CROSSTEX

RESPONSE PLAN FOR ONSHORE OIL PIPELINE

Ohio Oil Gathering LLC
9320 Black Run Road
Nashport, Ohio 43830
(740) 828-2892

Crosstex Operations Control Center (OCC)
(866) 394-9839
(24 Hour Number)

September 2013

Prepared By:
Weavertown Environmental Group
2 Dorrington Road
Carnegie, Pennsylvania 15106

TABLE OF CONTENTS

DESCRIPTION PAGE

1.0 INFORMATION SUMMARY 1

1.1 Operator Name and address 1
1.2 Response Zone Information 1
1.3 Pipeline System Description 1
1.4 Pipeline Designations 2
1.5 Significant/Substantial Harm 2
1.6 Worst Case Discharge 5
1.7 Certification 7

2.0 NOTIFICATION PROCEDURES 8

2.1 Notification Requirements 8
2.2 Notification Checklist 12
2.3 Additional Notifications 15
2.4 Qualified Individual Notification 15
2.5 Leak/Spill Report 16

3.0 SPILL DETECTION AND ON-SCENE SPILL MITIGATION PROCEDURES 19

3.1 Methods of Initial Detection 19
3.2 Spill Response – Immediate Actions 20
3.3 Overall Response Strategy 21
3.4 Ohio Oil Gathering LLC's Spill Response Materials and Equipment 22
3.5 Disposal 23
3.6 Outside Equipment 24

4.0 RESPONSE ACTIVITIES 26

4.1 Initial Actions 26
4.1.1 Mobilization of Resources 27
4.2 Cleanup Techniques 27
4.3 Incident Command Structure 30
4.4 Response Resources 37
4.5 Communications Plan 37

5.0 LIST OF CONTACTS 40

5.1 Federal, State, and Local Agencies 40
5.2 Qualified Individuals – Spill Response Coordinators 43
5.3 Response Resources 44

6.0 TRAINING PROCEDURES 45

6.1 General Pipeline Employee Training Procedures 45
6.2 Company Training Procedures 45
6.2.1 Operations Level 47
6.2.2 Technician Level 47

6.2.3 Incident Commander Level 48
6.3 QUALIFIED INDIVIDUAL TRAINING REQUIREMENTS 49
6.4 DOCUMENTATION REQUIREMENTS 50
7.0 DRILL PROCEDURES 51
7.1 QUARTERLY NOTIFICATION DRILLS 51
7.2 SEMI-ANNUAL 51
7.3 ANNUAL 52
7.4 TRIENNIAL EXERCISE 52
8.0 PLAN REVIEW AND UPDATE 55
8.1 PLAN REVIEW 55
8.2 PLAN UPDATING PROCEDURES 55
9.0 RESPONSE ZONE APPENDICES 56

FIGURES

OHIO MAP SYSTEM ..... FIGURE 1
PIPELINE SYSTEM ..... FIGURE 2

APPENDICES

GLOSSARY & DEFINITIONS ..... APPENDIX A
CROSSTEX COPERATIONS CONTROL CENTER RESPONSE CHART ..... APPENDIX B
HEALTH AND SAFETY PLAN ..... APPENDIX C
MATERIAL SAFETY DATA SHEETS ..... APPENDIX D
RESPONSE ZONE HABITATS AND RESPONSE METHODS ..... APPENDIX E
OCCURANCES OF FEDERALLY LISTED SPECIES ..... APPENDIX F
INLAND SENSITIVITY ATLAS INFORMATION ..... APPENDIX G
LINE DRAINAGE SUPPORTING INFORMATION ..... APPENDIX H
ABNORMAL OPERATING CONDITIONS ..... APPENDIX I
INCIDENT DOCUMENTATION FORMS ..... APPENDIX J
WEG EMERGENCY RESPONSE CAPABILTIES ..... APPENDIX K

1.0 INFORMATION SUMMARY

1.1 Operator Name and address

Ohio Oil Gathering LLC
9320 Black Run Road
Nashport, Ohio 43830
(740) 828-2892

Mailing Address

P.O. Box 430
Frazeysburg, Ohio 43822

1.2 Response Zone Information

Qualified Individuals – Spill Response Coordinators

Employee	Cell #	Office #	(b) (6)
Jeffrey Watson	(740) 328-5829	(740) 828-3929	(b) (6)
Thomas Moran	(740) 624-0827	(740) 828-3929	(b) (6)
James R. Priest	(740) 828-3929	(740) 828-3929	(b) (6)

Operations Control Center – 24 hour number: (866) 394-9839

1.3 Pipeline System Description

The Ohio Gathering's crude oil gathering pipeline was constructed during the late 1970's and 1980's. The pipeline system consists of six and eight inch coated, cathodically protected, welded steel pipeline with a combined length of 126 miles. The system runs from approximately 65 miles northeast of Columbus (Killbuck) to approximately seven miles east of Marietta (Bells Run). The entire pipeline operates in rural areas of the following eight counties of southeast Ohio:

- Athens,
- Coschocton,
- Holmes,
- Licking,
- Morgan,
- Muskingum,
- Perry, and
- Washington.

1.4 Pipeline Designations

Segment	Size	Miles	Capacity (Barrels)
Killbuck to Black Run	8"	2.19	716
Killbuck to Black Run	6"	27.99	5,994
Black Run to Sego	8"	20.31	6,636
Sego to Corning	8"	21.04	6,869
Corning to Lowell	8"	34.26	11,193
Lowell to Bells Run	8"	20.45	6,681
	TOTAL -	**126.24**	**38, 089**

Station	Pumping Rate (bbls per hour)
Killbuck	275
Black Run	475
Sego	465
Corning	500
Lowell	300
Bells Run	0 (Receive only)

1.5 Significant/Substantial Harm

The southeast end of this pipeline runs to the Ohio River. The last mile of this line meets the definition as a source of Significant and Substantial Harm as defined in 40 CFR 194.103(c). In addition, a listing of all drinking water intakes within a five-mile radius of the pipeline which could be potentially affected by a worst-case discharge also fit the definition.

(b) (7)(F)



SURFACE INTAKES

There were no surface intakes identified by The Ohio EPA Division of Drinking and Ground Water (August 15, 2013).

Sensitive Areas

The sensitivity of water types and shoreline habitats are described in Appendix E. In addition, federally and state listed or proposed endangered and threatened species and their critical habitats are high priority with a Category 1 for protection and remediation as described in Appendix IX of the EPA Region V Area Contingency Plan (ACP). Burr Oak State Park is considered a Category 2 priority. Category 1 is the highest priority category.

Fresh Water Resources

Name	County
Muskingum River	Morgan
Walhonding River	Jefferson
Killbuck River	Holmes/ Coshocton
Dillon Lake	Licking
Ohio River	Lawrence

State and National Parks

Name	County
Burr Oak State Park	Athens/ Morgan

Sensitive Species and Natural Communities

According to the Fish and Wildlife and Sensitive Environments in the EPA Region V ACP, the response zone contains endangered species such as the Clubshell Mussel (most likely listed in below table as an Aquatic/Riparian Zone Invertebrates) and the Indiana Bat (most likely listed in below table as a Terrestrial Zone Natural Communities). Included in Appendix F is a table of response zone counties' occurrences of federally listed species and their habitat. The following table identifies Threatened and Endangered Species, their classification, and approximately locations as identified on the EPA Region V Inland Sensitivity Atlas, Eastern Ohio River.

Name*	State Threatened	State Endangered	Federal Threatened	Federal Endangered	Approximate Locations**
Aquatic/Riparian Zone Vascular Plants	No	Yes	No	No	Burr Oak State Park; and Ohio River downstream of Bells Run
Terrestrial Zone Natural Communities	No	No	No	No	Burr Oak State Park; and Muskingum River downstream of the pipeline crossing the river
Upland Zone Vascular Plants	No	No	No	No	Morgan Co and Washington Co border 1 mile north of pipeline; and northeast of pipeline southwest of Whipple
Aquatic Natural Communities	No	No	No	No	1 mile north of pipeline (south of Waterford); ½ mile north of pipeline near Lowell; southwest of pipeline near Dell; and Ohio River downstream of Bells Run
Fish	No	No	No	No	In Muskingum River upstream and downstream of the pipeline crossing the river; and in the Ohio River Downstream of Bells Run
Aquatic/Riparian Zone Invertebrates	No	Yes	No	No	In Muskingum River upstream and downstream of the pipeline crossing the river
Aquatic/Riparian Zone Invertebrates	No	Yes	No	Yes	In Muskingum River upstream and downstream of the pipeline crossing the river
Aquatic/Riparian Zone Invertebrates	Yes	No	No	No	In Muskingum River upstream of the pipeline crossing the river; and in Ohio River near Mile Marker 160
Aquatic/Riparian Zone Invertebrates	Yes	Yes	No	No	In Muskingum River upstream and downstream of the pipeline crossing the river; and in Ohio River downstream of the Muskingum River.
Fish	No	Yes	No	No	In Muskingum River upstream of the pipeline crossing the river
Aquatic/Riparian Zone Invertebrates	Yes	Yes	No	Yes	In Muskingum River downstream of the pipeline crossing the river
Fish	Yes	No	No	No	In Muskingum River downstream of the pipeline crossing the river
Aquatic/Riparian Zone Invertebrates	No	No	No	No	In Muskingum River downstream of the pipeline crossing the river
Upland Zone Vascular Plants	Yes	No	No	No	Along Muskingum River downstream of the pipeline crossing the river
Aquatic/Riparian Zone Invertebrates	No	No	No	No	In Muskingum River downstream of the pipeline crossing the river
Aquatic/Riparian Zone Vascular Plants	No	No	No	No	Ohio River downstream of Bells Run

* As listed in the US EPA Region V Inland Sensitivity Atlas, Eastern Ohio River, which covers the pipeline zone from Corning to Bells Run. See Atlas maps in Appendix G for further information.

The water intakes, state park, and boat launches locations are indicated on the detailed system map. Once the Ohio EPA Emergency Response Section is notified of a spill, they will notify the

Ohio EPA Division of Drinking and Groundwater, who determines if there is any danger of contamination to a surface drinking water. If a potential danger exists, they notify the operator of the system. Ohio EPA will also notify county EMA who will make the necessary notifications to managers of designated sensitive areas.

1.6 Worst Case Discharge

The pipeline system transports only crude oil (medium weight oil) between various modes of transportation. The original gathering of the crude is by tank truck from producing wells. The pipeline moves the oil to custody transfer points where railroad tank cars are loaded at Black Run, Ohio and barges are loaded at our Bells Run terminal on the Ohio River. Oil is also transferred from our Bells Run terminal by pipeline to the adjacent property which is owned and operated by Ergon Oil Purchasing.

(b) (7)(F)



Since the pipeline is relatively new and is cathodically protected, the most likely cause of a spill would be "outside party damage." If this would occur, Operations Control Center would immediately detect the low pressure in addition to the automatic shutdown of the upstream station's pump due to low pressure. OCC will expeditiously alert personnel at the adjacent stations. Emergency response personnel will then be immediately dispatched.

There are approximately 326.75 BBLs per mile of 8" pipeline, however line drainage would be limited. Using historical information, over 270 repairs of lines for West Virginia Oil Gathering LLC in areas of similar terrain to the Ohio Oil Gathering LLC pipelines, the maximum line drainage from any of the repairs, even with the use of suction from a tank truck, was 410 barrels. A smaller diameter pipeline is used in hilly terrain. Based on the historical information, Ohio Oil

Gathering LLC is conservatively showing line drainage at a maximum of (b) (7)(F). Topographic maps and an elevation strip map reflecting terrain, rural location, and locations of main valves are included in Appendix H.

(b) (7)(F)

(b) (7)(F)



Although worst-case discharges have been calculated for all the line sections, response capabilities are based on the largest volume discharges. Since we operate a small pipeline in rural hilly terrain, any worst-case discharge could potentially reach any unnamed unlisted small streams in the vicinity.

For the purpose of this plan, we are considering the entire pipeline as a single response zone.

1.7 Certification

Ohio Oil Gathering LLC hereby acknowledges that we made every attempt to provide all necessary materials and information when preparing and developing our "Response Plan for Onshore Pipelines". Also, every attempt was made to comply with Area Contingency Plans (EPA Region V) and the National Contingency Plan. Ohio Oil Gathering LLC is committed to respond to all reported leaks/spills in an expeditious manner with all necessary clean-up materials, equipment, and personnel.

If Ohio Oil Gathering LLC determines that additional clean-up personnel and equipment is needed, we have made prior arrangements with Weavertown Environmental Group, 2 Dorrington Road, Carnegie, Pennsylvania, to provide assistance.

_____ _____

(Date) Aaron Fleming, Manager of Pipeline Operations

2.0 NOTIFICATION PROCEDURES

2.1 Notification Requirements

Ohio Oil Gathering LLC's Operation Control Center (OCC) must be notified immediately in the event of an emergency or crisis. The 24-hour toll free OCC number is posted at all pipeline stations and is also posted along the pipeline in various locations.

1) Any Ohio Oil Gathering Employee, receiving a leak/spill notification will compile all pertinent information on the Petroleum Crude Oil Leak/Spill Report.

2) OCC has established a "Basics of Response Action" for employees which includes:
   - Call OCC immediately,
   - Call the Qualified Individual
   - Assume role as Incident Commander until relieved,
   - Prevent unqualified persons from entering the area until a qualified Spill Response Team arrives.

The Q.I. will be responsible for contacting relevant federal, state and local agencies, using the Notification Checklist on Page 14.

Federal, State, and Local agencies

Upon the arrival of the Federal On-Scene Coordinator (FOSC), the Qualified Individual along with the Incident Commander and Agency Liaison shall brief the FOSC, by outlining what caused the discharge, actions taken to secure the source, actions taken to contain the spill, as well as intended cleanup activities, if these activities are not already in progress. After initial conversation, the Agency Liaison will conduct all communications with the FOSC. The location of the disposal site will be submitted to the FOSC when it is determined. The FOSC shall coordinate any federal and/or state response, and if the FOSC deems the required response is not being carried out, the FOSC has the authority to coordinate the entire response operation. It is Ohio Oil Gathering's intention never to use any type of dispersants or sinking agents except as last resort and then only with the permission/approval from the FOSC. If response methods are required that utilize equipment other than that owned by Ohio Oil Gathering, Weavertown Environmental Group (800-746-4850), contracted OSRO, will be contacted to respond with appropriate equipment.

