) could also be considered for use as tactical frequencies.

Other UHF frequencies exist which could also be considered for use as command or tactical frequencies. It is important to note that in order for an agency to operate on a particular frequency for which they do not have a license, that agency will need to obtain a letter license from the FCC licensed agency that utilizes the channel(s)/frequency(s) of interest or go through the FCC license process after coordination with that same state or local government agency. Provisions may exist which waive these requirements during times of an emergency.

Responders should:

- Ensure Radio Communications are solid before initiation of any operations.
- Make sure all radios are cloned with the current communications plan.
- Test daily prior to entering the incident area and check periodically during operational period.
- Utilize cell phones when possible to avoid traffic over the radio unless it is of a nature that others listening on the radio will benefit from the transmission.
- Because of the language issues when working on the border, at least one bilingual radio operator will be on duty at all times the communication center is staffed.

RESOURCES (ORANGE TAB)

RESPONSE RESOURCES

The goal of the Resources section of this Plan is to identify significant resources, both personnel and equipment, that exist within Nogales, Arizona/Nogales, Sonora or within close proximity and that could be utilized in an event. This section does not identify response resources that would routinely be expected to be carried by response agencies such as personal protective equipment, basic air monitoring equipment, etc. This section also does not provide information regarding various pieces of equipment (such as pumps, heavy equipment, lights, generators, etc.) that may be available from the teams listed below or the Public Works Departments, although some of this equipment may be useful during an event. To determine the availability of the equipment not included in the Orange Tab, contact city and county public works departments and emergency management offices (phone numbers are provided in the Notification section [Red Tab] of this Plan).

Additional information regarding the capabilities of response agencies is presented in the sections below. Phone numbers for the response agencies and private companies are presented in the Notification section (Red Tab) of this Plan.

HAZARDOUS MATERIALS TEAMS

The following is a list of hazardous materials teams and specialized teams that operate in the area. These teams can be contacted through their dispatch centers. For the purposes of this plan, HAZMAT response teams can be expected to meet certain standards, and as routine provide knowledge and capability for field testing, air monitoring, sampling, radiation monitoring/detection, protective clothing, technical reference, special capabilities, intervention, decontamination, communications, staffing, training, and sustainability. As such, detailed equipment inventory lists are not provided for each team, although a brief inventory of significant, and non-routine response equipment, including vessels, is provided later in this section. The two HAZMAT teams in the region are:

- Nogales, Arizona, Fire Department and
- Nogales, Sonora Fire Department.

Nogales, Arizona, Fire Department - Dispatch (520) 281-9111

The Nogales Arizona Fire Department (NFD) maintains a hazardous material team made up of 25 hazmat technicians. NFD also has a technical rescue team made up of 39 rope rescue-certified members, 5 of whom have additional training in swift water rescue. The rescue team is trained and equipped to respond to high angle, confined space, trench and swift water emergencies.

Nogales, Sonora Fire Department 011-52-(631)-312-0836 - Dispatch 911

The Nogales Sonora Fire Department (NSFD) also has a HAZMAT Response Team and has 28 HAZMAT technicians generally trained for land spills of hazardous materials, but who are also trained to handle spill response in flood/flash flood, with limited training in open water.

PUBLIC WORKS

Local streets and road departments are responsible for maintaining roadways in their jurisdiction and may assist in necessary road closures, cleanup, or decontamination (they are not responsible for state highway rights-of-way).

EMERGENCY MEDICAL SERVICES

Local emergency medical care providers (public and private sectors) have the responsibility to provide care and/or transportation to the sick and injured, including victims of contamination. No patient contact should be made without adequate decontamination, as determined by local Emergency Medical Services (EMS) protocols. Both sides of the border have these resources.

COMMUNITY EMERGENCY RESPONSE TEAMS

Community Emergency Response Teams (CERTs) are available on both sides of the border and are available to respond as volunteers. Although Mexico has been available to respond to the United States, this may not be the case with the Arizona CERT responding to Mexico.

FIRE DEPARTMENTS

Fire departments (FDs) have jurisdictional authority for containment of hazardous materials releases. The FDs with hazardous materials teams can provide specialized response capabilities and expert knowledge as mutual aid to other jurisdictions' Incident Commanders. Local fire departments may provide Incident Commanders, command level representation to a Unified Command, or incident support. The fire department works within the incident command system as needed for fire prevention, fire suppression, public protection measures, and/or rescue activities. Fire departments may also function to provide emergency decontamination, treatment, and transportation of patients injured as a result of a hazardous materials incident as well as resource coordination and resource management.

COUNTY SHERIFFS AND POLICE DEPARTMENTS

The County Sheriff has law enforcement responsibility, including traffic control and supervision, for the unincorporated areas of the county excluding state, federal, and tribal lands. The Sheriff has responsibility for public evacuation notification and management in life-threatening situations and will assist the Incident Commander with evacuations. For hazardous materials events, the Sheriff will provide command level representation in a Unified Command, working with a Fire Department with hazardous material response expertise, and may provide overall scene management.

City Police Departments have law enforcement responsibility, including traffic control and supervision, within their jurisdictions and will provide evacuation notifications and management when required. Police Departments will provide command level representation in a Unified Command for all types of incidents.

CITY/COUNTY EMERGENCY MANAGERS AND CIVIL PROTECTION

City, County Emergency Managers and Municipal Civil Protection typically serve as Coordinators of County/Municipal resources and will provide liaison to the Incident/Unified Command; evacuation coordination assistance; and resource management support, including activation of the County EOC, as needed. City Emergency Managers will provide similar support and assistance to city incidents, including activation of City EOCs as needed.

FACILITIES

In the event of an incident that requires mobilization of multiple resources to assist, the facilities that may be available to support the incident include the following:

- In the support zone on site, establish a rehabilitation (rehab) station to provide rehab supplies to emergency incident personnel (water, Gatorade®, and food).
- Tents and portable coolers will be ordered to provide shade for personnel in the event of hot weather.
- Establish mobile laundry facilities to handle contaminated clothing.
- Establish light towers at incident site for night operations. Light towers could be requested from the U.S. Border Patrol Nogales Station in Nogales, AZ.
- Initiate a request of the U.S. Border Patrol to approve emergency incident occupancy and use of the Nogales Station overflow warehouse (approximately 90,000 square feet which is heated and cooled) and the large parking lot located on the east side of this warehouse.
- Portable toilets can be set up in the interior of the warehouse since they have an evacuation system that can attach to the vent pipe of the portable toilets.

PRIMARY INCIDENT COMMAND POST SITE

The primary location for the Incident Command Post (ICP), staging, and base camp will be located at the U.S. Border Patrol Nogales Station, 1500 W. La Quinta Rd., Nogales, AZ. The secondary site for ICP location could be Nogales High School located at 1905 N. Apache Blvd. Nogales. A land-use agreement would need to be established with the school, and the site could only be considered if the school is out of session. The Santa Cruz County Building Complex is an alternative ICP.

LODGING/FOOD FOR EMERGENCY RESPONSE PERSONNEL

Lodging for personnel in Nogales should be obtained from local motels or, if unavailable, sleeping areas will have to be established at the Border Patrol warehouse. Local lodging phone numbers can be found in the Contacts Section in the Orange Tab.

Food should be obtained from local sources for initial incident activity. A national caterer should be ordered if incident personnel exceed 150. U.S. Border Patrol Nogales Station does have a supply of water and food that could be used in an emergency. Any use of these supplies will be accounted for and supplies will be replaced.

GROUND SUPPORT FOR EMERGENCY RESPONSE PERSONNEL

- Consider transporting equipment operators from ICP to incident site by van.
- U.S. Border Patrol does have fuel trailers that may be requested to fill equipment. Arrangements will need to be made to replace the fuel used.
- Will need trucks and drivers for transporting supplies and personnel to the site for a 24-hour operation.
- Vehicles and operators may be requested from U.S. Border Patrol to accomplish the transportation missions.
- Resources used on this type of Incident will not be familiar with using Incident shift tickets or personnel time recording forms. Close coordination with these resources will need to be established to provide training on completion of the necessary forms to ensure accurate time tracking.