The following governmental agencies will be notified in the event of a spill by the spill response coordinators and the notification checklist completed:

National Response Center (U.S. Coast Guard)	**800-424-8802**
Ohio EPA	800-282-9378
U.S. EPA Region 5	312-353-2000

Qualified Individual or Alternate

Employee	**Cell #**	**Office #**	(b) (6)
Jeffrey Watson	(740) 328-5829	(740) 828-3929	(b) (6)
Thomas Moran	(740) 624-0827	(740) 828-3929	(b) (6)
James R. Priest	(740) 828-3929	(740) 828-3929	(b) (6)
Steve Cunningham	(740) 328-5042	(742) 828-3929	(b) (6)

Operations Control Center – 24 hour number: (866) 394-9839

Respective County Disaster Services Coordinators:

Holmes County LEPC
Gary Mellor – EMA Director
Holmes County EMA
2 Court Street, Ste. 11
Millersburg, OH 44654
1-330-674-0989 (day)
1-330-674-1936 (24 hour)

Morgan County LEPC
Terry Robison – EMA Director
Morgan County EMA
60 S. Fourth Street
McConnellsville, OH 43756
1-740-962-2424 (day)
1-740-962-4044 (24 hour)

Coshocton County LEPC
James Van Horn – EMA Director
Coshocton County EMA
724 S. Seventh Street
Coshocton, OH 43812
1-740-622-1984 (day)
1-740-622-2411 (24 hour)

Washington County LEPC
Jeff Lauer - Director
Washington County EMA
205 Putnam Street
Marietta, OH 45750
1-740-373-5613 (day)
1-740-373-2833 (24 hour)

Muskingum County LEPC
Bo Keck – EMA Director
Muskingum County EMA
2215 Adamsville Rd.
Zanesville, OH 43701
1-740-453-1655 (day)
1-740-452-3637 (24 hour)

Perry County LEPC
Rita Spicer – Director
Perry County EMA
121 W. Brown St. PO Box 657
New Lexington, OH 43764
1-740-342-1141 (day)
1-740-342-4123 (24 hour)

Licking County LEPC
Jeff Walker- EMA Director
Licking County EMA
155 E. Main Street
Newark, OH 43055
1-740-670-5577 (day)
1-740-345-2345 (24 hour)

Fire Departments and Emergency Squads to cover respective area of pipeline:

HOLMES COUNTY

Fire and Emergency
Killbuck Township
Killbuck Volunteer Fire Department F/S – 911 (non-emergency: (330) 276-0441)

Holmes County Sheriff – 911 **(non-emergency: (330) 674-1936)**

COSHOCTON COUNTY

Fire and Emergency
Monroe Township
Walhonding Valley Fire Department F/S – 911 (non-emergency: (740) 622-2411)

Clark Township
Walhonding Valley Fire Department F/S – 911 (non-emergency: (740) 824-3100)

Jefferson Township
Walhonding Valley Fire Department F/S – 911 (non-emergency: (740) 622-2411)

Bedford Township
Walhonding Valley Fire Department F/S – 911 (non-emergency: (740) 622-2411)

Pike Township
Walhonding Valley Fire Department F/S – 911 (non-emergency: (740) 622-2411)

Coshocton County Sheriff – 911 or (330) 339-2000 **(non-emergency: (740) 622-2411)**

PERRY COUNTY

Fire and Emergency
Pleasant Township "Northwest"
New Lexington Fire Department F/S Fire – 911 (non-emergency: (740) 342-4535)

Pleasant Township "Southeast"
Corning Fire Department F/S – 911 (non-emergency: (740) 342-4123)

Salt Lick Township
New Straitsville Fire Department F/S – 911 (non-emergency: (740) 394-2400)

Coal Township
New Straitsville Fire Department F/S – 911 (non-emergency: (740) 394-2400)

Perry County Sheriff – (740) 342-4123

LICKING COUNTY

Fire and Emergency

Bowling Green Township
Bowling Green Fire Department F/S -911 (non-emergency: (419) 243-3441)

Hopewell Township
Hopewell Fire Department F/S-911 (non-emergency: (740) 763-4674)

Licking Township
Licking Fire Department F/S-911 (non-emergency: (740) 453-1888)

Licking County Sheriff – (740) 670-5555

ATHENS COUNTY

Fire and Emergency
Trimble Township
Glouster Fire Department F/S – 911 (non-emergency: (740) 767-2222)

Athens County Sheriff – (740) 593-6633

MORGAN COUNTY

Fire and Emergency
Homer Township
Chesterhill Fire Department F/S – 911 (non-emergency: (740) 554-6801)

Marion Township
Chesterhill Fire Department F/S – 911 (non-emergency: (740) 962-2222)

Windsor Township
Stockport Fire Department F/S – 911 (non-emergency: (740) 559-2311)

Morgan County Sheriff – 911 **(non-emergency: (740) 962-4044)**

WASHINGTON COUNTY

Fire and Emergency

Wesley Township	
Wesley Township Fire Department F/- 911	(non-emergency: (740) 551-2028)
Chesterhill Fire Department F/S – 911	(non-emergency: (740) 554-2222)
Watertown Township	
Beverly Fire Department F/S – 911	(non-emergency: (740) 984-2252)
Adams Township	
Lowell Fire Department F/S -911	(non-emergency: (740) 896-2525)
Muskingham Township	
Devola Fire Department F/S – 911	(non-emergency: (740) 374-7369)
Fearing Township	
Fearing Township Fire Department F/S – 911	(non-emergency: (740) 373-8600)
Marietta Township	
Reno Fire Department F/S – 911	(non-emergency: (740) 373-9800)
Newport Township	
Newport Fire Department F/S – 911	(non-emergency: (740) 473-2621)

Washington County Sheriff – (740) 373-6623

* F/S denotes Fire Department and Emergency Squad
F/ denotes Fire Department only
S/ denotes Emergency Squad only

2.2 Notification Checklist

After contacting the Operations Control Center, the person discovering/first receiving a report of a release will contact a Qualified Individual. The Qualified Individual will be responsible for notifying federal, state and local agencies.

Employee	Cell #	Office #	(b) (6) [redacted]
Jeffrey Watson	(740) 328-5829	(740) 828-3929	(b) (6) [redacted]
Thomas Moran	(740) 624-0827	(740) 828-3929	(b) (6) [redacted]
James R. Priest	(740) 828-3929	(740) 828-3929	(b) (6) [redacted]
Steve Cunningham	(740) 328-5042	(740) 828-3929	(b) (6) [redacted]

The Qualified Individual will also notify the line segment's Station Supervisor:

Line Segment	Supervisor Name	Cell Phone
Lowell/Corning/Sego	John Hambel	(740) 818-7751
Black Run/Killbuck	Jerry Little	(740) 814-6772
Bells Run	Derrick Lamp	(740) 891-1912

NOTIFICATION CHECKLIST:

Ohio EPA (Emergency Response).....(800) 282-9378

_____ _____(a.m./p.m.) _____
Contact-Name Time Date

National Response Center.....(800) 424-8802

_____ _____(a.m./p.m.) _____
Contact-Name Time Date

Local Emergency Response Commission (See Section 2.1)

_____
Contact- County

_____ _____(a.m./p.m.) _____
Contact-Name Time Date

Local Fire Department (If needed) (See Section 2.1)

_____ _____ _____
County Township Fire Department

_____ _____(a.m./p.m.) _____
Contact-Name Time Date

County Sheriff's Department

_____ _____(a.m./p.m.) _____
Contact-Name Time Date

Weavertown Environmental Group (24-hour number).....(800) 746-4850

_____ _____(a.m./p.m.) _____
Contact-Name Time Date

It will be the sole discretion of the on-scene coordinator to determine if Weavertown Environmental Group is needed for cleanup measures.

Finley Fire Equipment, McConnelsville, Ohio

Business Telephone (740) 962-4328
or
24 Hour Emergency # (800) 545-5237

2.3 Additional Notifications

In addition to the required notifications listed in Section 2.2, the pipeline segment's supervisor will act as the Spill Response Coordinator and call additional company personnel as directed by the Qualified Individual. All company personnel have received training in spill response and can be used as equipment operators or laborers.

Pipeline Segment Telephone Numbers

Bells Run Station	(740) 473-2711
Black Run Station	(740) 828-2147
Black Run Maintenance Shop	(740) 828-2892 (800) 846-6642
Corning Station	(740) 347-4737
Killbuck Station	(330) 276-5091
Lowell Station	(740) 896-2238
Sego Station	(740) 743-1879

2.4 Qualified Individual Notification

Any person discovering or suspecting a product leak or spill, or receiving a report of a discharge shall notify the Operations Control Center and the Qualified Individual. The Qualified Individual will contact the Spill Response Coordinator for the area affected (the pipeline segment supervisor). Company personnel are all provided with company cell phones that are equipped with employees cell phone numbers.

2.5 Leak/Spill Report

The following report will be filled and provided in the initial notification. The information during all follow-up reports to governmental agencies need only to include: Company Name, time and location of discharge, product and cause of discharge (if known), amount discharged, weather conditions, and actions taken or expected by on-scene personnel.

PETROLEUM CRUDE OIL LEAK/SPILL REPORT

Date_____ Time_____A.M./P.M

Name of Ohio Oil Gathering Corp. employee receiving leak/spill report

_____

PERSON TAKING THIS INFORMATION MUST STAY NEAR RADIO OR TELEPHONE. IF YOU HAVE TO LEAVE FOR ANY REASON, PLEASE NOTIFY COORDINATOR AT LEAK/SPILL LOCATION.

Response Notification Form

Information on Discharge

A. Reporting Party	B. Suspected Responsible Party
Name:	Name:
Telephone: ( )	Telephone: ( )
Company:	Company:
Position:	Organization Type:
Facility ID Number:	Private Citizen
Registration Number:	Private Enterprise
	Public Utility
	Local Government
	State Government
Address:	Federal Government
City: State:	City: State:
Zip Code:	Zip Code:

Were Materials Released (Y\N)? Calling for Responsible Party (Y\N)?

Incident Description

Source and/or cause of incident:

Date Cause: Time:

Storage Tank Container Type: ( ) Above Ground ( ) Below Ground ( ) Unknown
Tank Capacity: Facility Capacity:
Latitude Degrees:
Longitude Degrees:
Incident Address/Location:
Mile Post or River Mile:
Nearest City: State:
Distance from City: Direction in City:

Materials

Released Quantity: Unit of Measure: Released Material: Quantity in Water:

Remedial Action

Actions Taken to Correct or Mitigate Incident:

Impact

Number of Injuries: Number of Fatalities:
Were there Evacuations (Y/N/U)? Number Evacuated:
Was there any Damage (Y/N/U)? Damage in Dollars:
Medium Affected:

Additional Information

Any information about the incident not recorded elsewhere in the report:

Caller Notification

EPA State USCG Other DESC

* IT IS NOT NECESSARY TO WAIT FOR ALL INFORMATION BEFORE CALLING NRC

Follow-up Notifications: Follow-up notifications will be made whenever a significant change to the previous report occurs. The Incident Commander shall be responsible for ensuring that update notifications are made when appropriate. Such changes include, but are not limited to:

- Increase/decrease of environmental impact,
- Personnel injuries,
- Amount discharged, and
- Clean-up operations commenced/suspended.

When update notifications are made, the initial notification sheet shall be used to supply the background information (i.e. operator, date, time, location, etc.).

Time of Last Update: _____ Person Providing Update:_____
Update Notes: _____
_____
_____

Time of Last Update: _____ Person Providing Update:_____
Update Notes: _____
_____
_____

Time of Last Update: _____ Person Providing Update:_____
Update Notes: _____
_____
_____

Time of Last Update: _____ Person Providing Update:_____
Update Notes: _____
_____
_____

3.0 SPILL DETECTION AND ON-SCENE SPILL MITIGATION PROCEDURES

3.1 Methods of Initial Detection

(b) (7)(F)



If outside party damage or a physical split in the pipe would occur, the upstream station would automatically shutdown, due to low pressure mercroid controls.

If either of these situations would occur, the discharge tank and the receiving tank would be hand gauged. This is to verify that the line section is actually short and did not just appear to be short due to failure of a mechanical device (meter, automatic tank gauge).

If the receiving stations hand gauge verifies that the line section is actually short of product, the section would be walked to search for a discharge.

The pipeline is flown approximately every two weeks, but not to exceed three weeks, to try to discover any spills which cannot be detected by line monitoring. If a spill would be discovered, the pilot would contact us via telephone, reporting the location. We also use aerial surveillance as part of our damage prevention program.

The company's crude oil gathering trucks continually operate in the area of the pipeline and the drivers look for signs of spills or right-of-way violations.

Included in Appendix I is a description and initial detection methods of abnormal operating conditions.

Spills could also be reported by the general public since pipeline markers area at road crossings and other areas which could be likely areas for outside party damage. These signs are also at our gathering stations and have a toll free 24-hour emergency response telephone number for the Operations Control Center. The Operations Control Center is manned 24-hours a day, seven days a week. The Control Center has emergency contact information for all Q.I.s and line segment supervisors.

Since the construction of these pipelines, no spills or leaks have occurred, but every spill report will be investigated thoroughly. If the spill is discovered and did not result from the company's pipeline, Ohio Oil Gathering's spill response crew will do everything possible to stop the flow of oil and minimize environmental damage until the responsible party can be contacted.

3.2 Spill Response – Immediate Actions

The following section describes those activities to be performed by employees, until the Qualified Individual arrives on scene. All activities outlined herein are only to be performed with the safety of site personnel first.

Once Ohio Oil Gathering LLC is notified of a spill, the following steps will be taken:

1. Immediate shutdown of the pipeline section, if this has not occurred due to low pressure controls. Shut all valves that could eliminate flow to the location of the spill.

2. Notify Spill Response Coordinators with the information received on the leak/spill report.

3. Spill Response Coordinators will contact any or all of the employees on our emergency response team as the situation requires. If additional manpower or equipment is needed, the coordinator will contact Weavertown Environmental Group.

4. The first emergency response employee at the spill location will analyze the situation and take precautions to minimize the migration of the oil. Then, if possible, install a clamp on the pipe to eliminate any additional release, if oil is still leaking from the pipeline.

   Response Methods outlined in Appendix E will be initiated as appropriate for the type of water or land impacted by the spill. In general, if the spill is only on land, trenches, ditches, soil or straw dams will be constructed depending on the terrain to eliminate further migration of the oil and if the spill has reached flowing water, the spill response team will, in addition to digging trenches, find a location downstream from the existing location of the oil and construct a chicken wire/straw dam, siphon dam, or install a boom

with sufficient skirt for the current conditions. The type of response to any water spill will depend entirely on the size, depth, and speed of the water.

Once the Qualified Individual/Incident Commander is on site or receives a situation report from a person on site, a determination must be made if the spill is beyond the capabilities of the company's emergency response team, at his/her discretion, Weavertown Environmental Group can be contacted to respond.

Qualified Individuals Responsibilities:

- Identify the Incident Commander if other than Qualified Individual;
- Notify spill response personnel, if required; and
- Ensure safety of the site while initiating response activities.

Spill Response Responsibilities:

The Supervisor in charge should decide the best technique for recovery –

- Vacuum Truck – Very good for spills contained on land, has limitations if the spill is on water.
- Sorbents – Can be used to recover product on land or water. Sorbent materials are useful for final polishing of spills on land and small spills on water.
- Skimmers – Can be used to recover spilled product from the surface of water.
- Water Sprays – Can be used to direct product to recovery point.

3.3 Overall Response Strategy

During the initial response, the Incident Commander will receive situation reports from the Spill Response Coordinator at the actual spill site. Based on the information received, the Incident Commander will mobilize additional company personnel and/or equipment and also make the determination on calling in outside contractors.

All equipment, both owned and under contract, is maintained within the geographic region and would enable it to be onsite within 12 hours (tier 1) after notification (based on the Coast Guard travel speed of 35 MPH). A couple of the first decision factors to be considered are the types of water and land habitats impacted, and distance from the area effected by the spill to any environmentally sensitive areas as well as the distance to public or private drinking water sources. Other factors would include weather conditions (i.e. rain, snow, hot, etc.) and ground

conditions (i.e. frozen, dry, water saturated, etc.). Response Methods outlined in Appendix E will be initiated as appropriate for the type of water or land impacted by the spill. In general, during most land spills, a series of trenches are used to contain the spilled product. The trenches are normally lined with plastic on the bottom and along the outer wall, this allows the product to leach out of the soil and pool up in the trenches where it can be either vacuumed or pumped out into temporary storage containers until it can be placed into "frac tanks" or fixed storage tanks owned by the company. All contaminated soil will be removed and replaced and any debris will be placed in roll-off boxes for disposal along with the soil. When water (i.e. streams, creeks, runs, rivers, etc.) is involved, in general, the use of oil sorbent material (boom, pads) will be used as well as containment boom, as needed. Contaminated soil and debris would be removed and properly disposed of in accordance with federal and state regulations. If response methods are required that utilize equipment other than that owned by Ohio Oil Gathering, Weavertown Environmental Group will be contacted to response with appropriate equipment.

Ohio Oil Gathering LLC employs over 50 personnel that are trained in spill response. This number can be augmented with Weavertown Environmental Group personnel (over 100 trained responders). For spills requiring 24-hour cleanup effort, company and contractor personnel will be divided into groups with the majority of the available manpower assigned to daylight and a smaller workforce assigned to night time hours. The groups would work 12-hour shifts, normally from 7 to 7. Every effort will be made to ensure the right amount of equipment operators, laborers, health & safety, and supervisory personnel are assigned to each shift. The number of personnel available from Ohio Oil Gathering LLC and its contractor will ensure available manpower to not only work around the clock, but also sustain a 24-hour response for over a seven-day period.

3.4 Ohio Oil Gathering LLC's Spill Response Materials and Equipment

The following is a listing of materials and equipment that is strategically located at various locations along our pipeline systems throughout our Ohio and West Virginia pipeline. This is a tremendous aid in reducing the environmental impact of a spill by reducing the critical response time. It should be noted that most of the equipment is used on a daily basis to perform work on or for the pipeline and could be at any location along the pipeline at any given time. The average

response time for the initial response is less than two hours with the remainder of the response force arriving within four hours. Communications and response strategies are discussed in Section 4.

- 50 trained personnel,
- A Spill Response Trailer, stocked with emergency response supplies,
- Backhoes: Two Caterpillar 416, 4-wheel drive with extendible bucket,
- Bulldozers: John Deere 450,
- Two tractor/lowboy combinations to haul equipment and materials,
- Two Side x Side Gators to transport emergency response supplies,
- Forty pickups,
- One vacuum truck, six 90-barrel and six 160-barrel tank trucks with Roper gear pumps to be used to collect oil (capable of pumping 350 gallons per minute) and as portable storage,
- Supply of sorbent-C absorbent, sorbent pads, and sorbent slick bars,
- Supply of hay and straw for use as an absorbent and flow barriers,
- Supply of chicken wire for use in connection with the hay and straw in building dams across waterways to collect oil slick and/or film,
- Minimum of 600 feet of oil booms and/or slick bars, 500 feet of above, will be heavy current boom (8" float, 12" skirt),
- 2" and 3" portable pumps capable of pumping 316 gallons per minute and hoses for use in picking up oil in remote areas,
- Rakes, shovels, brooms, mops, steel drums, and other miscellaneous material used to mitigate oil spills,
- Miscellaneous diameters and lengths of pipe to create siphon dams on small streams,
- One 16-foot pontoon boat with a 25hp outboard motor, one 24-foot pontoon boat with a 115hp engine to use on navigable streams/rivers, and
- Various fire extinguishers.

3.5 Disposal

Crude oil that is removed from a spill location will be put into the tanks at the Bell's Run terminal or in frac tanks (portable 21,000 gallon tanks) under a subcontract with Weavertown Environmental Group. At any given time, over 150 frac tanks are available within five hours of notification and approximately 25 tanks can be onsite within three hours. The Weavertown Environmental Group location in Cecil, Pennsylvania normally maintains 4 frac tanks on site. Any water that is collected with the oil will be put into the crude oil tanks and be treated at the

wastewater treatment plant or disposal well. Ohio Oil Gathering LLC will arrange for the disposal and transportation of contaminated debris associated with cleanup procedures. All contaminated debris will be disposed at a licensed disposal facility.

3.6 Outside Equipment

Prior arrangements have been made with Finley Fire Equipment, located in McConnelsville, Ohio, to provide specialized assistance and equipment in case of fire. Finley is a distributor of specialized fire fighting equipment and keeps approximately 1,000-1,6000 gallons of "AFFF" foam in stock at all times.

Finley Fire Equipment
McConnelsville, Ohio
Telephone: (740) 962-4328
Emergency (24 hour): (800) 545-3280

Arrangements have also been made with Weavertown Environmental Group (WEG). WEG is a Coast Guard certified OSRO (number 0075). A complete list of WEG's personnel and equipment is in Appendix K. Currently, WEG holds the following USCG OSRO ratings. This rating is a based on the actual capabilities and equipment owned by WEG and does not include equipment owned by affiliated response organizations.

Pittsburgh port:	Class MM, W1, W2, W3 for River and Canal Environment Class MM rating for Inland Environment
Huntington port:	Class MM, W1, W2, W3 for River and Canal Environment Class MM rating for Inland Environment

WEG's contact information is as follows:

Weavertown Environmental Group (24 hour number) (800) 746-4850

WEG Office	**Address**
Carnegie, Pennsylvania (Corporate Office)	2 Dorrington Road Carnegie, PA 15106
East Liverpool, Ohio	101 Jackson St. East Liverpool, OH 43920

McDonald, Pennsylvania (Operations Office)	3866 Millers Run Road McDonald, PA 15057
Charleston, West Virginia	PO Box 713 Charleston, WV 25323
Ashland, Kentucky	12455 Paul Coffey Blvd. Ashland, KY 41102
Lock Haven, PA	61 Pine Mountain Road Lock Haven, PA 17745
New Philadelphia, OH	2741 Stonecreek Road SW New Philadelphia, OH 44663

4.0 RESPONSE ACTIVITIES

The following section describes those activities to be performed by employees, until the Qualified Individual arrives on scene. All activities outlined are only to be performed with the safety of site personnel first. If a discharge of crude oil occurs, the response strategies would be to protect all identified environmentally sensitive areas using a tactic combining the use of sorbent boom, containment boom, and intercept trenches dug with heavy equipment or by hand. To the extent possible, collection of the spilled oil will be at natural collection sites. Collection sites will be cleaned using vacuum units (trailers and trucks), pumps, as well as sorbents (pads and booms). All trenching will be lined with plastic sheeting to help prevent the spread of soil contamination. Communications between federal, state, and local authorities, as well as company personnel and contractors will be through the individual organization's own communication gear. A representative of each organization shall be located within the command post to ensure communication between organizations is timely and accurate. The overall strategy is to first secure or minimize the flow from the source, evaluate the area impacted by the discharge, and set containment. Once containment is set, cleanup operations can commence working from the outer areas to the source. To sustain night operations, light plants can be staged at various locations and response crews divided into shifts as explained in Section 3.

4.1 Initial Actions

Once Ohio Oil Gathering LLC is notified of a spill, the following steps will be taken:

1. Immediate shutdown of the pipeline section, if this has not occurred due to low pressure controls. Shut all valves that could eliminate flow to the location of the spill.
2. Notify Qualified Individual with the information received on the leak/spill report.
3. Qualified Individuals will contact any or all of the employees on our emergency response team as the situation requires. If additional manpower or equipment is needed, he will contact Weavertown Environmental Group.
4. The first emergency response employee at the spill location will analyze the situation and take precautions to minimize the migration of the oil. Then, if possible, install a clamp on the pipe to eliminate any additional release, if oil is still leaking from the pipeline. Response Methods outlined in Appendix E will be initialed as appropriate for the type of water or land impacted by the spill. In general, if the spill is only on land, trenches, ditches, soil or straw dams will be constructed depending on the terrain to eliminate further migration of the oil. If the spill has reached flowing water, the spill response team will find a location downstream from the existing location of the oil and construct a

chicken wire/straw dam, siphon dam, or deploy containment boom. The size, depth, and speed of the water will dictate which action is required.

4.1.1 Mobilization of Resources

The Supervisor in charge should decide the best technique for recovery and relay the information back to the command post. The command post should already have or be in the process of getting a listing showing the current location of available resources, equipment as well as personnel. If outside contractors are needed, the Incident Commander shall direct the command post to make the notification which should include the information contained in the spill report. The contractors should be told what type of equipment to respond with or to respond with the equipment based on their experience in similar situations. The following information should be used as a guideline when selecting equipment.

- Vacuum Truck – Very good for spills contained on land, has limitations if the spill is on water.
- Sorbents – Can be used to recover product on land or water. Best for use as final polishing of spills on land and small spills on water.
- Skimmers – Can be used to recover spilled product from the surface of water.
- Water Sprays – Can be used to direct product to recovery point.

4.2 Cleanup Techniques

Technique	Description	Primary Use	Requirements
Motor grader/ elevating scraper	Motor grader forms windrows for pickup by elevating scraper.	Used primarily on sand and gravel beaches where oil penetration is 0 to 3 cm, and trafficability of beach is good. Can also be used on mudflats.	Good trafficability. Heavy equipment access.
Elevating scraper	Elevating scraper picks up contaminated material directly off beach.	Used on sand and gravel beaches where oil penetration is 0 to 3 cm. Can also be used on mudflats. Also used to remove tar balls or flat patties from the surface of a beach.	Fair to good trafficability. Heavy equipment access.
Motor grader/front-end loader	MOTOR GRADER FORMS WINDROWS FOR PICKUP BY FRONT-END LOADER.	Used on gravel and sand beaches where oil penetration is less than 2 to 3 cm. This method is slower than using a motor grader and elevating scraper but can be used when elevating scrapers are not available. Can also be used on mudflats.	Fair to good trafficability. Heavy equipment access.

Technique	Description	Primary Use	Requirements
Front-end loader (rubber-tired or tracked)	Front-end loader picks up materials directly off beach and hauls it to unloading area.	Used on mud, sand or gravel beaches when oil penetration is moderate and oil contamination is light to moderate. Rubber-tired front-end loaders are preferred because they are faster and minimize the disturbance of the surface. Front-end loaders are the preferred choice for removing cobble sediments. If rubber-tired loader cannot operate, tracked loaders are the next choice. Can also be used to remove extensively oil-contaminated vegetation.	Fair to good trafficability for rubber-tire loader. Heavy equipment access.
Bulldozer/ rubber-tired front-end loader	Bulldozer pushes contaminated substrate into piles for pickup by front-end loader.	Used on coarse sand, gravel or cobble beaches where oil penetration is deep, oil contamination extensive and trafficability of the beach is poor. Can also be used to remove heavily oil contaminated vegetation.	Heavy equipment access. Fair to good trafficability for front-end loader.
Backhoe	Operates from top of a bank or a beach to remove contaminated sediments and loads into trucks.	Used to remove oil contaminated sediment (primarily mud or silt) on steep banks.	Heavy equipment access. Stable substrate at top of bank.
Dragline or clamshell	Operates from top of contaminated area to remove oiled sediments.	Used on sand, gravel or cobble beaches where trafficability is very poor (i.e., tracked equipment cannot operate) and oil contamination is extensive.	Heavy equipment access to operating area. Equipment reach covers contaminated area.
High pressure flushing (hydro-blasting)	High pressure water streams remove oil from substrate where it is channeled to recovery area.	Used to remove oil coatings from boulders, rock and man-made structures; preferred method of removing oil from these surfaces.	Light vehicular access. Recovery equipment.
Steam cleaning	Steam removes oil from substrate where it is channeled to recovery area.	Used to remove oil coatings from boulders, rocks and man-made structures.	Light vehicular access. Recovery equipment. Fresh water supply.

Technique	Description	Primary Use	Requirements
Sand-blasting	Sand moving at high velocity removes oil from substrate.	Used to remove thin accumulations of oil residue from man-made structures.	Light vehicular access. Oil must be semi-solid. Supply of clean sand.
Manual Scraping	Oil is scraped from substrate manually using hand tools.	Used to remove oil from lightly contaminated boulders, rocks and man-made structures or heavy oil accumulations when other techniques are not allowed.	Foot access. Scraping tools and disposal containers.
Sump and pump/ vacuum	Oil collects in sump as it moves down the beach and is removed by pump or vacuum truck.	Used on firm sand or mud beaches in the event of continuing oil contamination where sufficient longshore currents exist and on streams and rivers in conjunction with diversion booming.	Heavy equipment access. A long-shore current present.
Manual removal of oiled materials	Oiled sediments and debris are removed by hand, shovels, rakes, wheelbarrows, etc.	Used on mud, sand, gravel and cobble beaches when oil contamination is light or sporadic and oil penetration is slight or on beaches where access for heavy equipment is not available.	Foot or light vehicular access.
Low pressure flushing	Low pressure water spray flushes oil from substrate where it is channeled to recovery points.	Used to flush light oils that are not sticky from lightly contaminated mud substrates, cobbles, boulders, rocks, man-made structures and vegetation.	Light vehicular access. Recovery equipment.
Beach cleaner	Pulled by tractor or self-propelled across beach, picking up tar balls or patties.	Used on sand or gravel beaches, lightly contaminated with oil in the form of hard patties or tar balls.	Moderate to heavy vehicular access. Good trafficability.
Manual sorbent application	Sorbents are applied manually to contaminated areas to soak up oil.	Used to remove pools of light, nonsticky oil from mud, boulders, rocks and manmade structures.	Foot or boat access. Disposal containers for sorbents.
Manual Cutting	Oiled vegetation is cut by hand, collected and stuffed into bags or containers for disposal.	Used on oil contaminated vegetation.	Foot or boat access. Cutting tools.