MEDICAL SUPPORT FOR EMERGENCY RESPONSE PERSONNEL

- Rely on local EMS to provide transportation of any injured.
- Order local ambulance service to transport minor injuries to the hospital.
- Continual monitoring of incident personnel for heat and exhaustion is necessary.
- Establish decontamination process for exposed personnel.

SECURITY FOR EMERGENCY RESPONSE PERSONNEL

- Order one Security Manager and three (3) Level 1 security personnel for ICP security.
- Security personnel will staff main gate to ICP on a 24-hr. cycle.
- Coordinate security protocols with Border Patrol at the facility.
- Security for the work site will need to be coordinated with the local Law Enforcement agency with jurisdiction for work site.

SUPPLY

- Critical stockpile supplies are located at the Incident Base.
- Rely on local resources for vendor contacts and specialized equipment.
- If needed, order a buying team to be located in Tucson for local purchase.
- If pump around of the IOI is necessary, the sources of supply are KE&G Construction of Tucson and Mobile Mini Tank & Pump Solutions. Phone numbers are located in the Contacts Section in the Orange Tab.
- If additional calcium hypochlorite in pellet or capsule form is needed, contact the USIBWC for their source of supply. The contact is John Light at 520-470-9029.

COMMUNICATIONS

- Order AZDEMA large communication van “Bullfrog.” It should be ordered with communications technician familiar with ACU 1000 setup and operations. A small communication van “Toad” needs be ordered if the Bullfrog is not available through the same agency. Order to be placed through the Arizona Dispatch Center (ADC).
- Consider ordering Regional Communication Van located at Tubac Fire Department.
- For communication unit set up order 1 COMT, 1 INCM, and 3 RADO.
- Since cell phone coverage is marginal at the site it is recommended that a cellular enhancing system be ordered. Cellular telephones can be ordered through the ADC. Contact Dale Brown or Jon Huish.
- Consider utilizing the Smart Tactical Advanced Communications System “STACS”-100. STACS-100 provides reliable data and voice communications in situations where existing communications infrastructure may be unavailable or unreliable. The regional communications van operated by the Tubac Fire District may transport a portable STACS unit via a special request (i.e., The STACS is not usually carried on the van.).
- Communication Starter Kit (NFES 4390) will be ordered through the cache system by ADC.
- Repeater location will need to be identified by Communication Unit to provide radio communications from Nogales Wash work site to ICP.
- Order 10 phone lines and 2 DSL lines for the ICP. The U.S. Border Patrol Nogales Station has its own technicians and might be able to provide the lines at the ICP site without ordering through local providers.
- AZDEMA PIO could be used for posting appropriate incident related maps, pictures, press releases, etc. and for expediting future updates of the Nogales Wash Emergency Management Response Plan.
- Copies of the Tactical Interoperable Communications Plan (TICP) are available from the Santa Cruz County Office of Emergency Management. This document lists all emergency service providers communications assets and frequencies.

INTERNATIONAL CALLING TO MEXICO

Land lines in the Santa Cruz Office of Emergency Management and County Manager are international call-enabled. All soft phones connected to computers in the Santa Cruz County EOC are international call-enabled. When calling land line numbers in Mexico, dial 01152 + international number. For calling another cell phone, dial 01152 1 + international number.

RESOURCE ORDERING PROCEDURES

It is highly recommended that all resource orders be conducted and documented via WebEOC. If an incident has not yet been established under the WebEOC program, contact the AZDEMA Duty Officer or the EIS officer from the AZDEMA Certified Response Team Weekly Schedule roster and request an incident be opened under WebEOC. Tracking all resource order activity via WebEOC will enhance accurate documentation and time stamps for the order and arrival of resources.

- When ordering resources from AZDEMA via the WebEOC system, a phone call to the order desk is necessary as well as the WebEOC order request.
- Resources ordered beyond “mutual aid” agreements of the incident will be ordered through the appropriate channels.
- Resources on the pre-order that are not identified as order through other agency(s) will be ordered through the ADC.
- Resources on the pre-order identified as order through ADEQ will be ordered direct through ADEQ utilizing Contracts in the State of Arizona Contracting program Spirit.

INCIDENT COMMAND STRUCTURE (BLUE TAB)

INCIDENT COMMAND STRUCTURE

All Nogales Wash incidents will be managed throughout the duration of the incident utilizing the Incident Command Structure (ICS). ICS ensures consistency in identifying the command and organizational structure, providing for safety, common terminology and information flow and communication of incident strategies and tactics. All Nogales Wash incidents should be managed as potential hazardous materials HAZMAT incidents.

NATIONAL INCIDENT MANAGEMENT SYSTEM

Nogales Wash incidents may involve participation, response, support and coordination activities from multiple sectors of government including Federal, State and Local representatives along with private contractors and Nongovernmental Organizations (NGO). The incident could last for several weeks and will require all parties working together around the clock, 7 days a week. National Incident Management System (NIMS) provides for consistency in the utilization of these resources to ensure a standard framework for their command and management structure.

TYPES OF RESPONSE ACTIONS AND MANAGEMENT DEPLOYMENTS FOR NOGALES WASH INCIDENTS

The type of organization necessary to manage incidents in the Nogales Wash is determined by the complexity and severity of the incident. A flow event in the Nogales Wash channel that does not reach high volumes of water and water levels; stays in the Nogales Wash; does not pose a threat to overflow the Nogales Wash banks; or cause any structure damage to the channel, bridges or IOI; is considered to be low in complexity and is managed by the Nogales City Public Works Division with little or no outside support.

As a flood event escalates, as described below, the complexity increases and management level required raises commensurately.

The following three types of incidents can occur in the Nogales Wash requiring response actions:

- A – Extraordinary discharge of sewer effluent into the Nogales Wash. The sewage may come from a rupture of the IOI or some other source. This muck would not be accompanied by any excess surface flood waters.
- B – There would be flows in excess of normal in the Nogales Wash. All flooding would be contained in the channel proper. There may or may not be contamination from the IOI or other sources in the runoff.
- C – There would be flows in excess of normal in the Nogales Wash. The flood waters would overflow the banks of the Nogales Wash. This event may be caused by the volume of water or some form of blockage in the channel. There may or may not be contamination from the IOI or other sources in the flood waters.

The Incident Complexity Analysis is a guide used to assess the incident status and suggest a level of Incident Management necessary to manage the incident. As the complexity of the incident increases, Incident Management Teams (IMTs) are used to provide management of the incident and support to the local jurisdictions.

Type III, II, I, IMT or National Incident Management Organization (NIMO) could be used to manage an incident depending on the severity and complexity of the incident.

Previous flood events have initially been managed by Nogales City Public Works Division, and as the complexity increased, a Type III IMT was used to provide oversight and management.

The Type III IMT organization will include the Incident Commander and may incorporate the additional following positions: Deputy Incident Commander, Safety Officer, Liaison Officer, Plans Section Chief, Resource Unit Leader, Technical Specialists (City Engineer), Logistic Section Chief, Communications Unit Leader, Operations Section Chief, Group Leaders (5) and Finance Section Chief.

IMT ORDER PROCESS

Callout procedures and dispatch of team:

- Incident managers determine whether threshold criteria are met and whether the incident is an extraordinary threat to public safety and exceeds the emergency response capacity of the City of Nogales and Santa Cruz County.
- Upon meeting threshold criteria, AZDEMA will mobilize state assets, including the AZ IMT, in support of the City of Nogales and Santa Cruz County emergency response operations.
- AZDEMA will order the AZ IMT through the Arizona State Forestry Division's Arizona Dispatch Center (ADC).
- At the earliest indication of an incident meeting threshold criteria, AZDEMA will prepare a Governor's Emergency Declaration with a request for the Governor's signature.

IMT briefing site:

- A preferred IMT briefing site is the U.S. Border Patrol Nogales Station, located at 1500 W. La Quinta Rd., Nogales, AZ. Reference in Appendix Contact List.

Delegation of Authority:

The Delegation of Authority to the Incident Commander for the management of the incident is from the City of Nogales, Santa Cruz County, Arizona Division of Emergency Management and the U.S. International Boundary and Water Commission. The delegation designates Technical Advisors as subject matter experts to work with the IMT.

FINANCIAL ACCOUNTABILITY

Financial accountability is essential to capture the cost of the entire incident. The Incident Management Team Finance Section is responsible for all financial, administrative and cost analysis aspects for the incident. The Finance Section will compute incident daily costs from all sections and sources and compile the final financial package. The final finance package will meet the requirements of AZDEMA.

All actions taken during HAZMAT incidents will be carefully documented so that sufficient and accurate information is available to support the response and recovery operations, and to recover costs, if applicable. Documentation should be self-descriptive to prove the source and circumstances of the incident, identify the potentially responsible parties, and illustrate the impact or potential impact to public health and the environment. Documentation may be written, graphic, audiovisual, or in other form; and will include the location of the incident, time, date and duration of the spill, source and cause of the incident, name and contact information of the potentially responsible parties, description of the released material, resources affected or threatened, status of response and cleanup efforts, and accurate accounting of public costs incurred.

NOGALES WASH MAPS (GREEN TAB)

To be added by Santa Cruz County

GENERAL INFORMATION (WHITE TAB #1)

BACKGROUND ON NOGALES WASH

The Nogales Wash Channel was constructed by the USIBWC in the early 1930s. It drains a 94.2 square mile (244 square kilometer) watershed centered over the U.S./Mexico border at Ambos Nogales. Given Mexico's higher elevation, the Nogales Wash flows northward through Nogales, Sonora into Nogales, Arizona.

The Nogales IOI is the gravity wastewater pipeline that begins at the border and flows 8.5 miles north to the Nogales International Wastewater Treatment Plant (NIWTP). The international outfall is the point where all Nogales, Sonora wastewater concentrates into a 24-inch pipe.

The reach of the IOI from the international border to the City Public Works building was constructed during the 1950s. It consists of 24- and 30-inch concrete reinforced pipe. This entire stretch of pipe is located within and/or below the concrete-lined channel of the Nogales Wash. The reach from the City Public Works Building to the current site of the NIWTP was constructed in 1971 by the USIBWC for the City of Nogales. It consists of 30-, 36- and 42-inch-diameter concrete-reinforced pipe, gradually becoming larger as it nears the NIWTP. The majority of this stretch of pipe is NOT located within the Nogales Wash, with the exception of a limited number of perpendicular crossings."

The ADEQ reports that the wastewater influent rate at the border averages 11 to 12 million gallons per day (MGD). Peak flows have almost doubled this amount. The international treaty allocation is 9.9 MGD. The USIBWC is the federal agency responsible for the treaty. The City of Nogales, Arizona, discharges its wastewater into the IOI, commingling with Mexican wastewater, at a rate of 2 to 4 MGD. The capacity of the NIWTP is about 15 MGD.

Given their age and disrepair, the Nogales Wash and IOI are chronically impacted by relatively small flood events. These conditions expose downstream populations to extraordinary public health risk.

WEATHER AND HYDROLOGY HAZARDS

The Nogales Wash Channel is impacted by both winter tropical storms and summer monsoon storm events. Whereas winter storms may be anticipated a few days in advance, summer monsoon storms occur frequently and are unpredictable in their location and intensity. Frequently these storms yield extraordinary amounts of rainfall in a brief period.

The National Weather Service has identified Arizona's monsoon season as June 15 through September 30. By Arizona standards, Ambos Nogales receives frequent and robust summer monsoon storms. Unfortunately, there is a void of historical flood data on the Nogales Wash Watershed. The U.S. Geological Survey had a stream gage on Nogales Wash from 1932 through 1934. The Santa Cruz County Flood Plain Manager's tenure began in December 1999. Since then, the Flood Plain Manager has observed six 10-year flood events on Nogales Wash.

In August 2007 and July 2008, the Nogales Wash Channel experienced two 10-year flood events. Both of these floods remained within the confines of the channel. The 10-year estimate is based upon high water marks observed by the Santa Cruz County Flood Plain Manager. The 10-year estimates are consistent with findings of the Preliminary Flood Insurance Study of 2008 as part of Santa Cruz County's Map Modernization and Digital Flood Insurance Study Project. Although these routine floods were within channel design limits, the fragile infrastructure was damaged, concrete panels were displaced, and the IOI was in danger of compromise. Former Governor Napolitano declared a state of emergency for these incidents and the U.S. Army Corps of Engineers (USACE) provided technical assistance.

The City of Nogales, Sonora continues to grow at a rapid pace. In contrast to Nogales, Arizona, much of Nogales, Sonora is high-density urban development. Whereas this development adds to watershed runoff, it is expected that runoff will increase as planned urbanization continues.

NOGALES WASH EVENT HISTORY

Major Incidents:

On June 1, 2004, local and state emergency personnel responded to an IOI compromise originating in Nogales, Sonora. This incident spilled an estimated 30 million gallons of raw sewage into the Nogales Wash Channel. To mitigate the threat to public health, 210 cubic yards of contaminated material were removed and an 8-mile section of Nogales Wash was treated with 600 pounds of chlorine. The 6-day operation concluded on June 6, 2004.

In August, 2007, severe flooding resulted in the concrete bottom of the Nogales Wash channel being removed south of the Patagonia overpass. The channel floor damages were very near the IOI alignment. Had the alignment been impacted, it would have resulted in the discharge of 10 to 12 MGD of raw sewage into the Nogales Wash.

Between 2008 and 2014, six incidents were reported that put the IOI at risk:

- March 2008 – Nogales Wash invert damage
- July 2008 – Nogales Wash invert damage
- July 2009 – Bank failure
- October 2010 – Scour failure of IOI at the Border
- March 2013 – Bank erosion
- September 2014 – Invert damage

In mid-July 2017, there was a report of bank erosion along Potrero Creek (North tributary of the Nogales Wash) near South River Road. Upon site inspection it was apparent that the creek was actively removing the East Bank and was migrating toward South River Road. Emergency measures were employed by the County to protect the bank by dumping boulders and rock into the creek to prevent continued erosion. The east side of the site contained critical infrastructure such as gas mains and telephone trunk lines.

Soon thereafter on July 24, 2017, a portion of the east bank covering the IOI South of Mariposa Road eroded into the Nogales Wash. One hundred and fifty yards of the IOI were directly exposed to stormwater within the Nogales Wash. A large cottonwood tree fell into the Wash and had to be segmented with chain saws so the tree would not occlude the bridge at Mariposa downstream over the Nogales Wash. Unfortunately, a tree limb of the tree contained a hive of Africanized bees, so several workers in the area were attacked. A nearby sporting event was closed down due to the bee activity. Again emergency measures were taken that included covering the IOI with dirt and attempting to divert the Nogales Wash toward the west bank. Both of these mitigation measures failed, and contractors were called in to place intermediate-sized rock over the IOI and then to grout the rock in place with a cement mixture. This protective action took several days to complete as stormwater events continued due to monsoon activity.



On July 25, 2017, the City of Nogales opted to inspect the run of the IOI and discovered Manhole 89 was dislodged from the IOI pipe, creating a partial rupture of the IOI. A significant portion of the untreated sewage was actively emitting into Potrero Creek at Manhole 89. Due to this partial breach, the County EOC was activated and resources from ADEM requested as well as a wide range of emergency providers and public health officials. It took more than a week to construct a bypass of the IOI along the ground to transfer the untreated sewage to an undamaged section of the pipe. During the relocation of the bypass, there were multiple Africanized bee

attacks. A suspension of all operations occurred until bee suits could be procured and workers briefed on personal protection activity.