Technique	Description	Primary Use	Requirements
Burning	Upwind end of contaminated area is ignited and allowed to burn to down-wind end.	Used on any substrate or vegetation where sufficient oil has collected to sustain ignition; if oil is a type that will support ignition and air pollution regulations so allow.	Light vehicular or boat access. Fire control equipment.
Vacuum trucks	Truck is backed up to oil pool or recovery site where oil is picked up via the vacuum hose.	Used to pick up oil on shorelines where pools of oil have formed in natural depressions, or in the absence of skimming equipment to recover floating oil from the water surface.	Heavy equipment access. Large enough pools on land or thick enough oil on water for technique to be effective.
Push contaminated substrate into surf	Bulldozer pushes contaminated substrate into surf zone to accelerate natural cleaning.	Used on contaminated cobble and lightly contaminated gravel beaches where removal of sediments may cause erosion of the beach or backshore area.	Heavy equipment access. High energy shoreline.
Breaking up pavement	Tractor fitted with a ripper is operated up and down beach.	Used on low amenity cobble, gravel or sand beaches or beaches where substrate removal will cause erosion where thick layers of oil have created a pavement on the beach surface.	Heavy equipment access. High energy shoreline.
Disc into substrate	Tractor pulls discing equipment along contaminated area.	Used on nonrecreational sand or gravel beaches that are lightly contaminated.	Heavy equipment access. Fair to good trafficability. High energy environment.
Natural recovery	No action taken. Oil left to degrade naturally.	Used for oil contamination on high energy beaches (primarily cobble, boulder and rock) where wave action will remove most oil contamination in a short period of time.	Exposed high energy environment.

4.3 Incident Command Structure

The Ohio Oil Gathering LLC, along with the company's response team and contractors, is capable of managing a response to all spills up to and including the worst case discharge. Upon activation of the company's Qualified Individual, the Qualified Individual assumes full command of all response resources and activities relevant to the discharge. Ohio Oil Gathering's response organization will utilize the Incident Command Structure (ICS) as required by the

HAZWOPER Standard. Using this structure will ensure all Ohio Oil Gathering LLC response personnel, spill response contractors, and agency representatives are coordinating the response effort. Only positions that are required for an adequate response need to be filled, and organizations may be kept as small as possible to accomplish incident objectives and monitor progress. This plan is designed to be consistent with both the National Contingency Plan (NCP) and the Area Contingency Plans (ACPs) which designates the coordination and responsibilities between the responsible party and the Federal On-Scene Coordinator (FOSC). The FOSC is the federal official pre-designated to coordinate and direct federal removal efforts at the scene of an oil or hazardous substance discharge or a threat of such discharge. The agencies designated as FOSC's are the United States Coast Guard and the U.S. Environmental Protection Agency (EPA) Regions III and V, and their contractors.

The ICS allows all agencies with responsibility for the incident, either geographic or functional, to manage an incident by establishing a common set of incident objectives and strategies. The ICS allows for all involved agencies contribute to the command process by:

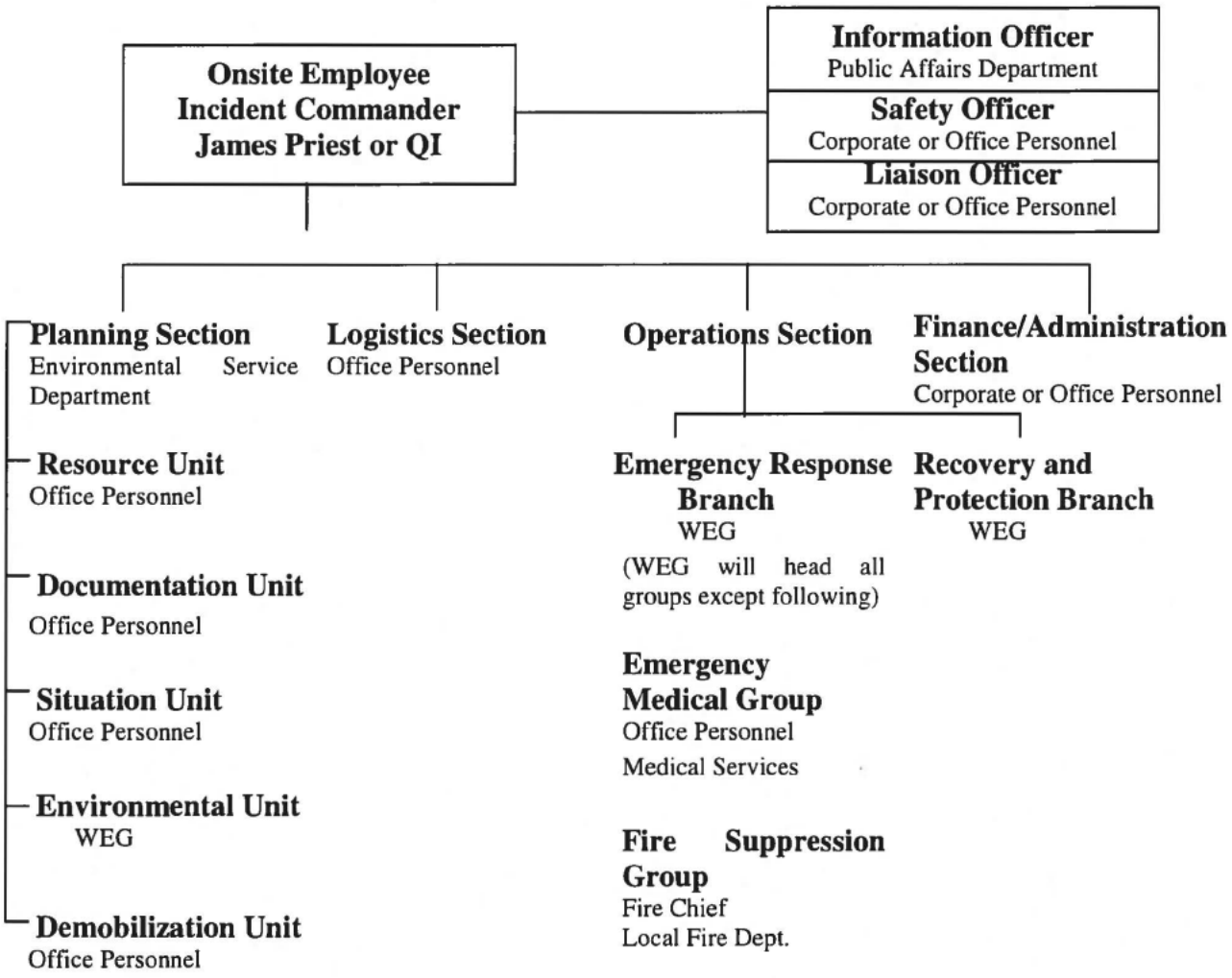
- Determining overall objectives
- Planning jointly for operational activities while conducting integrated operations
- Maximizing the use of all assigned resources

Under the ICS, the following always apply:

- The incident functions under a single, coordinated Incident Action Plan
- One Operations Section Chief has responsibility for implementing the Incident Action Plan

As indicated above, Ohio Oil Gathering LLC will coordinate all response activities with the FOSC and other federal, state, and local regulatory agencies and other parties. However, Ohio Oil Gathering LLC remains in command of all response activities. The ICS will be formed by Ohio Oil's Incident Commander. It is understood that the federal authorities have the authority to assume the role of Incident Command if it is determined that the "responsible party" is not addressing the spill response adequately. The following full incident command structure will be implemented in the event of a worse case discharge.

Ohio Oil Gathering LLC
INCIDENT COMMANT STRUCTURE



Qualified Individual

As defined in 49 CFR 194.5, the Qualified Individuals listed in this plan speak English and are available on a 24 hour basis. All Qualified Individuals have full authority to activate company personnel and equipment as needed in the event of a discharge. In addition, they also have the authority to hire outside contractors they feel are necessary.

Incident Commander

The command function is directed by the Incident Commander, who is the person in charge at the incident, and who is fully qualified to manage the response. They are the listed "Qualified Individual" and have the authority as described in 49 CFR Section 194.5 during a release. The

Incident Commander will work closely with federal, state, and local authorities to ensure the proper course of actions are being taken and that all their concerns are addressed. It is understood that the federal authorities have the authority to assume the role of Incident Command if it is determined that the "responsible party" is not addressing the spill response adequately. Major responsibilities for the Incident Commander include:

- Performing command activities, such as establishing command and establishing the response strategy
- Protecting life and property
- Controlling personnel and equipment resources
- Maintaining accountability for responder and public safety, as well as for task accomplishment
- Establishing and maintaining an effective liaison with outside agencies and organizations, including the FOSC, when it is activated
- Ensuring responder safety
- Assessing incident priorities
- Determining operational objectives
- Developing an appropriate organizational structure
- Maintaining a manageable span of control
- Managing incident resources
- Coordinating overall emergency activities
- Coordinating the activities of outside agencies
- Authorizing the release of information to the media
- Keeping track of costs
- Ensuring proper documentation is maintained in accordance with the National Interagency Incident Management System (NIIMS) forms by himself or appropriate designation officers or section chiefs (included in Appendix J)

The Incident Commander will also ensure that the ICS structure includes, as appropriate for the emergency:

- Common terminology (plain-English radio codes, area-wide standards for unit IDs)

- A modular organization
- Integrated communications (hand held radio, common frequencies, radio patch capability)
- Unity of command
- A unified command structure
- Consolidated Incident Action Plans
- A manageable span of control
- Designated incident facilities (alternate, mobile or consolidated comm centers)
- Comprehensive resource management

Initially, the Incident Commander will be the senior first-responder to arrive at the scene. As additional responders arrive, command will transfer on the basis of who has primary authority for overall control of the incident. As incidents grow in size or become more complex, the responsible jurisdiction or agency may assign a more highly qualified Incident Commander. At transfer of command, the outgoing Incident Commander must give the incoming Incident Commander a full briefing and notify all staff of the change in command.

As incidents grow, the Incident Commander may delegate authority for performing certain activities to others, as required. When expansion is required, the Incident Commander will establish other Command Staff positions: Information Officer, Safety Officer, Liaison Officer.

- The **Information Officer** handles all media inquiries and coordinates the release of information to the media with the Public Affairs Officer at the EOC. This position will be solely performed by the Ohio Oil Gathering's Public Affairs Department.
- The **Safety Officer** monitors safety conditions and develops measures for ensuring the safety of all assigned personnel. The Safety Officer is responsible for the overall safety of all control, mitigation and remediation activities. The Safety Officer has the authority to alter, suspend, or terminate any activities deemed unsafe or uncertain. This will include such items as suspending or terminating deployment of containment boom if the water current is too swift or there are indications of fast rising waters or limited visibility. The safety officer also is responsible for disseminating information concerning the hazards of the

released materials to the response groups and ensuring the safety of all personnel during firefighting operations, and releases of hazardous materials. Decontamination, triage and emergency medical assistance is the Safety Officers responsibility.

- The **Liaison Officer** is the on-scene contact for other agencies assigned to the incident. The Liaison Officer will assist the Incident Commander in those matters relating to regulatory issues and the environment and will ensure that information concerning spills, releases or other events having environmental impact is gathered and recorded.

The Incident Commander will base the decision to expand (or contract) the ICS organization on three major incident priorities:

- **Life safety**. The Incident Commander's first priority is always the life safety of the emergency responders and the public.
- **Incident stability**. The Incident Commander is responsible for determining the strategy that will:
    - Minimize the effect that the incident may have on the surrounding area.
    - Maximize the response effort while using resources efficiently.
    - The size and complexity of the command system that the Incident Commander develops should be in keeping with the complexity (i.e., level of difficulty in the response) of the incident, not the size (which is based on geographic area or number of resources).

- **Property conservation**. The Incident Commander is responsible for minimizing damage to property while achieving the incident objectives. As incidents become more involved, the Incident Commander can activate additional General Staff sections (that is, Planning, Operations, Logistics, and/or Finance/Administration), as necessary.

Planning Section

In smaller events, the Incident Commander is responsible for planning, but when the incident is of larger scale, the Incident Commander establishes the Planning Section. The Planning Section's function includes the collection, evaluation, dissemination, and use of information about the development of the incident and status of resources. The Planning Section will provide for an

inventory of materials used during the response operations and for the retrieving of materials not readily accessible to emergency response personnel. The Planning Section will also be responsible for noting all communications (written and verbal) and activities that occur during an emergency operation. This would include noting who was on-scene, who was notified, and the time in which they arrived or were notified.

This section's responsibilities can also include creation of the Incident Action Plan (Incident Action Plan), which defines the response activities and resource utilization for a specified time period. The decision to have a written Incident Action Plan is made by the Incident Commander. ICS requires written plans whenever:

- Resources from multiple agencies are used
- Several jurisdictions are involved
- The incident is complex (e.g., changes in shifts of personnel or equipment are required)

Operations Section

The Operations Section is responsible for carrying out the response activities described in the Incident Action Plan. The Operations Section Chief coordinates Operations Section activities and has primary responsibility for receiving and implementing the Incident Action Plan. The Operations Section Chief reports to the Incident Commander and determines the required resources and organizational structure within the Operations Section. Reporting to the Operations Section Chief will be individuals responsible for land spill response activities (facility personnel and contractor), water spill response activities (contractor) and fire suppression (community Fire Chief).

The Operations Section Chief's main responsibilities are to:

- Direct and coordinate all operations, ensuring the safety of Operations Section personnel
- Assist the Incident Commander in developing response goals and objectives for the incident
- Implement the Incident Action Plan
- Request (or release) resources through the Incident Commander

- Keep the Incident Commander informed of situation and resource status within operations
- The section chief will require the Fire Suppression Group (the community Fire Chief) to be responsible for all fire suppression activities. This would include providing adequate water supply, breathing air supply, and the necessary water movement equipment to extinguish or control fires that occur on the facility.

Logistics Section

The Logistics Section is responsible for providing facilities, services, and materials, including personnel to operate the requested equipment for the incident. This section takes on great significance in long-term or extended operations. It is important to note that the Logistics Section functions are geared to support the incident responders. Logistics will be the responsibility of the Environmental Service Department.

Finance Section

The Finance Section will have the authority to dispense company resources and funds necessary to control and mitigate the release. The Finance Section must work with the other officers to ensure a complete list of response decisions, activities and costs is maintained. The Finance Section is critical for tracking incident costs and reimbursement accounting.

4.4 Response Resources

Ohio Oil Gathering LLC will utilize Weavertown Environmental Group (WEG), a division of Weavertown Transport Leasing, Inc., as the primary Oil Spill Response Organization. WEG will be contacted if additional personnel and equipment are required to contain and cleanup a release. In addition, if response methods are required that utilizes equipment other than that owned by Ohio Oil Gathering, WEG will be contacted to response with appropriate equipment. WEG's capabilities are provided in Appendix K.