Concurrently, the Produce Row bridge spanning the Nogales Wash was undercut by stormwater, creating a structural problem, and three other Nogales Wash migration issues occurred with extensive bank erosion. Outside resources, such as the Army Corps of Engineers and the Arizona Army National Guard, were mobilized for bank protection measures and emergency engineering to stabilize the situation. The DeConcini Port of Entry also was flooded by stormwater and reported a significant undercut to the enclosed portion of the Nogales Wash at the Port of Entry. Declarations of Emergency were made by the City of Nogales and Santa Cruz County in response to this event.

FRAGILE INFRASTRUCTURE

Given the fragile condition of the Nogales Wash/IOI, the City of Nogales, Arizona responds to chronic IOI mishaps. Most of these incidents are remedied at the local level with cooperation between the City of Nogales and the USIBWC.

On June 1, 2004, local and state emergency personnel responded to an IOI compromise originating in Nogales, Sonora. This event resulted in the spill of an estimated 30 million gallons of raw sewage into the Nogales Wash Channel. To mitigate the threat to public health, 210 cubic yards of contaminated material were removed and an 8-mile section of Nogales Wash was treated with 600 pounds of chlorine. The 6-day operation concluded on June 6, 2004.

In 2007 and 2008, USACE conducted technical studies of the Nogales Wash Channel. These studies emphasize the need for immediate protective measures and long-term replacement of this infrastructure. On April 23, 2009, USACE conducted further evaluations and found that conditions have continued to deteriorate.

THREATS TO PUBLIC HEALTH AND CRITICAL INFRASTRUCTURE

The Nogales Wash Channel and IOI enter the United States at the City of Nogales, Arizona. With a City of Nogales population of 21,830, county officials estimate that at least 500 residences and 100 businesses are within the immediate reach of an IOI compromise. The Dennis DeConcini Port of Entry sits on the U.S./Mexico international border alongside the Nogales Wash Tunnel and is routinely impacted by these flood events. U.S. Customs Border Protection reports that in FY 2008, a daily average of 8,510 motor vehicles passed northbound through the port.

A July 12, 2008 10-year flood event caused a catastrophic rupture of the enclosed Nogales Wash Tunnel, in Nogales, Sonora. The rupture occurred immediately southeast of the DeConcini Port of Entry. The sudden surge of flood waters swept 40 automobiles against the U.S./Mexico border fence and flooded about 50 businesses in Nogales, Arizona, and Nogales, Sonora. Waters reached depths of more than 5 feet in Nogales, Sonora, and more than 2 feet in Nogales, Arizona. Human life was severely threatened.

The Union Pacific Railroad runs immediately adjacent and parallel to the Nogales Wash/IOI. The railroad processes an average of 10 trains daily carrying hazardous materials, motor vehicles, automotive parts, and commodities into the United States. In the August 2007 flood, this rail line was shut down for 3 days because the relatively small 10-year flood event threatened rail bed stability.

The Santa Cruz County Sheriff's Headquarters and Corrections Facilities are 2 miles north of the border and are immediately across the street from the Nogales Wash/IOI. The Headquarters are normally occupied by about 30 public safety personnel, including emergency dispatch. The corrections facilities house an average daily population of 110 inmates. The Sheriff's Department states that a compromise of the IOI will cause an emergency evacuation of these facilities, impair the Sheriff's public safety mission, and present the extraordinary challenge of relocating 110 inmates on short notice.

ASSOCIATED AFFILIATES

The following agencies/affiliates may be associated with an emergency response action to an incident in the Nogales Wash:

- **City of Nogales:**
 - Mayor and City Council
 - City Manager
 - Public Works
 - Public Affairs
 - Finance Department
 - Fire Department
 - Police Department
- **Santa Cruz County:**
 - Board of Supervisors
 - County Manager
 - Flood Control District
 - Emergency Services
 - Sheriff's Office
 - Public Works
 - Health Services
- **Fire Districts:**
 - Nogales Suburban Fire District
 - Rio Rico Fire District
 - Tubac Fire District
- **State of Arizona:**
 - Arizona Department of Emergency Management (ADEM)
 - Arizona Department of Environmental Quality (ADEQ)
 - Arizona Department of Health Services (ADHS)

Arizona Department of Public Safety (ADPS)
Arizona Department of Transportation (ADOT)
Arizona Department of Water Resources (ADWR)

- **United States Government:**
 - U.S. International Boundary and Water Commission (USIBWC)
 - U.S. Border Patrol (USBP)
 - U.S. Army Corps of Engineers (USACE)
 - Environmental Protection Agency (EPA)
 - Federal Emergency Management Agency (FEMA)
 - Coast Guard (USCG)
 - Customs Border Protection (CBP)
 - National Weather Service (NWS)
 - U.S. Geological Survey (USGS)
- **Mexico Government:**
 - Civil Protection
- **Other affiliates:**
 - Non- Government Organizations (NGO)
 - American Red Cross
 - Salvation Army
 - Volunteer Organization Active in Disaster
 - UniSource Energy Services (utilities gas & electrical)
 - Union Pacific Railroad
 - Qwest telephone
 - Cell Phone Carriers (Alltel, Verizon, ATT)
 - Rio Rico Utilities / Liberty Water
 - Holy Cross Hospital

OPERATIONS (WHITE TAB #2)

INCIDENT OPERATIONS

Incident operations encompasses efforts that directly address the incident impacted area in the Nogales Wash channel and any associated impacted area outside of the channel. Operations implements the strategic plan, and establishes operational control objectives and tactical actions to control and mitigate the hazards and damages during an Nogales Wash incident.

OPERATIONS FUNCTIONAL GROUPS

The operations section has identified eight Functional Groups that may be needed for a Nogales Wash incident. This list may increase or decrease depending on the complexity and the scope of the incident. If more than five are activated, then a Branch Director position may be needed. These Groups are identified in the Incident Action Plan as ICS-204s.

Containment Group – Contains all flood and wastewater to the Nogales Wash channel. Returns all water to the channel when overbanking takes place. Initiates a pump around to return flow to the IOI if a failure takes place.

Search and Rescue Group – Establishes swift water rescue teams as needed. Works with local authorities for search operations along the Nogales Wash. Provides swift water rescue teams when incident personnel are working in the Nogales Wash.

Law Enforcement Group –Coordinates with local authorities for evacuations. Controls transportation corridors. Supports local law enforcement.

Decontamination Group – Ensures complete decontamination of personnel and equipment prior to leaving the flooded area. Ensures all runoff is contained and disposed of.

Monitoring / Remediation Group – Establishes water and weather monitoring sites. Identifies sites for containment features. Initiates monitoring of water quality and health impacts. Conducts analysis of water quality and health impacts throughout the duration of the incident. Documents the hydrologic aspects of the incident with reasonable scientific data that might be used for future emergency incident reference.

Technical Specialist Group – Provides Technical information on all aspects of the operation to functional Groups and incident personnel.

Interpreter Group – Provides interpreters to ICP and Communications with 24-hour coverage. Provides interpreters to Group Supervisors and to work sites as needed.

Mass Care Group – Provides reception care and sheltering operations if required. Coordinates with Volunteer Organizations Active in Disasters (VOAD) groups. Pre-identified evacuation and staging areas have been identified and are specifically documented in Section 4.10.

Street Group – Provides for street access for emergency and local traffic. Provides removal of flood debris blocking streets.

LAW ENFORCEMENT OPERATIONS

Law Enforcement activities related to a catastrophic event in Nogales Wash and/or the surrounding county caused by flooding and/or a compromise of the sewage line IOI with resulting spillage consist of on-site (ICP and any other designated facilities) law enforcement and off-site law enforcement coordination with local, State, Federal, and other law enforcement agencies involved in the incident.

Activities on-site will be dedicated to the security of the ICP and accompanying personnel and equipment. If other facilities or staging areas are designated and a need for security for those sites becomes apparent, the need will be met.

Off-site activities will include, but are not limited to the following: road closures, evacuations and property protection, criminal investigation of illicit activities within evacuated areas, coordination with the Union Pacific Railroad Police as well as law enforcement agencies with jurisdiction over Santa Cruz County, City of Nogales, AZ, and City of Nogales, Sonora.

Nogales Police Department has the following orders:

- Nogales Police Department, AZ Order 66-Critical Incidents/Incident Command System,
- Order 67-Critical Incidents/City Emergency Plan (EOP),
- Order 68-Critical Incidents/Mobile Field Force, Order 69-Critical Incidents, Mass Arrest Procedures,
- Order 70-Critical Incidents, Citizens Evacuation Protocol, and
- Order 71-Critical Incidents/Guidelines for Specific Incidents.

POTENTIAL HAZARDS (WHITE TAB #3)

PUBLIC AND EMERGENCY RESPONSE PERSONNEL HEALTH AND SAFETY

Health and Safety conditions will vary greatly in Nogales Wash depending on the type of incident. To better categorize the incidents, ADEQ personnel have characterized the incidents into the following three general categories:

- A – Extraordinary discharge of effluent into the Nogales Wash. The sewage may come from a rupture of the IOI or some other source. This muck would not be accompanied by any excess surface flood waters.
- B – There would be flows in excess of normal in the Nogales Wash. All flooding would be contained in the channel proper. There may or may not be contamination from the IOI or other sources in the runoff.
- C – There would be flows in excess of normal in the Nogales Wash. The floodwaters would overflow the banks of the Wash. This event may be caused by the volume of water or some form of blockage in the channel. There may or may not be contamination from the IOI or other sources in the floodwaters.

At any point in addressing any of these three different incident types, but especially during a sewage spill or break that does not involve the dilution of sewage by large quantities of flood waters, contamination and contact with raw sewage may occur.

Airborne bacteria concentrations are typically highest wherever sewage is agitated, such as near incoming wastewater inlets and sludge treatment areas. However, contractors and workers should not assume that any area is necessarily clean. Airborne bacteria have been found in “clean” areas such as control rooms, although at much lower levels relative to other areas of a WWTP. The table in Section 4.2 lists several organisms that may be present as well as typical signs and symptoms of exposure. The primary route of exposure to these organisms is hand-to-mouth contact or the “fecal-oral route.” This can occur during eating, drinking, or smoking or by touching the face with contaminated hands or gloves. Inhalation of aerosols containing microorganisms is a less common, yet important method of entry. Skin absorption is unlikely unless the skin has been previously damaged by cuts, blisters, burns or puncture wounds. Mucous membranes (such as in the eyes and nose) may also provide a portal of entry for certain organisms.

Another scenario would be a spill from derailed railroad car(s) containing sulfuric acid from mining activities. This could originate in Sonora or Arizona as a result of failure of the wash or other infrastructure aligned with the railroad. With ongoing disinfection activity occurring in the Nogales Wash with chlorine, an acid spill could create a chemical reaction and release chlorine gas. Chlorine gas could accumulate within the tunnel systems if chlorination occurs in Mexico, and/ or would be more likely to be a concern for a spill south of the border since US disinfection usually occurs where the Morley Avenue Tunnel exits in Arizona.

NOGALES WASH FLOODING EARLY WARNING SYSTEM

The “Early Warning System” for flooding in Nogales Wash is solely dependent on excellent working relationships between the Nogales, Arizona, Fire Department and the Nogales, Sonora, Fire Department.

There are two large reservoirs located in Mexico, south of the border and Nogales, Arizona. On the east side just below Pirnola Mountain is Centauro Reservoir. The concern during monsoon season is when it rains on both the west and east side of Pirnola Mountain. When Centauro Reservoir is full from thunderstorm activity (usually in July and August), water from additional thunderstorm activity flows down past Colonia Ferrocarrilera and into Nogales Wash. On the west side less than 15 miles from Nogales, Sonora is Torres/Refreso Reservoir. Likewise, when Torres/Refreso Reservoir fills to capacity and additional rain causes the reservoir to overflow, the water flows down Tecnologico Wash past Colonia Granja and into Nogales Wash. Nogales Wash crosses the international boundary near the Port of Entry between Bueños Aires St. on the east and Reforma St. on the west in Mexico.

When Tecnologico Wash starts flowing with a considerable amount of water, the Fire Department, Sonora, Mexico, posts lookouts along Tecnologico Wash (Fire Station #3 is located on Tecnologico Street) and Colonia Granja. As water levels attain 3 feet either in the Nogales Wash bank-to-bank, or the street sidewalk-to-sidewalk, and are running fast, the Nogales Fire Department, Arizona, is immediately notified by cell phone or police radio that flooding is imminent on the U.S. side of the border. Historically, when these conditions occur on the Mexican side of the border, the following conditions are typically seen in Nogales, Arizona, specifically in Nogales Wash: approximately 6 inches of water in Nogales Wash near the Bowling Alley flowing fast with a 4- to 5-foot wall of water close behind.

From the time of notification and the initial 4- to 5-foot wall of water, there is approximately a 15- to 20-minute time frame. It should be noted that throughout a given day, the water will recede and then surge again several times per day with water levels in the Nogales Wash Channel reaching 10 to 15 feet.

The Nogales Fire Department, Arizona, immediately notifies the Nogales Police Department, Arizona, U.S. Customs, and the Santa Cruz County Sheriff Department of the impending flood in Nogales Wash.

Early Warning System Contacts for Nogales, Arizona

Primary Contact: Operations Chief, Nogales, AZ Fire Department.

Alternate Contacts: Assistant Fire Chief and Fire Chief, Nogales, AZ Fire Department.

Early Warning System Contacts for Sonora, Mexico

Primary Contact: Fire Chief, Nogales Sonora Fire Department.

Alternate Contact: Comandante/Director of Civil Protection/Emergency Management, Sonora Mexico.

HAZMAT EXPOSURE

Substantial chemical hazards may be present when working in the waters of Nogales Wash. There is always the potential for chemical exposure when working in proximity to or where there is contact with the waters of Nogales Wash. Most chemicals involved in flood runoff will have been diluted substantially by the flood waters, but when the waters recede, the remaining waters will be treated with a disinfectant to kill harmful organisms. This treatment has been historically accomplished with calcium hypochlorite in pellet or capsule form, as is used in swimming pool disinfectant operations.

Additional hazardous materials may be present in the floodwaters of Nogales Wash. These materials may be petroleum-based chemicals, heavy metals, or acids used in manufacturing processes in Mexico. Although floodwaters dilute these chemicals substantially, all incident personnel should be aware of their potential presence and always wear PPE when working in or near the waters of Nogales Wash.

During any event involving flooding of the Nogales Wash, whether it stays within the banks or over tops and floods lower lying areas, there is always a potential for the waters to be contaminated with sewage and chemicals including those chemicals used to disinfectant sewage tainted waters. Chemical treatment for disinfection of water in the Nogales Wash is not based on hard data or measurements. The quantity of chlorine chemicals administered is based on raw estimates of the volume of water present. There is always potential that waters will be over-treated with chlorine compounds and thus there is a continual probability that incident personnel exposed to the waters of Nogales Wash will come into contact with chemicals that can harm them. This includes chemicals inadvertently present in the water and chemicals intentionally administered to the water for disinfectant purposes.

For this reason, any activity involving exposure to or contact with the waters of Nogales Wash, should be conducted by incident personnel using PPE for sewage water.

HEALTH HAZARDS

The table below provides information on organisms that may be found in WWTPs or sewage that could impact the Nogales Wash in the event of a flood or other incident.