4.5 Communications Plan

COMMAND POST

In the event of a release of a regulated material(s), a Command Post will be established and maintained throughout the emergency so as to facilitate:

- The creation of a tightly structured Incident Command System
- The flow of information needed for informed and coherent decision making and planning
- The flow of accurate and timely information to government agencies and the news media
- Centralized accounting and documentation procedures.

The scope and purpose of the Command Post is to:

- Establish meeting schedules, participants, and responsibilities for reporting
- Determine the extent, nature of the release and subsequent damages
- Identify roles for interface with the public, government, and media
- Develop a public relations plan, initial press statements/briefings
- Establish strategic objectives and response priorities
- Establish a communications network
- Establish a procedure for handling questions/requests from the public.

LOCATION OF COMMAND POST

The location of the Command Post in the event of a release of a material at Bells Run Terminal will be the Office Building. This location has the following equipment that may be used in the event of an emergency:

- adequate parking for Command Post personnel
- landline telephones
- portable and base radios
- office supplies and other materials that may be needed for clerical support
- reference materials:
    - topographical and river maps of area
    - facility/operation plot plan
    - Emergency response plans (SARA Off Site Response Plan; Spill Prevention Control and Countermeasures Plan; Fire and Emergency Plan; Oil Pollution Act Facility Response Plan; other required response plan)

- contact phone numbers
- phone directories for local area

For releases that occur along the pipeline, a command post can be set up at the nearest pumping station. Equipment from the Bell's Run Terminal and the nearest WEG office can be quickly dispatched to the location.

LINES OF COMMUNICATION

Overall spill response and planning communications between Ohio Oil Gathering personnel and government agencies on the Federal Regional Response Team (RRT) will occur formally between the Incident Commander and the Federal On-Scene Coordinator (USCG).

For internal communications, all personnel have cell phones with stored company contact information. Company pick-up trucks are equipped with computer workpads, providing capabilities for email and messaging. Each gathering station is equipped with a computer with internet service.

External communication used for summoning emergency assistance (County Communications Center, Fire or Police Departments) can be made by landline telephone or cell phones. Eternal communication for remote areas of response outside the plant will be accomplished through the use cellular phones. In addition, the communications equipment of the Response Contractor, WEG listed below can be utilized:

20 - Portable radios private two frequency channel: 438.00 & 470.00
3 - Mobile radio systems: 22 channel low band frequencies in both 30-40 mhz band and 40-50 mhz band; 22 channel high band frequency; and 22 channel ultra-high band frequency
119 - Cellular telephones
1 - Cellular telephone on the Sea Ark
5 - Marine band radios (2 portable)

On-Board Computers with Modem, CAMEO Software and FAX

5.0 LIST OF CONTACTS

5.1 Federal, State, and Local Agencies

The following governmental agencies will be notified in the event of a spill by the spill response coordinators and the notification checklist completed:

National Response Center (U.S. Coast Guard)	**1-800-424-8802**
Ohio EPA (Emergency Response)	1-800-282-9378
Ohio EPA	1-740-644-3020

Respective County Disaster Services Coordinators:

Holmes County LEPC
Gary Mellor – EMA Director
Holmes County EMA
3 Court Street, Ste. 11
Millersburg, OH 44654
1-330-674-0989 (day)
1-330-674-1936 (24 hour)

Morgan County LEPC
Terry Robison – EMA Director
Morgan County EMA
60 S. Fourth Street
McConnellsville, OH 43756
1-740-962-2424 (day)
1-740-962-4044 (24 hour)

Coshocton County LEPC
James Van Horn – EMA Coordinator
Coshocton County EMA
724 S. Seventh Street
Coshocton, OH 43812
1-740-622-1984 (day)
1-740-622-2411 (24 hour)

Washington County LEPC
Jeff Lauer - Coordinator
Washington County LEPC
205 Putnam Street
Marietta, OH 45750
1-740-373-5613 (day)
1-740-373-2833 (24 hour)

Muskingum County LEPC
Bo Keck – EMA Coordinator
Muskingum County EMA
2215 Adamsville Rd.
Zanesville, OH 43701
1-740-453-1655 (day)
1-740-452-3637 (24 hour)

Perry County LEPC
Rita Spicer – EMA Coordinator
Perry County EMA
121 W. Brown St., PO Box 657
New Lexington, OH 43764
1-740-342-1141 (day)
1-740-342-4123 (24 hour)

Licking County LEPC
Jeff Walker- EMA Director
Licking County EMA
155 E. Main Street
Newark, OH 43055
1-740-349-6437 (day)
1-740-345-2345 (24 hour)

Hocking County LEPC
Susan Rauber- EMA Director
Hocking County EMA
52 East Second Street
Logan, OH 43138
1-740-385-6168 (day)
1-740-385-3000 (24 hour)

Departments and Emergency Squads to cover respective area of pipeline:

HOLMES COUNTY

Fire and Emergency
Killbuck Township
Killbuck Volunteer Fire Department F/S – 911 (non-emergency: (330) 276-0441)

Holmes County Sheriff – 911 **(non-emergency: (330) 674-1936)**

COSHOCTON COUNTY

Fire and Emergency
Monroe Township
Walhonding Valley Fire Department F/S – 911 (non-emergency: (740) 622-2411)

Clark Township
Walhonding Valley Fire Department F/S – 911 (non-emergency: (740) 622-2411)

Jefferson Township
Walhonding Valley Fire Department F/S – 911 (non-emergency: (740) 622-2411)

Bedford Township
Walhonding Valley Fire Department F/S – 911 (non-emergency: (740) 622-2411)

Pike Township
Walhonding Valley Fire Department F/S – 911 (non-emergency: (740) 622-2411)

Coshocton County Sheriff – 911 or (330) 339-2000 **(non-emergency: (330) 339-7743)**

PERRY COUNTY

Fire and Emergency
Pleasant Township "Northwest"
New Lexington Fire Department F/S Fire – 911 (non-emergency: (740) 342-4111)

Pleasant Township "Southeast"
Corning Fire Department F/S – 911 (non-emergency: (740) 342-4123)

Salt Lick Township
Shawnee Fire Department F/S – 911 (non-emergency: (740) 394-2900)
New Straitsville Fire Department F/S – 911 (non-emergency: (740) 394-2400)

Coal Township
New Straitsville Fire Department F/S – 911 (non-emergency: (740) 394-2400)
Hocking County Emergency Medical Services S/ - 911 (non-emergency: (740) 385-3000)

Perry County Sheriff – (740) 342-4123

HOCKING COUNTY

Fire and Emergency

Ward Township	
Ward Township Fire Department F/ - 911	(b) (6)
Hocking County Emergency Medical Service S/ - 911	(non-emergency: (740) 385-8569)
Green Township	
Logan City Fire Department F/ - 911	(non-emergency: (740) 385-2307)
Hocking County Emergency Medical Service S/ - 911	(non-emergency: (740) 385-8568)
Starr Township "West ½"	
Starr Township Fire Department F/ - 911	(b) (6)
Hocking County Emergency Medical Service S/ - 911	(non-emergency: (740) 385-8568)
Starr Township "East ½"	
Ward Township Fire Department F/ - 911	(b) (6)
Hocking County Emergency Medical Service S/ - 911	(non-emergency: (740) 385-8568)

Hocking County Sheriff – (740) 385-2131

ATHENS COUNTY

Fire and Emergency

Trimble Township	
Glouster Fire Department F/S – 911	(non-emergency: (740) 767-3551)

Athens County Sheriff – (740) 593-6633

MORGAN COUNTY

Fire and Emergency

Homer Township	
Chesterhill Fire Department F/S – 911	(non-emergency: (740) 554-6801)
Marion Township	
Chesterhill Fire Department F/S – 911	(non-emergency: (740) 962-2222)
Windsor Township	
Stockport Fire Department F/S – 911	(non-emergency: (740) 559-2311)

Morgan County Sheriff – 911 **(non-emergency: (740) 962-3333)**

WASHINGTON COUNTY

Fire and Emergency

Wesley Township
Wesley Township Fire Department F/ (740) 373-2833 (non-emergency: (740) 551-2028)
Chesterhill Fire Department F/S – (740) 373-2833 (non-emergency: (740) 554-6801)

Watertown Township
Beverly Fire Department F/S – (740) 373-2833 (non-emergency: (740) 984-2252)

Adams Township
Lowell Fire Department F/S – (740) 373-2833 (non-emergency: (740) 896-3110)

Muskingham Township
Devola Fire Department F/S – (740) 373-2833 (non-emergency: (740) 374-7369)

Fearing Township
Fearing Township Fire Department F/S – (740) 373-2833 (non-emergency: (740) 373-0742)

Marietta Township
Reno Fire Department F/S – (740) 373-2833 (non-emergency: (740) 373-9800)

Newport Township
Newport Fire Department F/S – (740) 373-2833 (non-emergency: (740) 473-1506)

Washington County Sheriff – (740) 373-2833 (non-emergency: (740) 376-7070 ext. 0)

* F/S denotes Fire Department and Emergency Squad
F/ denotes Fire Department only
S/ denotes Emergency Squad only

5.2 Qualified Individuals – Spill Response Coordinators

Employee	Cell Telephone #	Office #	(b) (6)
Jeffrey Watson	(740) 328-5829	(740) 828-3929	(b) (6)
Thomas Moran	(740) 624-0827	(740) 828-3929	(b) (6)
James Priest	(740) 828-3929	(740) 828-3929	(b) (6)

5.3 Response Resources

Finely Fire Equipment
McConnelsville, Ohio
Business Telephone (740) 962-4328
24 Hour Response # (800) 545-5237

Weavertown Environmental Group
2 Dorrington Road
Carnegie, Pennsylvania 1515106
24 Hour Response # (800) 746-4850

6.0 TRAINING PROCEDURES

6.1 General Pipeline Employee Training Procedures

Training will be conducted to ensure the following in accordance with 49 CFR 194.117. This training maybe conducted separately or as part of the training described in the remainder of Section 6.

1. All personnel know:
   (i) Their responsibilities under the response plan;
   (ii) The name and address of, and the procedure for contacting, the operator on a 24-hour basis; and
   (iii) The name of, and procedures for contacting, the qualified individual on a 24-hour basis.
2. Reporting personnel know:
   (i) The content of the information summary of the response plan;
   (ii) The toll-free telephone number of the National Response Center; and
   (iii) The notification process.
3. Personnel engaged in response activities know:
   (i) The characteristics and hazards of the oil discharged;
   (ii) The conditions that are likely to worsen emergencies, including the consequences of facility malfunctions or failures, and the appropriate corrective actions;
   (iii) The steps necessary to control any accidental discharge of oil and to minimize the potential for fire, explosion, toxicity, or environmental damage; and
   (iv) The proper firefighting procedures and use of equipment, fire suits, and breathing apparatus.

6.2 Company Training Procedures

Due to the continuous updating in spill response changes, Ohio Oil Gathering LLC has had numerous employees attend various seminars dealing with various aspects of on-land and inland oil cleanup procedures and technology.

Required employees have acquired the mandated Commercial Drivers License with the following endorsements:

- Hazardous Materials,
- Tanker,
- Air Brakes, and
- Combination Unit.

During routing safety meetings, employees review and discuss various topics and procedures dealing with oil spill cleanup.

All response employees have reviewed the following areas as listed on the Material Safety Data Sheet covering petroleum crude oil:

- NFPA Hazard Identification,
- Hazardous Ingredients/Identify Information,
- Physical/Chemical Characteristics,
- Fire and Explosion Hazard Data,
- Reactivity Data,
- Health Hazard Data,
- Precautions for Safe Handling and Use, and
- Control Measures.

All employees associated with crude oil handling and transportation have acquired mandated HM-126F training as mandated by the Department of Transportation.

Ohio Oil Gathering LLC conducts training drills with individuals that are responsible for the complete and successful implementation of the OPA Plan. All training and drills are conducted in compliance with the PREP guidelines.

Response team members are trained in accordance with 29 CFR 1910.120, paragraph q. Team members and contractors receive training in addition to the training specified in the HAZWOPER Standard.

Annual training includes a minimum of 8-hour Hazardous Materials First Responder Operational Level with supervisors, managers, and safety officers having annual 24-hour Hazardous

Materials Technician Level Training, and the Incident Commander having an additional 8-hour Hazardous Materials Incident Commander Level Training or refresher training annually.

6.2.1 Operations Level

Eight hour operation level training is provided to all individuals that must be competent to perform the following tasks:

- Basic hazard and risk assessment,
- Select and use personal protective equipment,
- Understand basic hazardous materials terms and definitions,
- Implement basic decontamination procedures, and
- Understand standard operating and terminating procedures.

To meet this requirement, OSHA requires that operations level training include the following topics:

- Regulatory Overview,
- Discharge Control,
- Hazard Recognition,
- Notification Protocols,
- Incident Response Plan and Process,
- Personal Protection,
- Hazard Assessment, and
- Decontamination.

6.2.2 Technician Level

Twenty-four hour technician level training is provided to individuals that must be competent of the following tasks:

- Implement the employer's emergency response plan,
- Classify, identify, and verify materials by using field survey instruments and equipment,
- Function within an assigned role in the Incident Command System,
- Select and use proper chemical protective equipment,
- Understand hazard and risk assessment,
- Perform control, containment, and confinement operations,

- Understand and implement decontamination procedures,
- Understand termination procedures, and
- Understand basic chemical and toxicological terminology and behavior.

OSHA requires that technician level employees receive training in the following areas:

- Regulatory Overview,
- Incident Command System,
- Hazard Recognition,
- Control Procedures,
- Incident Response Process,
- Site Control,
- Personal Protection, and
- Hazard Assessment.

6.2.3 Incident Commander Level

Eight-hour Incident Commander level training is provided to individuals that must be competent of the following tasks:

- Implement the Incident Command System,
- Implement the OPA Plan,
- Assume control of the incident,
- Understand the hazards and risks associated with individuals working with or in hazardous materials,
- Know how to implement the local emergency response plan, and
- Know of the State Emergency Response Plan and the Federal Regional Response Team.

Training for Incident Commanders includes the following requirements:

- 24-hour training equal to the operations level,
- Implementing the Incident Command System,
- Implementing the OPA Plan,
- Hazard and risk assessment, and
- Federal, State, and Local Emergency Response Plans.

Responders that perform tasks for land or water responses have Ohio Oil Gathering Response Plan (FRP) Inland Spill Response training. This training will include some or all of the following elements depending on individual responsibilities:

- Site FRP,
- Initial response actions,
- Properties that affect product recovery,
- Containment of product on surface waters,
- Containment of product on land,
- Shoreline protection and restoration,
- Response capabilities of contractors,
- Treatment of spills,
- Containment and recovery of subsurface product spills,
- The affect of weather on spills, and
- General and construction industry standards.

Additionally, employees and contractors that will be engaged in product spill to water receive specific training on the following items:

- Task training on operations to be performed on water craft, including safe boat embarkment and disembarkment, casting off, docking, safe work practices, crew responsibility, boom deployment, standard communications, and principles of navigation. Also, crewmembers must be knowledgeable in the use of emergency or contingency equipment and plans,
- Use of personal flotation devices, and
- Task training on operations to be performed on shore, including knowledge of safe working practices on elevated surfaces over water, and use of personal flotation devices.

6.3 Qualified Individual Training Requirements

The Qualified Individual and alternates receive training to implement and manage operation conducted under the OPA Plan. To accomplish this, the Qualified Individual must be thoroughly familiar with all elements within this plan including:

- Site Operations,
- Response activities on land and water,
- Site safety and health,
- Notification procedures,
- Incident Command System,
- Contractor management, and
- Training and drill requirements.

6.4 Documentation Requirements

Certificates of qualification or training will be documented and maintained on file at the Black Run office, located in Nashport, Ohio. Certificates will be filed in team member's individual training file. Training files will be maintained for a minimum of three years and for as long as a member has an assigned duty in the response plan. All training documentation will be made available to RSPA upon request.

Under certain circumstances, training requirements may be waived for individuals that provide a necessary function or have a needed skill. In these cases, the Qualified Individual will be notified and will either approve or disapprove of the individual's participation in response activities. If the individual is approved, they will be briefed on the hazards associated with the response by the Safety Officer. Additionally, they will be required to review and sign the health and safety plan.

Certificates of qualifications and/or training, as well as instructor certificates, for WEG personnel will be documented and maintained on file at the Weavertown Transport Leasing office located in Cecil, Pennsylvania. Certificates will be filed in team member's individual training and/or personnel file. Training files will be maintained for a period of at least three years.

All training will be performed by qualified individuals with documented education or experience in the course material presented. Certificates of qualifications and/or training as well as instructor certificates will be maintained by their parent company and made available to Ohio Oil Gathering and/or RSPA upon request.

7.0 DRILL PROCEDURES

Ohio Oil Gathering LLC conducts both announced and unannounced drills in accordance with the PREP guidelines. All drills will be documented and all documentation will be held for a period of at least three years. All documentation will be made available to RSPA upon request. Mr. Steve Cunningham will be responsible to ensure that all training is carried out and properly documented.

7.1 Quarterly Notification Drills

A Qualified Individual (QI) Notification Drill will be conducted once a quarter (four times a year), twelve (12) times triennially. The purpose of the drill is to ensure that the QI is able to be reached in a spill response emergency and to verify emergency phone numbers. Contact must be made with the QI, and confirmation received to satisfy the requirements of the drill.

Drills are also required quarterly for manned pipeline emergency procedures and emergency actions of assigned operating and/or maintenance personnel on the pipeline facilities which are normally unmanned. The purpose of these drills is to ensure that the operating and maintenance personnel are able to be reached and respond in emergency situations.

7.2 Semi-Annual

The Spill Response Coordinator, upon notification of a semi-annual simulated spill, will contact the members of the Spill Response Team.

The Control Center, on unannounced simulated semi-annual spills, will activate remote emergency pipeline shutdown procedures for the respective line section. The Control Center, on unannounced simulated semi-annual spills, will also activate manual emergency pipeline shutdown procedures for the respective line section.

Equipment Deployment

Response equipment not normally used in the normal course of business will be deployed semi-annually. As a minimum, the following equipment will be deployed and operated:

- 1,000 feet of solid log flotation boom,
- One of each type of skimming system, and
- Company owned response boats.

The amount of boom deployed will be that required to respond to an average most probable discharge. Certifications by the contracted Oil Spill Response Organization of obtaining the required equipment deployment will be maintained.

7.3 Annual

The Ohio Oil Gathering LLC provides spill emergency response for crude oil producers in our operating area, and we are listed as a spill response contractor by the Ohio EPA. This provides our employees with continual training for crude oil spill response, providing a high level of competence, which cannot be obtained through drills. All responses by Ohio Oil Gathering LLC personnel will be counted towards their annual training requirements. In the event that Ohio Oil Gathering's personnel have not responded to a crude oil spill within the past year, an annual exercise involving field equipment deployment will be conducted.

Tabletop

A tabletop exercise involving the Spill Management Team will be conducted annually. At least one tabletop exercise, in a three-year period, will include worse case discharge.

Unannounced Exercises

At least annually, one of the above mentioned drills will be an unannounced exercise. Every three years, the unannounced drill will include an equipment deployment.

7.4 Triennial Exercise

The following components will be exercised at least once every three years by Ohio Oil Gathering LLC:

Organizational Design

- Notifications
- Staff Mobilization
- Ability to operate within the response management system described in the plan

Operational Response

- Discharge control
- Assessment of discharge
- Containment of discharge
- Recovery of spilled material
- Protection of environmentally and economically sensitive areas
- Disposal of recovered product

Response Support

- Communications
- Transportation
- Personnel support
- Equipment maintenance and support
- Procurement
- Documentation

In the triennial cycle, the following internal exercises will be conducted:

- Twelve (12) QI Notification Drills
- Three (3) Spill Management Team Tabletop Exercises
- Three (3) Unannounced Exercises (one will be an equipment deployment)
- Six (6) Facility Owned Equipment Deployment Exercises
- Three (3) OSRO Equipment Deployment Exercises

Equipment Testing

Due to the nature of Ohio Oil Gathering LLC's operation, all of the mechanical equipment which will be used for spill response does not require testing since it is used frequently in routine operations except:

- Boats run and containment boom deployed semi-annually.
- Fire extinguishers: Checked monthly in accordance with current NFPA standards.
- Portable pumps: Started at least semi-annually.

The company maintenance supervisor, in the Blacks Run maintenance depot, is responsible to ensure all of the required maintenance is performed on all company equipment in accordance with the manufacturer's recommendations for the piece of equipment.

RESPONSE EQUIPMENT INSPECTION LOG

INSPECTOR	DATE	COMMENTS

8.0 PLAN REVIEW AND UPDATE

8.1 Plan Review

This response plan shall be reviewed at least every five years from the previous RSPA plan approval date and after any worst case discharge to evaluate and determine the plan's effectiveness. Any part of the plan that is determined ineffective shall be changed. This review shall be conducted by our Spill Response Coordinators and Safety Administrator, after discussion with the Emergency Response Team. After review and updates, if required, the plan will be resubmitted to RSPA for approval. As stated above, the plan will be resubmitted to RSPA after facility review at least every five years from the previous plan approval date.

8.2 Plan Updating Procedures

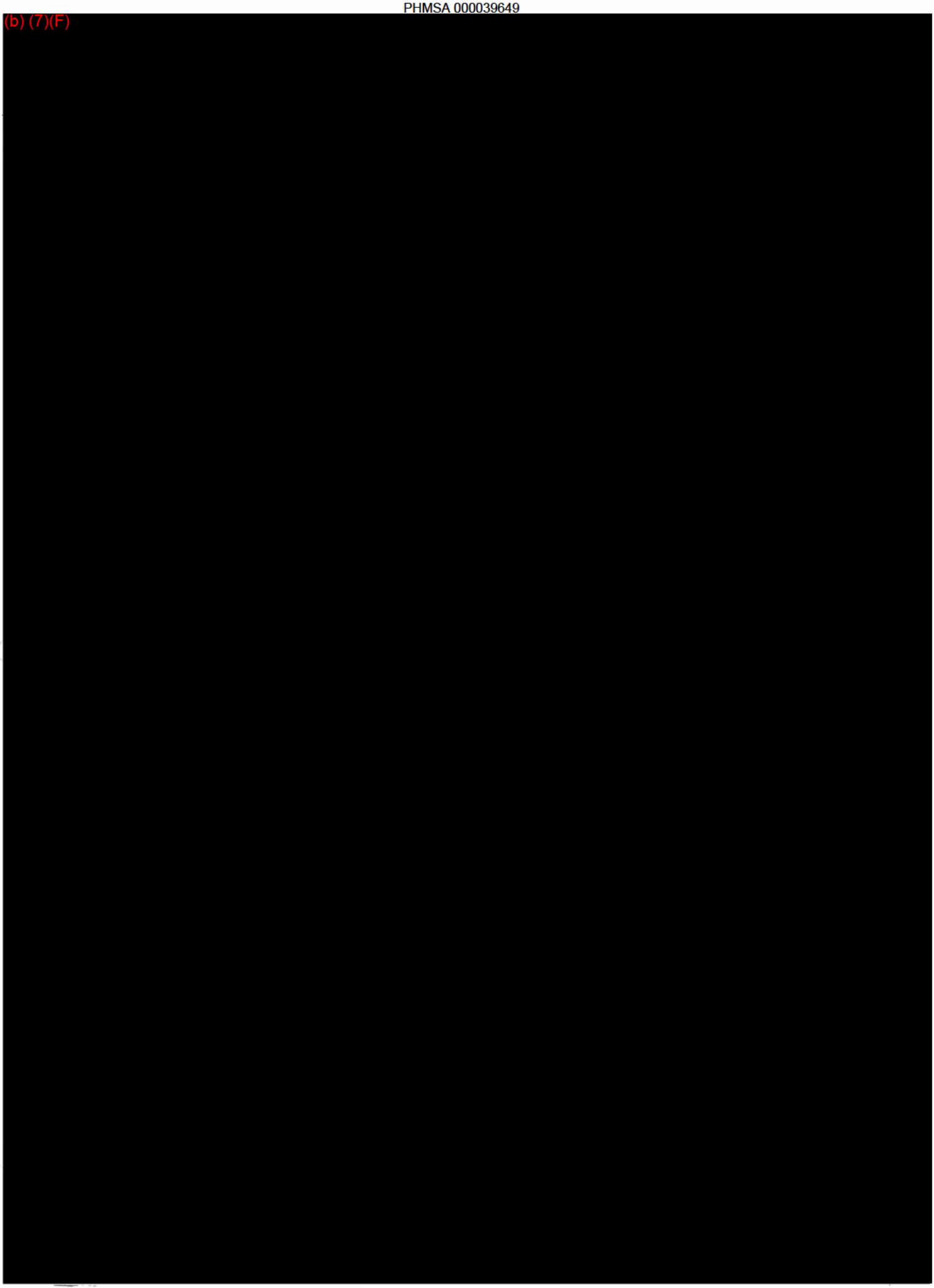
The response plan shall be updated and a copy of the changes submitted to the RSPA within thirty (30) days of any changes in the following operating conditions:

- Extension of the existing pipeline or construction of new pipeline.
- Relocation or placement of the pipeline that substantially affects the response plan, such as change in worst case discharge volume.
- Change in type of oil transported, if the change affects the required response resources (crude oil to gasoline).
- Change of Oil Spill Removal Organization.
- Change of emergency response procedures.
- Change of Qualified Individual(s) (Spill Response Coordinators).
- Change in NCP/ACP that significantly impact the appropriateness of response equipment or response strategies.
- Post-drill evaluation results.
- Post-incident evaluation results.
- Change in ownership.
- Any change that has significant impact on the equipment appropriate for response activities or any other information that may effect full implementation of the plan.

9.0 RESPONSE ZONE APPENDICES

Section 9 is not required for single zone response plans.

(b) (7)(F)



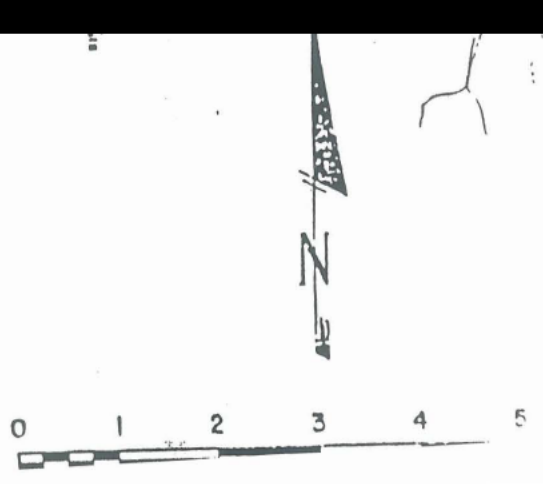
HOLMES

(b) (7)(F)

[redacted]

(b) (7)(F)

[redacted]



(b) (7)(F)

[redacted]

MUSKINGUM COUNTY

(b) (7)(F)

(b) (7)(F)

[redacted]

(b) (7)(F)

(b) (7)(F)

(b) (7)(F)

Appendix B

DEFINITIONS:

ACCESS/STAGING AREAS:	Designated areas near the spill site accessible for and deploying equipment and/or personnel.
BARREL:	Measure of space occupied by 42 U.S. gallons at sixty degrees Fahrenheit (60° F).
BOOMING STRATEGIES:	Strategic techniques which identify the location and quantity of boom required to protect certain areas. These techniques are generated by identifying a potential spill source and assuming certain conditions which would affect spill movement on water.
BULK:	Material that is stored or transported in a loose, unpackaged liquid, powder, or granular form capable of being conveyed by a pipe, bucket, chute, or belt system.
CLEAN-UP CONTRACTOR:	Persons contracted to undertake a response action to clean up a spill.
CLEAN-UP:	For the purposes of this document, clean-up refers to the removal and/or treatment of oil, hazardous substances, and/or the waste or contaminated materials generated by the incident. Clean-up includes restoration of the site and its natural resources.
CONTRACT OR OTHER APPROVED MEANS:	For OPA 90, a written contract with a response contractor; certification by the facility owner or operator that personnel and equipment are owned, operated, or under the direct control of the facility, and available within the stipulated times; active membership in a local or regional oil spill removal organization and/or the facility's own equipment.

Appendix B

DEFINITIONS:

COMMAND POST: A site located at a safe distance from the spill site where response decisions are made, equipment and manpower deployed, and communications handled. The Incident Commander and the On-Scene Coordinators may direct the on-scene response from this location.

COMMUNICATIONS EQUIPMENT: Equipment that will be utilized during response operations to maintain communication between employees, contractors, federal/state/local agencies. (Radio/telephone equipment and links.)

CONTAINMENT BOOM: A flotation/freeboard device, made with a skirt/curtain, longitudinal strength member, and ballast unit/weight designed to entrap and contain the product for recovery.

CONTINGENCY PLAN: A document used by (1) federal, state, and local agencies to guide their planning and response procedures regarding spills of oil, hazardous substances, or other emergencies.

CRITICAL AREAS TO MONITOR Areas which if impacted by spilled oil may result in threats to public safety or health.

CULTURAL RESOURCES: Current, historic, prehistoric and archaeological resources which include deposits, structures, ruins, sites, buildings, graves, artifacts, fossils, or other objects of antiquity which provide information pertaining to the historical or prehistorical culture of people in the state as well as to the natural history of the state.