Organisms	Signs & Symptoms	Average Latency Period
	BACTERIA	
Salmonella	Nausea, headache, diarrhea and vomiting; almost always with a fever.	6 to 72 hours
Tetanus (lockjaw)	Muscular stiffness in jaw, neck. Sweating, fever, difficulty swallowing	8 days
Shigella	Cramps, diarrhea, fever, bloody stool, nausea, vomiting	1 to 3 days
Leptospirosis (Weil's Disease)	Intestinal problems, liver and kidney disease, jaundice.	4 to 10 days
E. coli	Diarrhea, vomiting, little or no fever, blood often seen in stool	Approximately 3 days
Tulareisis	Chills, fever, swollen lymph nodes, stomach pain diarrhea, vomiting	3 to 5 days

Organisms	Signs & Symptoms	Average Latency Period
Yersinia	Diarrhea, fever, abdominal pain that resembles appendicitis.	1 to 14 days
VIRUSES		
Hepatitis A	Fever, abdominal pain, nausea, jaundice, dark-colored urine.	Approx. 30 days
Hepatitis B	Nausea, vomiting, loss of appetite, jaundice, joint pain.	60 to 90 days
Hepatitis C	Nausea, vomiting, loss of appetite, jaundice, joint pain.	6 to 9 weeks
HIV	Destroys immune system, prone to opportunistic infections.	1 to 2 years
Polio	Fever, headache, nausea, muscle pain and stiffness, paralysis	6 to 20 days
PARASITES		
Entamoeba histolytica	Mild nausea, loose stool, abdominal tenderness. In severe cases can spread throughout the body and attack other organs, especially the liver. (amebiasis)	14 to 28 days
Giardia lamblia	Cramps, weight loss, loose/greasy stool, bloating. Fever is rare.	7 to 10 days

Sources: American Federation of State, County and Municipal Employees (AFSCME); Utah Dept. of Health.

Responders potentially exposed to wastewater should be immunized for Hepatitis A, B and C as well as tetanus.

There is also potential for presence of chlorine gas in concentrations that may be harmful to personnel. This will be actively monitored by ADEQ and incident personnel to ensure that no incident activities or operations occur in confined spaces or areas not well ventilated.

Handling of chemicals used to disinfect sewage spills and flood waters poses a hazard, although fewer hazards exist in the handling of calcium hypochlorite in a dry capsule or pellet form than does the handling of sodium hypochlorite in liquid bleach form.

Acute and chronic Health Hazards of using these chemical disinfectants containing chlorine include the following:

- Impacts to the Skin: May cause severe irritation and/or burns with prolonged exposure. May cause severe destruction of the dermis resulting in impairment of the skin. Burns may not be immediately apparent.
- Impacts to the eyes: Severe irritation and or burns can occur. Contact may cause impairment of vision and corneal damage.
- Impacts to the respiratory system: Inhalation may cause irritation to the nose, mouth, throat, and lungs. It may cause burns to the respiratory tract with the production of lung edema. Inhalation of high concentrations of mist can result in permanent lung damage.
- Impacts to the gastro intestinal tract: Ingestion can cause irritation and or burns within and throughout the entire gastrointestinal tract.

General chronic health impacts may be lung damage, tissue destruction, eye burns, and gastrointestinal tract damage.

The telltale signs and symptoms of overexposure to either the liquid or solid form of chlorine compound disinfectants are redness, swelling and scab formation on the skin and severe irritation of the eyes. When inhaled, shortness of breath, wheezing, choking, chest pain may occur immediately. When ingested, nausea, vomiting, diarrhea, abdominal pain, bleeding and/or tissue ulceration may occur.

Exposure to bees can also be a health and safety issue. If bees are observed, a suspension of all operations is necessary until bee suits can be procured and workers briefed on personal protection activity.

DECONTAMINATION

All workers who come in contact with or are proximate to the waters of Nogales Wash or the IOI should take a shower and put on clean clothes when leaving the work area. All work clothes should be put into plastic bags and washed before using again. Hats, gloves, face shields, goggles, reusable face masks, boots and impervious rain type gear will be discarded or washed and dried before using again on following work periods. All eating, smoking and drinking of fluids will be done only after thoroughly washing hands and face and at a location away from possible contamination. Treat the waters of Nogales Wash as potentially contaminated with hazardous materials after a high water event. Thorough decontamination and wise use of PPE will mitigate almost all potential contact with hazardous materials as well as contact with potential biological hazards and raw sewage.

MASS CARE AND PUBLIC HEALTH

If a flood overtops the banks of the Nogales Wash, there is a potential for a Mass Care situation that will involve its own safety hazards for sanitation. The one element that will contribute most to the health of public and incident workers during mass care situations is the availability and use of adequate facilities to wash hands, bodies (showers) and clothing (laundry). Adequate numbers of clean toilets and clean eating areas is essential.

To minimize possible groundwater contamination, ensure that an adequate supply of chlorine compound disinfectant is available to decontaminate the floodwaters or sewage spill. ADEQ will monitor surface waters north of Nogales to determine the appropriate locations and need for decontamination of the Nogales Wash.

EVACUATIONS / PUBLIC HEALTH AND SECURITY

Evacuations will be handled by the Santa Cruz County Sheriff's Office and the Nogales Police Department. Security of personal property in these evacuated areas will also be the responsibility of these two entities. The City of Nogales and Santa Cruz County will determine when the impacted areas are safe to re-enter and will assist with decontamination of impacted areas.

Early Warning System

The “Early Warning System” for flooding in Nogales Wash is solely dependent on the excellent working relationships between the Nogales, Arizona, Fire Department and the Nogales, Sonora, Fire Department.

There are two large reservoirs in Mexico located south of the border and Nogales, Arizona. On the east side just below Pirnola Mountain is Centauro Reservoir. The concern during monsoon season is when it rains on both the west and east side of Pirnola Mountain. When Centauro Reservoir is full from thunderstorm activity (usually in July and August), water from additional thunderstorm activity flows down past Colonia Ferrocarrilera and into Nogales Wash. On the west side less than 15 miles from Nogales, Sonora, is Torres/Refreso Reservoir. Likewise, when Torres/Refreso Reservoir fills to capacity and additional rain causes the reservoir to overflow, the water flows down Tecnologico Wash past Colonia Granja and into Nogales Wash. Nogales Wash crosses the international boundary near the Port of Entry between Bueños Aires St. on the east and Reforma St. on the west in Mexico.

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From the time of notification and the initial 4- to 5-foot wall of water, there is approximately a 15- to 20-minute time frame. It should be noted that throughout a given day, the water will recede and then surge again several times per day with water levels in the Nogales Wash Channel reaching 10 to 15 feet.

The Nogales Fire Department, Arizona, immediately notifies the Nogales Police Department, Arizona, U.S. Customs, and the Santa Cruz County Sheriff Department of the impending flood in Nogales Wash.

Early Warning System Contacts

Nogales, Arizona:

Primary Contact: Operations Chief, Nogales, AZ, Fire Department.

Alternate Contacts: Assistant Fire Chief and Fire Chief, Nogales, AZ, Fire Department.

See Contact List (Red Tab).

Sonora, Mexico:

Primary Contact: Fire Chief, Nogales Sonora Fire Department.

Alternate Contact: Comandante/Director of Civil Protection/Emergency Management, Sonora Mexico. See Contact List (Red Tab).