DAMAGE ASSESSMENT: The process of determining, measuring damages and injury to the human environment and natural resources, including cultural resources. Include differences between the conditions and use of natural resources and the human environment that would have occurred without the incident, and the conditions and use that ensured following the incident. Damage assessment includes planning for restoration and determining the costs of restoration.

Appendix B

DEFINITIONS:

DECONTAMINATION:	The removal of hazardous substances from personnel and their equipment necessary to prevent adverse health effects.
DISCHARGE:	Any spilling, leaking, pumping, pouring, emitting, emptying, or dumping.
DISPERSANTS:	Those chemical agents that emulsify, disperse, or solubilize oil into the water column or promote the surface spreading of oil slicks to facilitate dispersal of the oil into the water column.
DIVERSION BOOM:	A floatation/freeboard device, made with a skirt/curtain, longitudinal strength member, and ballast unit/weight designed to deflect or divert the product towards a pick up point, or away from certain areas.
EMERGENCY SERVICE:	Those activities provided by state and local government to prepare for and carry out any activity to prevent, minimize, respond to, or recover from an emergency.
ENVIRONMENTALLY SENSITIVE AREAS:	Streams and water bodies, aquifer recharge zones, springs, wetlands, agricultural areas, bird rookeries, endangered or threatened species (flora and fauna) habitat, wildlife preserves or conservation areas, parks, beaches, dunes, or any other area protected or managed for its natural resource value.
ESTUARY:	Unique environment at the mouth of coastal rivers where fresh water and sea water meet, providing important habitat for marine life, birds, and other wildlife.

Appendix B

DEFINITIONS:

FACILITY: Any pipeline, structure, equipment, or device used for handling product, including, but not limited to, underground and aboveground tanks, impoundments, mobile or portable drilling or workover rigs, barge mounted drilling or workover rigs, and portable fueling facilities located offshore or on or adjacent to coastal waters or any place where a discharge of oil from the facility could enter coastal waters or threaten to enter coastal waters.

FEDERAL FUND: The spill liability trust fund established under OPA.

FIRST RESPONDERS, FIRST RESPONSE AGENCY: A public health or safety agency (e.g., fire service or police department) charged with responding to a spill during the emergency phase and alleviating immediate danger to human life, health, safety, or property.

HANDLE: To transfer, transport, pump, treat, process, store, dispose of, drill for, or produce.

HARMFUL QUANTITY OF OIL: The presence of oil from an unauthorized discharge in a quantity sufficient either to create a visible film or sheen discoloration of the surface of the water or a shoreline, tidal flat, beach, or marsh, or to cause a sludge or emulsion to be deposited beneath the surface of the water or on shoreline, tidal flat, beach, or marsh.

HAZARDOUS MATERIAL: Any nonradioactive solid, liquid, or gaseous substance which, when uncontrolled, may be harmful to humans, animals, or the environment. Including but not limited to substances otherwise defined as hazardous wastes, dangerous wastes, extremely hazardous wastes, oil, or pollutants.

Appendix B

DEFINITIONS:

HAZARDOUS SUBSTANCE: Any substance designed as such by the Administrator of the EPA pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act; regulated pursuant to Section 311 of the Federal Water Pollution Control Act.

HAZARDOUS WASTE: Any solid waste identified or listed as a hazardous waste by the Administrator of the EPA pursuant to the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA), 42 U.S.C., Section 6901, et seq as amended. The EPA Administrator has identified the characteristics of hazardous wastes and listed certain wastes as hazardous in Title 40 of the Code of Federal Regulations, Part 261, Subparts C and D respectively. (Individual states may further define Hazardous Waste(s).)

HEAT STRESS: Dangerous physical condition caused by over exposure to extremely high temperatures.

HYPOTHERMIA: Dangerous physical condition caused by over exposure to freezing temperatures.

IMMEDIATE RESPONSE STEPS: The immediate steps that are to be taken by the spill observer after detection of a spill.

INCIDENT: Any event that results in a spill or release of oil or hazardous materials. Action by emergency service personnel may be required to prevent or minimize loss of life or damage to property and/or natural resources.

INCIDENT COMMANDER (IC) The one individual in charge at any given time of an incident. The incident commander will be responsible for establishing a unified command with all on-scene coordinators.

Appendix B

DEFINITIONS:

INCIDENT COMMAND SYSTEM A method by which the response to an extraordinary event, including a spill, is categorized into functional components and responsibility for each component assigned to the appropriate individual or agency.

INITIAL CLEAN-UP: Remedial action at a site to eliminate acute hazards associated with a spill. An initial clean-up action is implemented at a site when a spill of material is an actual or potentially imminent threat to public health or the environment, or difficulty of clean-up increases significantly without timely remedial action. All sites must be evaluated to determine whether initial clean-up is total clean-up, however, this will not be possible in all cases due to site conditions (i.e., a site where overland transport or flooding may occur).

INITIAL NOTIFICATION: The process of notifying necessary personnel and federal/state/local agencies that a spill has occurred, including all pertinent available information surrounding the incident.

INLAND AREA: For OPA 90, the area shoreward of the boundary lines defined in 46 CFR Part 7, except in the Gulf of Mexico. In the Gulf of Mexico, it means the area shoreward of the lines of demarcation defined in 80.740 - 80.850 of the title 33 of the CFR. The inland area does not include the Great Lakes.

INTERIM STORAGE SITE: A site used to temporarily store recovered oil or oily waste until the recovered oil or oily waste is disposed of at a permanent disposal site. Interim storage sites include trucks, barges, and other vehicles, used to store waste until the transport begins.

LEAD AGENCY: The government agency that assumes the lead for directing response activities.

Appendix B

DEFINITIONS:

LEAD FEDERAL AGENCY: The agency which coordinates the federal response to incidents on navigable waters. The lead federal agencies are:

United States Coast Guard: (USCG) Oil and chemically hazardous materials incidents on navigable waters.

United States (EPA) Environmental Protection Agency: Oil and chemically hazardous materials incidents on inland waters.

LEAD STATE AGENCY: The agency which coordinates state support to federal and/or local governments or assumes the lead in the absence of federal response.

LOCATION BOUNDARIES: Areas where oil may be expected to impact during the first day of a spill based on tidal currents and prevailing winds.

LOWER EXPLOSIVE LIMIT: Air measurement utilized to determine the lowest concentration of vapors that support combustion. This measurement must be made prior to entry into a spill area.

MARINAS: Small harbors with docks, services, etc. for pleasure craft.

MARINE TRANSPORTATION-RELATED FACILITY: An onshore facility, including piping and any structure used to transfer oil to or from a vessel, subject to regulation under 33 CFR Part 154 and any deepwater port subject to regulation under 33 CFR Part 150.

NATIONAL CONTINGENCY PLAN: The plan prepared under the Federal Water Pollution Control Act (33 United States Code 1321 et seq) and the Comprehensive Environmental Reponse, Compensation, and Liability Act of 1980 (42 United State Code 9601 et seq), as revised from time to time.

Appendix B

DEFINITIONS:

NATURAL RESOURCE:	Land, fish, wildlife, biota, air, water, groundwater, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to or otherwise controlled by the state, federal government, private parties, or a municipality.
NEARSHORE AREA:	For OPA 90, the area extending seaward 12 miles from the boundary lines defined in 46 CFR Part 7, except in the Gulf of Mexico. In the Gulf of Mexico, it means the area extending seaward twelve (12) miles from the line of demarcation defined in 80.740 - 80.850 of title 33 of the CFR.
NON-PERSISTENT OR GROUP I OIL:	For OPA 90, a petroleum-based oil that, at the time of shipment, consists of hydrocarbon fractions: (1) At least fifty (50%) per cent of which by volume, distills at a temperature of 340 degrees C (645 degrees F), and (2) At least 95% of which by volume, distills at a temperature of 370 degrees C (700 degrees F).
OCEAN:	For OPA 90, the offshore area and nearshore area as defined in this glossary.
OFFSHORE AREA:	For OPA 90, the area beyond 12 nautical miles measured from the boundary lines defined in 46 CFR Part 7 extending seaward to 50 nautical miles, except in the Gulf of Mexico. In the Gulf of Mexico, it is the area beyond 12 nautical miles of the line of demarcation defined in 80.740 - 80.850 of title 33 of the CFR extending seaward to 50 nautical miles.

Appendix B

DEFINITIONS:

OIL OR OILS: Naturally occurring liquid hydrocarbons at atmospheric temperature an pressure coming from the earth, including condensate and natural gasoline, and any fractionation thereof, including, but not limited to, crude oil, petroleum, gasoline, fuel oil, diesel oil, oil sludge, oil refuse, and oil mixed with wastes other than dredged spoil. Oil does not include any substance listed in Table 302.4 of 40 CFR Part 30 adopted August 14, 1989, under Section 101(14) of the federal comprehensive environmental response, compensation, and liability act of 1980, as amended by P. L. 99 - 499.

OILY WASTE: Product contaminated waste resulting from a spills.

OWNER OR OPERATOR: Any person, individual, partnership, corporation, association, governmental unit, or public or private organization of any character.

PERSISTENT OIL: For OPA 90, a petroleum-based oil that does not meet the distillation criteria for a non-persistent oils are classified by specific gravity as follows: Group II - specific gravity less than .85; Group III - specific gravity between .85 and less than .95; Group IV - specific gravity of .95 to and including 1.0; Group V - specific gravity greater that 1.0.

PERSON: Any political subdivision, government agency, municipality, industry, public or private corporation, copartnership, association, firm, individual, or any other entity whatsoever.

PLAN: Spill response, clean-up, and disposal contingency plan.

POST-EMERGENCY RESPONSE: The portion of a response performed after the immediate threat of a release has been stabilized or eliminated and clean-up of the sites has begun.

Appendix B

DEFINITIONS:

PRIMARY RESPONSE CONTRACTORS OR CONTRACTORS An individual, company, or cooperative that has contracted directly with the plan holder to provide equipment and/or personnel for the containment or clean-up of spilled oil. For use in contingency plans, primary response contractors must be approved by Ecology.

QUALIFIED INDIVIDUAL: For OPA 90, an English speaking representative of the facility, located in the United States, available on a 24 hour basis, who is familiar with and trained on the response plan, and has full written authority to implement the facility's plan.

RECREATION AREAS: Publicly accessible locations where social/ sporting events take place.

REGIONAL RESPONSE TEAM: The federal response organization (consisting of representatives from selected federal and state agencies) which acts as a regional body responsible for planning and preparedness before an oil spill occurs and providing advice to the FOSC in the event of a major or substantial spill.

RESPONSE CONTRACTORS: Persons/companies contracted to undertake a response action to contain and/or clean up a spill.

RESPONSE GUIDELINES: Guidelines for initial response that are based on the type of product involved in the spill, these guidelines are utilized to determine clean-up methods and equipment.

RESPONSE PLAN: A practical manual used by industry for responding to a spill. It's features include: (1) identifying the notifications sequence, responsibilities, response techniques, etc. in an easy to use format; (2) using decision trees, flowcharts, and checklists to insure the proper response for spills with varying characteristics; and (3) segregating information

Appendix B

DEFINITIONS:

Response Plan (cont)	needed during the response from data required by regulatory agencies to prevent confusion during a spill incident.
RESPONSE RESOURCES:	For OPA 90, the personnel, equipment, supplies, and other capability necessary to perform the response activities identified in a response plan.
RESPONSIBLE PARTY:	Any person, owner/operator, or facility that has control over an oil or hazardous substance immediately before entry of the oil or hazardous substance into the atmosphere or in or upon the water, surface, or subsurface land of the state.
RESTORATION:	The actions involved in returning a site to it former condition.
RIVERS AND CANALS:	For OPA 90, a body of water confined within the inland area that has a project depth of 12 feet or less, including the Intracoastal Waterway and other waterways artificially created for navigation.
SECURING THE SOURCE:	Steps that must be taken to stop discharge of oil at the source of the spill.
SHIP:	Any boat, ship, vessel, barge, or other floating craft of any kind.
SIGNIFICANT AND SUBSTANTIAL HARM:	For OPA 90, any fixed MTR facility that is capable of transferring oil, in bulk, to or from a vessel with a capacity of 250 barrels or more that must submit response plans and have plans approved by the USCG.

(b) (7)(F) [redacted]

Appendix B

DEFINITIONS:

SITE CONDITIONS:	Details of the area surrounding the facility, including shoreline descriptions, typical weather conditions, socioeconomic breakdowns, etc.
SKIMMERS:	Mechanical devices used to skim the surface of the water and recover floating oil. Skimmers fall into four basic categories (suction heads, floating weirs, oleophilic surface units, and hydrodynamic devices) which vary in efficiency depending on the type of oil and size of spill.
SORBENTS:	Materials ranging from natural products to synthetic polymeric foams placed in confined areas to soak up small quantities of oil. Sorbents are very effective in protecting walkways, boat decks, working areas, and previously uncontaminated or cleaned areas.
SPILL:	An unauthorized discharge of oil or hazardous substance into the waters of the state.
SPILL OBSERVER:	The first individual who discovers a spill. This individual must function as the first responder and person-in charge until relieved by an authorized supervisor.
SPILL RESPONSE:	All actions taken in responding to spills of oil and hazardous materials, e.g.: receiving and making notifications; information gathering and technical advisory phone calls; preparation for and travel to and from spill sites; direction of clean-up activities; damage assessments; report writing, enforcement investigations and program development.
SPILL RESPONSE PERSONNEL:	Federal, state, local agency, and industry personnel responsible for participating in or otherwise involved in spill response. All spill response personnel will be preapproved on a list maintained in each region.
STATE EMERGENCY	A group of officials appointed by the Governor to implement

Appendix B

DEFINITIONS:

RESPONSE COMMISSION (SERC) the provisions of Title III of the Federal Superfund Amendments and Reauthorization Act of 1986 (SARA). The SERC approves the State Oil and Hazardous Substance Discharge Prevention and Contingency Plan and Local Emergency Response Plan.

SUBSTANTIAL HARM: For OPA 90, any mobile MTR facility (tank trucks and railroad tank cars) that is capable of transferring oil, in bulk, to or from a vessel with a capacity of 250 barrels or more that must submit a response plan to the USCG.

TIDAL CURRENT CHARTS: Comprehensive charts which contain the predicted tidal current movement for each day of the year for designated areas. These charts specify the direction and speed of the current in specific areas.

TIDAL CURRENT TABLES: Tables which contain the predicted times and heights of the high and low waters for each day of the year for designated areas.

TRAJECTORY ANALYSIS: Estimates made concerning spill size, location, and movement through aerial surveillance or computer models.

UNDERWRITER: An insurer, a surety company, a guarantor, or any other person, other than on owner or operator of a vessel or facility, that undertakes to pay all or part of the liability of an owner or operator.