Potential Areas for Public Evacuation:

Name	Location	Phone Number
1. Old 1904 Courthouse	20 E. Court St. Nogales AZ 85621 Corner of Morley and Court St.	---
2. Sacred Heart Church (Reference only)	272 N. Rodriquez St. Nogales AZ 85621	(520) 287-9221
3. Lincoln Elementary School	652 N. Tyler Ave Nogales AZ 85621	(520) 287-0870
4. Nogales Unified School District Office	310 W. Plum St. Nogales AZ 85621	(520) 287-0800
5. Wade Carpenter Middle School	595 W. Kino St. Nogales AZ 85621	(520) 287-0820
6. Challenger Elementary School	901 E. Calle Mayer Nogales AZ 85621	(520) 377-0544
7. County Complex	2150, N. Congress Dr. Nogales AZ 85621	---
8. Nogales High School	1905 N. Apache Blvd Nogales AZ 85621	(520) 377-2021
9. Saddle Drive Apartments	Bitache Dr. Nogales AZ 85621	---
10. Clearing Behind St. Andrew's Church	969 W. Country Club Dr. Nogales AZ 85621 Clearing at Country Club / Grand	---

Also identified as evacuation areas within the plan:

- Nogales Airport – Highway 82 Patagonia
- County Building Complex – 2150 N. Congress Drive, Nogales
- Rio Rico High School – 1374 W. Frontage Road, Rio Rico

HAZMAT EXPOSURE BASELINE DOCUMENTATION

Nogales Wash Emergency Incidents will be considered HAZMAT Incidents. To ensure proper documentation for all incident personnel, the following protocol will be followed.

The U.S. Department of Labor, Office of Workers' Compensation Programs, CA-2 form "Notice of Occupational Disease and Claim for Compensation" will be available for completion by incident personnel at check-in or the earliest opportunity.

HAZMAT exposure baseline documentation (CA-2 form) is required for ALL personnel assigned to a Nogales Wash Emergency Incident. All incident personnel will be required to complete a CA-2 form before being released from the incident. A copy of all completed CA-2 forms will be placed in the final incident package and a copy will be held by each incident personnel.

PERSONNEL WELFARE, HEAT STRESS & DEHYDRATION AND FATIGUE

All personnel should be alerted to the threat of dehydration and the symptoms of heat stress. Reconditioning units or reconditioning areas should be set up in proximity to the work location so workers can rehydrate and eat. Extra precaution needs to be taken to make sure that there is no contamination from PPE or clothing in these reconditioning areas. PPE should be removed in decontamination areas and washing hands and face is required before ingesting any liquids or food.

PERSONAL PROTECTIVE EQUIPMENT

It is important that the skin and eyes be protected from splashes and airborne materials when working near any water flowing in Nogales Wash or water that has escaped from Nogales Wash. This protection also includes handling materials used to disinfect the waters of Nogales Wash with chlorine compounds. Skin protection is especially important if skin is chapped, burned, cut or otherwise damaged. Use liquid-proof gloves, boots and eye/face protection when in direct contact with any water flowing in Nogales Wash and when handling disinfectants used to treat these waters. When working in or near the waters of Nogales Wash, PPE is required to prevent contact with potential disease causing organisms and potentially harmful chemicals in these waters.

Full face shields and life vests should be worn any time work is done adjacent to or in the waters of Nogales Wash. Face shields as well as dust masks should be worn any time there is agitation of the waters in Nogales Wash to prevent aerosol liquids from entering the airways of response personnel. All PPE should remain at the job site and should be disposed of. Items that will be reused will be cleaned with a soap and hot water (160°F) and bleach mixture after each use. Puncture-resistant gloves, steel-toed boots and hard hats should be used.

WORKING SURFACES

Generally, personnel should not be working in moving water more than 6 inches deep to maintain secure footing. This requirement may be adjusted if engineering methods are used such as rope, hand rails, lines or other methods to ensure that there is no loss of footing in swiftly moving waters. Within flooded areas, it is always a hazard to not be able to see the surface or bottom of the Nogales Wash and can make stepping into a hole or tripping and falling more likely. All personnel should have probes or walking sticks to hold out in front while walking in flooded areas to make sure that there are no trip and fall hazards.

HEAVY EQUIPMENT OPERATIONS

Heavy equipment operations within the Nogales Wash or immediately top side of the Nogales Wash will only be conducted during daylight hours. Safety vests are required for all personnel working around heavy equipment.

THUNDER STORMS THAT ARE NOT IN THE INCIDENT AREA

Maintain an early warning network for watershed storms that will affect drainage. Lookouts will be posted at high points with the ability to look over the Nogales Wash watershed in Mexico. The lookouts will watch for thunderstorms developing south of the watershed. To accomplish this mission, lookouts may need to be in aircraft at a suitable altitude to be able to observe the area.. It is critical that redundancy is established for both personnel involved in the early warning system as well as in the communication equipment and systems used to ensure proper and fast notification of (who??) if the electricity and telecommunications systems fail. As policy, no operations of any kind other than emergency rescue will occur in the Nogales Wash after 1pm daily if the early notification system is not operational, reliable and there is no threat of thunderstorms in the Nogales Wash Watershed. During the monsoon season, the only operations to occur will be emergency rescue operations and only during daylight hours.

THUNDERSTORMS IN THE INCIDENT AREA

- Take shelter in a vehicle or building if possible.
- If outdoors, find a low spot away from tall trees, wire fences, utility lines and other elevated conductive objects. Make sure the place you pick is not subject to flooding.
- If in a tree covered area, move to a location with shorter trees.
- If only isolated trees are nearby, keep your distance – twice the tree height.
- If in open country, crouch low minimizing contact with the ground. You can use a pack to sit on, but NEVER LIE ON THE GROUND.
- If you feel your skin tingle or hair stand on end, immediately crouch low to the ground. Make yourself the smallest possible target and minimize your contact with the ground.
- Don't group together.
- Don't stay on ridge tops, in wide open areas, near ledges or rock outcroppings or on elevated structures.
- Don't operate landline telephones, machinery or electric motors.
- Don't handle flammable materials in open containers or metal hand tools.
- Handheld radios and cellular telephones can be used.
- Stay inside buildings or inside vehicles when lightning is present. Follow the 30-30 rule. Whenever you see lightning; count thousand one, thousand two ... to thousand 30. If the time between the flash and the time you hear it is less than 30 seconds, you need to move to locations that are less subject to lightning strikes. Thirty minutes after the last lightning strike, it is generally safe to begin working. Move out of Nogales Wash whenever thunder storms are visible within the watershed area.

SENSITIVE POPULATIONS/VALUES AT RISK (WHITE TAB #4)

In the event of a significant incident at Nogales Wash, information regarding sensitive populations may be critical to decisions made by response personnel (evacuation, rescue, power failures, etc.). The following tables provide information regarding the location of schools, nursing homes, hospitals, assisted living organizations, a hospital and a detention center within the Nogales Wash Area.

SCHOOLS

City/Town	Facility	Location	Phone	Capacity
Nogales	A.J. Mitchell Elementary	855 N Bautista St. Nogales, AZ 85621	(520) 287-0840	410
Nogales	Bracker Elementary	121 Camino Diez Mandamientos Nogales, AZ 85621	(520) 377-2886	264
Nogales	Challenger Elementary	901 Calle Mayer Nogales, AZ 85621	(520) 377-0544	537
Nogales	Desert Shadows Middle School	340 Blvd. Del Rey David Nogales, AZ 85621	(520) 377-2646	734
Nogales	Ed Options	2021 Grand Ave. Nogales, AZ 85621	(520) 281-9179	140
Nogales	Elgin School	23 Elgin Rd. Elgin, AZ 85611	(520) 455-5514	115
Nogales	Francisco Vasquez de Coronado Elementary	2301 N. Al Harrison Dr. Nogales, AZ 85621	(520) 377-2855	549
Nogales	Lincoln Elementary	652 N. Tyler Ave. Nogales, AZ 85621	(520) 287-0870	442
Nogales	Lourdes Catholic School	555 E. Patagonia Hwy Nogales, AZ 85621	(520) 287-5659	329
Nogales	Mary L Welty Elementary	1050 W. Cimarron Nogales, AZ 85621	(520) 287-0880	382
Nogales	Mexicayote Charter School	2059 N. Grand Ave. Nogales, AZ 85621	(520) 287-6790	167
Nogales	Nogales High School	1905 N Apache Blvd, Nogales, AZ 85621	(520) 377-2021	1,714
Nogales	Pierson Vocational High School	451 N. Arroya Blvd. Nogales, AZ 85621	(520) 287-0915	128
Nogales	Pinnacle Charter High School	2055 N. Grand Ave. Nogales, AZ 85621	(520) 281-5109	183
Nogales	Sacred Heart of Jesus Catholic	207 W. Oak St. Nogales, AZ 85621	(520) 287-2223	173
Nogales	St. Andrews Preschool	969 W. Country Club Dr. Nogales, AZ 85621	(520) 281-0133	40
Nogales	Santa Cruz Elementary #28	7 Duquesne Rd. Nogales, AZ 85621	(520) 287-0737	240
Nogales	Smart Kid Preschool	939 N. Perkins Ave. Nogales, AZ 85621	(520) 287-7845	16

City/Town	Facility	Location	Phone	Capacity
Nogales	Sunshine Christian School	207 Oak St. Nogales, AZ 85621	(520) 287-2223	150
Nogales	Wade Carpenter Middle Academy	595 W. Kino Blvd. Nogales, AZ 85621	(520) 287-0820	620
Patagonia	Patagonia Elementary #6	200 W. Naugle Ave. Patagonia, AZ 85624	(520) 394-3050	101
Patagonia	Patagonia Union High School #20	200 W. Naugle Ave. Patagonia, AZ 85624	(520) 394-3050	83
Patagonia	Patagonia Montessori School	500 N. 3 rd Ave. Patagonia, AZ 85624	(520) 394-9530	36
Rio Rico	Calabasas School (CK-8)	1412 West Frontage Rd Rio Rico, AZ 85648	(520) 375-8600	1,447
Rio Rico	Coatimundi Middle School	490 Avenida Coatimundi Rio Rico, AZ 85648	(520) 375-8800	468
Rio Rico	Mountain View Elementary School	580 Camino Lito Galindo Rio Rico, AZ 85648	(520) 281-7990	512
Rio Rico	Rio Rico High School	590 Camino Lito Galindo Rio Rico, AZ 85648	(520) 377-9556	1,233
Rio Rico	San Cayetano Elementary School	1412 West Frontage Rd. Rio Rico, AZ 85648	(520) 375-8300	904
Tubac	Montessori de Santa Cruz	18 Calle Baca Tubac, AZ 85646	(520) 398-0536	69

HEALTH CARE/DETENTION

Type	Facility	Location	Phone	Capacity
Hospital	Holy Cross Hospital	1852 N. Mastick Way Nogales, AZ 85621	(520) 281-1550	NA
Hospital	Mariposa Community Health Care Center	1852 N. Mastick Way Nogales, AZ 85621	(520) 281-1550	NA
Jail	Santa Cruz County Jail	2170 N. Congress Dr. Nogales, AZ 85621	(520) 761-7874	372
Jail	Santa Cruz County Juvenile Detention Services Division	2170 N. Congress Dr. Nogales, AZ 85621	(520) 375-8195	10

SENIOR CARE

Type	Facility	Location	Phone	Capacity
Assisted Living Facility	Karla's Home Care	2429 N Grand Ave Nogales, AZ 85621	(520) 281-2323	7
Assisted Living Facility	Viviana Home Care	671 Windy Ln Rio Rico, AZ 85648	(520) 281-8278	8

VALUES AT RISK

The co-locations listed below might be compromised during a Nogales Wash incident.

Name	Address	Latitude / Longitude
Downtown Nogales and the Port of Entry if over banking occurs on the Sonoran side of the border		
Union Pacific tracks directly adjacent to the Nogales Wash		
Nogales City Hall and Court House are within the floodplain downtown		
Santa Cruz County Jail (in the floodplain)	1250 N Hohokam Dr.	31 21.5790 by 110 55.7808
City of Nogales Public Works Building and maintenance yard	1450 N Hohokam Dr.	31 21.6432 by 110 55.791
County maintenance yard	1270 N Hohokam Dr.	31 21.5852 by 110 55.7808
State maintenance yard	1340 N Hohokam Dr.	31 21.6080 by 110 55.7856
City of Nogales Gymnasium is identified as an evacuation center and is within the floodplain	1500 N Hohokam Dr.	31 21.6639 by 110 55.7843
Mexicayote School	Corner of Morley and Fredricks	31 20.8692 by 110 55.6870
Kinder Garden	Corner of Perking and Morley	
Arizona DPS and Motor Vehicle Division	Old Tucson Road and Business 19	31 23.2116 by 110 56.9703
Nogales Fire and Police Stations	777 Grand Av	31 20.7986 by 110 55.8421
Chula Vista subdivision	Chula Vista Rd. and Old Tucson Rd.	31 23.7535 by 110 57.2689
Pete Kitchen Trailer Park	Cochise and E Frontage Rd	31 23.8404 by 110 57.4976
Nogales Suburban Fire Department #2	86 North Old Tucson Hwy	31.39.8199 by 110.95.3032
Business along the Nogales Wash corridor		
Rio Rico Drive Bridge Structure		31.469682 by 110.992659
Chula Vista Project USACE		31.398199 by 110.953032
Nogales International Wastewater Treatment Plant (NIWTP)		31.444635 by 110.964599

Name	Address	Latitude / Longitude
Nogales Wash Bridges		
Ruby Rd.		31 25.8115 by 110 57.6603
Old Tucson Rd		31 25.4579 by 110 57.5784
Old Tucson Rd at Chula Vista		31 23.8715 by 110 57.1763
West Gold Hill Rd		31 23.0276 by 110 56.8296
West Produce Row		31 22.7524 by 110 56.4279
West Escondido Xing		31 22.6531 by 110 56.3389
East Terminal Produce Drive		31 22.2537 by 110 55.85
East Calle Sonora		31 22.0323 by 110 55.7807
East Doe St		31 21.1591 by 110 55.6341
Hwy 82		31 20.9418 by 110 55.6557
Local road that crosses the Nogales Wash visible on aerial photograph No Name		31 20.5983 by 110 55.8973

PLAN ADMINISTRATION (WHITE TAB #5)**DISTRIBUTION LOG**

Copies of the Nogales Wash Emergency Response Plan have been distributed to the following agencies:

Hard Copy	CD	AGENCY/ORGANIZATION	DATE DISTRIBUTED
		Arizona Department of Environmental Quality	
		American Red Cross	
		Arizona State Emergency Response Commission	
		Arizona Division of Emergency Management	
		City of Nogales Council	
		City of Nogales Fire Department	
		City of Nogales Police Department	
		Rio Rico Fire Department	
		Tubac Fire Department	
		Sonoita/Elgin Fire Department	
		EPA Region IX	
		Cochise County OEM	
		Pima County OEM	
		Santa Cruz County Manager	
		Santa Cruz County Board of Supervisors	
		Santa Cruz County Emergency Operations Center	
		Santa Cruz County Office of Emergency Management	
		Santa Cruz County Health Department	
		Santa Cruz County Sheriff's Department	
		Santa Cruz County Superintendent of Schools	
		Carondelet Holy Cross Hospital	
		Arizona Department of Public Safety	
		Customs and Border Protection	
		Green Valley Fire Department	
		International Boundary Wastewater Commission	
		Union Pacific Railroad	
		Nogales Suburban Fire Department	

RECORD OF REVIEW

The plan needs to be reviewed annually to ensure that it is current and relevant to the status of the Nogales Wash Channel and the IOI. Updates will be made as required. The review team should consist of a representative from the Incident Management Team and Incident Commander, City of Nogales, ADEM, ADEQ, ADHS, USIBWC, Santa Cruz County and Nogales Sonora.

The plan will be scheduled for review prior to February1st of each year.

Chuck McHugh, ADEM is responsible for making review team contacts and scheduling the meeting.

Direct recommendations, suggested changes or updates to this Emergency response plan to Chuck McHugh (Chuck.McHugh@azdema.gov).

Review Date	By (Print)	Signature

RECORD OF CHANGES

Record changes to the Nogales Wash Emergency Response Plan in the table below.

Change No.	Date Posted	Document/ Section Title	Brief Description of Change	By (Print Name)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				