UNIFIED COMMAND: The method by which local, state, and federal agencies and the responsible party will work with the Incident Commander to:

Determine their roles and responsibilities for given incident.
Determine their overall objectives for management of an incident.
Select a strategy to achieve agreed-upon objectives.
Deploy resources to achieve agreed-upon objectives.

Appendix B

DEFINITIONS:

VOLUNTEERS:	An individual who donates their services or time without receiving monetary compensation.
WASTE:	Oil or contaminated soil, debris, and other substances removed from coastal waters and adjacent waters, shorelines, estuaries, tidal flats, beaches, or marshes in response to an unauthorized discharge. Waste means any solid, liquid, or other material intended to be disposed of or discarded and generated as a result of an unauthorized discharge of oil. Waste does not include substances intended to recycled if they are in fact recycled within 90 days of their generation or if they are brought to a recycling facility within that time.
WILDLIFE RESCUE:	Efforts made in conjunction with federal and state agencies to retrieve, clean, and rehabilitate birds and wildlife affected by an oil spill.

Appendix A

GLOSSARY
ABBREVIATIONS: (Typical)

BLM	Bureau of Land Management (USDOI)
CEMP	Comprehensive Emergency Management Plan
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended
CFR	Code of Federal Regulations
CHEMTREC	Chemical Transportation Emergency Center
CMA	Chemical Manufactures Association
COTP	Captain of the Port (USCG)
CWA	Clean Water Act (Federal)
EOC	Emergency Operations Center
EPA	U.S. Environmental Protection Agency
EQ	Environmental Quality
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Administration
FOSC	Federal On-Scene Coordinator
FRDA	Freshwater Resource Damage Assessment
FRF	Federal Revolving Fund
FWPCA	Federal Water Pollution Control Act
GIS	Geographic Information System
HMPA	Hazardous Materials Protection Act
HAZWOPER	Hazardous Waste Operations and Emergency Response Personnel Training (29 CFR Part 1910.1200)
IC	Incident Commander
ICS	Incident Command System
LEL	Lower Explosive Limit
LEPC	Local Emergency Planning Committee
LEPD	Local Emergency Planning District
LO	Logistics Officer
LOSC	Local On-Scene Coordinator
MMS	Mineral Management Service (USDOI)
MSDS	Material Safety Data Sheets
MSO	Marine Safety Office (USCG)
MSRC	Marine Spill Response Corporation
MTR	Marine Transportation-Related (Facility, for OPA 90)
NCP	National Contingency Plan
NIIMS	National Interagency Incident Management System
NOAA	National Oceanic and Atmospheric Administration

Appendix A

Glossary
Abbreviations: (Typical)

NRC	National Response Center
NRDA	National Resource Damage Assessment
NRT	National Response Team
OCI	Office of Criminal Investigation (EPA)
OO	Operations Officer
OH-EPA	Ohio Environmental Protection Agency
OPA 1990	Federal Oil Pollution Act of 1990
OSC	On-Scene Coordinator/Commander
OSHA	Occupational Safety and Health Administration (USDL)
PA DER	Pennsylvania Department of Environmental Resources
PFD	Personal Flotation Device
PIAT	USCG Public Information Assist Team
PPE	Personal Protective Equipment
QI	Qualified Individual
RCP	Regional Contingency Plan
RCRA	Resource Conservation and Recovery Act of 1976
RRT	Regional Response Team (Federal)
SARA	Superfund Amendments and Reauthorization Act
SO	Safety Officer
SPCC	Spill Prevention Control and Countermeasures
SSC	Scientific Support Coordinator (NNOAA)
SUPSALV	U.S. Navy Supervisor of Salvage
TRC	Three Rivers Council
USACE	U.S. Army Corps of Engineers
USCG	U.S. Coast Guard
USDOD	U.S. Department of Defense
USDL	U.S. Department of Labor
USDOE	U.S. Department of Energy
USDOI	U.S. Department of Interior
USDOJ	U.S. Department of Justice
USDOT	U.S. Department of Transportation
USFWS	U.S. Fish & Wildlife Service (USDOI)
USGS	U.S. Geological Survey (USDOI)
USHHS	U.S. Department of Health & Human Services
USN	U.S. Navy
VTS	Vessel Traffic System
WV-DEP	West Virginia Department of Environmental Protection

CROSSTEX 1-866-394-9839

Operations Control Center (OCC)

Classification ▶	Emergency	Crisis
Event Categories ▼	**Moderate impact**	**Major impact**
Injury and/or Fatality ▶	Injury requiring medical attention beyond First Aid; no fatalities	Extensive and/or life-threatening injury and/or fatality
Fire ▶	All fires that may or may not result in damage to company's equipment	Fires causing substantial damage to company's equipment, 3rd parties and/or public
Pipeline Incidents (DOT-related events) ▶	➢ Dents caused by 3rd parties ➢ Pipeline leaks ➢ Costs of damages, repairs & clean up add up to more than $5,000, but less than $50,000 [RQ in TX; requires <2 hr notification to TRRC]	➢ Costs of damages, repairs & clean up total ≥$50,000 ➢ Total product loss ≥3MMscf ➢ [DOT PHMSA RQ; requires <2-hr notification of NRC & state agencies]
Evacuation & Traffic Impact ▶	➢ Evacuation of site personnel and/or nearby residents may be necessary ➢ Blocking access road to the facility	➢ Evacuation of site personnel & area residents required ➢ Blocking public roadways
Operations / Process Impacts ▶	Impact to facility that requires emergency shutdown (ESD), creates safety concerns, and/or results in unplanned interruption of deliveries to customers	Impact to operations that requires a prolonged shut-down for repairs with no ability for customer deliveries
Liquid Spills / Gaseous Releases ▶	➢ Onsite spills of any chemical ≥5 gal. ➢ Releases from pipeline PSVs or vents [LA RQ 100 lbs in urban areas; 1,000 lbs in rural area] ➢ Offsite spill and/or release of any chemical requiring immediate notification of a regulatory agency [LA <1 hr; TX <24 hrs]	➢ Major spill and/or release causing substantial offsite impact that may potentially cause immediate and significant health and safety threat to employees and/or public ➢ oil sheen on a water surface is RQ; immediate notification to NRC required
Air Pollution Control Equipment Malfunction ▶	➢ Unplanned shutdown for any period of time of control equipment (thermal oxidizer, NOx water injection system, BTEX condenser, flare, VRU, catalyst) ➢ Unplanned blowdowns	Unexpected major failure of all controls simultaneously
(b) (7)(F)	[redacted]	[redacted]
Public, Media, or Government Agencies ▶	➢ Calls received from neighbors, concerned citizens, interest groups, local media, municipalities, etc. ➢ Unannounced arrival of a regulatory agency representative and/or law enforcement	➢ Media onsite; law enforcement takes control over our facility; significant public attention ➢ Unannounced arrival of elected official
Vehicle Accident ▶	Follow Crosstex vehicle incident reporting policy	

Rev. 01-2012

INITIAL INFORMATION TO BE PROVIDED (additional details can be provided in the follow up notifications)			
Facility name (for pipeline indicate if its DOT-jurisdictional)	☐	Name of substance released and/or spilled	☐
Location: town, parish/county (give GPS information if available or the best available description of the geographic location)	☐	Estimated volume of spill/release if possible (be conservatively high in the initial estimate)	☐
Type of incident (e.g., release, spill, fire, pipeline hit, security breach, etc.)	☐	Cause of the incident, if known (do not speculate if the facts are not known)	☐
Date and Time incident discovered and/or verified by Crosstex operator	☐	Immediate actions taken (e.g., personnel in route or onsite)	☐
If applicable, indicate time the incident was secured	☐	Weather conditions (windy, raining, drought, etc.)	☐
Hazmat Incident # (requires a call to LA Hazmat to be placed first)	☐	If an announced inspection, Name & phone number of the Agency Inspector	☐

BASICS OF RESPONSE ACTION

- Call OCC 866-394-9839
- Assume role of the Incident Commander until relieved
- If safe and qualified, control the source
- If necessary, evacuate impacted area
- Call your local emergency response contractor if needed
- Establish safe perimeter; prevent unqualified persons from entering the area & wait for qualified Response Team to arrive
- Administer first aid if trained to do so
- Initiate cleanup and/or repairs
- Periodically communicate updates to OCC
- Notify OCC when the incident is terminated
- Record/report the chronology of events; prepare to participate in the post-incident investigation

Ohio Oil Gathering Corporation
RSPA Facility Response Plan Appendix C

Health and Safety Plan

Approved _____

Last Update: _____

(To Be Filled Out In The Event of A Release)

Health and Safety Plan for

Petroleum Products and Hazardous Materials

Emergency Response and Removal

The following health and safety plan is written to provide specific health and safety guidance for employees and all individuals in contract with _____ when responding to releases of petroleum products and hazardous materials into waterways. This plan is written in accordance with the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA) "Hazardous Waste Operations and Emergency Response Standard (HAZWOPER)" 29 CFR 1910.120 and 40 CFR 341 and is in compliance with requirements established by Section 311(j) of the Federal Water Pollution Control Act (FWPCA), as amended by section 4202 of the Oil Pollution act of 1990 (OPA 90).

Facility Identification

Facility Name: _____
Address: _____
_____

Telephone: _____
Emergency Telephone: _____

Owner: _____

Qualified Individual: _____

Alternate
Qualified Individual: _____

Appendix C
Health and Safety Plan

This health and safety plan has been developed to address emergency response for releases and removal of petroleum products and hazardous materials. The plan identifies policies and procedures that must be followed to safely perform operations or tasks that will be conducted when responding to spills. The plan identifies the following items:

- Incident Command Structure and Responsibilities
- Training Requirements
- Medical Surveillance Requirements
- Safety and Health Risks
- Personal Protective Equipment Requirements
- Environmental Monitoring
- Site Control
- Decontamination Procedures

Employees and contractors engaged in emergency response activities must be thoroughly trained and familiar with the information presented in this document.

Incident Command Structure and Responsibilities

The _____ facility is manned __ hours a day with and average of __ personnel per shift. In the event of a release, the management of incidents resulting in the release of petroleum products or hazardous materials shall be conducted by the utilizing the following Incident Command System (ICS) as required by the HAZWOPER Standard and the facility incident response plan.

The following full incident command structure will be implemented as indicated in figure one.

Appendix C
Health and Safety Plan

Figure 1.

Incident Command Structure

Incident Commander
Qualified Individual

Logistics	Safety	Operations
Communications	Emergency Medical	Land Based Operations
Public Relations	Government Agencies	Water Based Operations
Supply	Fire Suppression	Recorder
Financial	Planning	

Appendix C
Health and Safety Plan

The responsibility of each of these individuals is indicated below:

Incident Commander _____
Alternates_____

The Incident Commander is responsible for coordinating all spill response activities. This includes logistical, operational, communications, safety and financial operations. The Incident Commander will ensure that all operations are performed safely to protect employees, response personnel, the community, and the environment.

The Incident Commander shall be responsible to ensure that all operations conform to facility response plans, including this health and safety plan.

Safety Officer _____

The Safety Officer is responsible for the overall safety of all control, mitigation and cleanup activities. The Safety Officer has the authority to alter, suspend, or terminate any activities deemed to be unsafe or uncertain. This will include such items as suspending or terminating deployment of containment boom if the water current is too dangerous, there is indication of fast rising waters or limited visibility, or there is the potential for explosion. The safety officer is responsible to disseminate information concerning the hazards of the release materials to the response organizations, and to ensure the safety of all personnel conducting operations under the provisions of the facility response plan.

Logistics Officer _____

The Logistics Officer is responsible for providing support to the Incident Commander and the Operations Units. This responsibility includes providing adequate personnel, transportation, communications, and equipment and supplies for response activities. Additionally, the Logistics Officer must ensure that items such as food, shelter, and protective clothing and gear for response and support personnel.

Operations Officer _____

The Operations Officer develops the tactics and strategies to contain, control and mitigate a release of petroleum products and hazardous materials. All facility response team personnel, community emergency response organizations, and spill contractor activities are the responsibility of the Operations Officer. Reporting to the Operations Officer will be individuals responsible for land spill response activities, water spill response activities and fire suppression.

Government Agencies _____

The lead government agency as described in the National Contingency Plan will coordinate the efforts during a release of all other State and Federal Agencies.

Public Relations _____

The Public Relations Officer will be responsible for disseminating information regarding the hazards of the released material, the response and clean-up activities to the community and news media.

Appendix C
Health and Safety Plan

Supply

The Supply Officer will provide for the inventory of materials used during the response operations and for the retrieving of materials not readily accessible to emergency response personnel.

Recorder

The Recorder is responsible for noting all communications (Written and verbal) and activities that occur during and emergency operation. This would include noting who was on-scene, who was notified, and the time in which they arrived or were notified.

Fire Suppressions

The community fire chief will be responsible for all fire suppression activities. This will include providing adequate water supply, breathing air supply and the necessary water movement equipment to extinguish or control fires that occur at the facility.

Contractor

The contractor will be responsible to provide or supply equipment or services in accordance with their agreement with Ohio Oil Gathering. The contractor must provide services in compliance with the response and safety plan.

Training Requirements

All employees and contractors assigned to this project shall have the training specified in the HAZWOPER Standard Section (q)(6). This includes a minimum of 8-hour Hazardous Materials First Responder Operational Level with supervisors, managers, and safety officer having 24-hour Hazardous Materials Technician Level Training, and the Incident Commander having and additional 8-hour Hazardous Materials Incident Commander Level Training.

Responders that perform tasks for water responses must have Inland Spill Response Training as outlined in the training section of the Facility Response Plan.

Additionally, employees and contractors must receive specific training on the following items.

- Task training on operations to be performed on watercraft, including safe boat embarkment and disembarkment, shipping off, docking, safe work practices, crew responsibility, boom deployment, standard communications, principles of navigation. Also crew members must be knowledgeable in the use of emergency or contingency equipment and plans.
- Use of personal floatation devices
- Task training on operations to be performed on shore, including knowledge of safe working practices on elevated surfaces over water, and use of personal floatation devices.

Appendix C
Health and Safety Plan

Medical Surveillance Requirements

All employees and contractors that may respond to releases of petroleum products and hazardous materials will be provided medical examinations as required by the HAZWOPER Standard Section (f). The physicians written opinion for these individuals will be maintained on file at _____. Contractors that are engaged for service will be require to certify the physical ability of each contractor employee to perform work in accordance with their job responsibility up to an including enrollment in a medical surveillance program required by the HAZWOPER Standard.

Safety and Health Risk

The safety and health risk for the hazards associated with activities identified in the Facility Response Plan indicate the potential for exposure to chemical and physical hazards. In addition to guidance provided in this document, standard health and safety practices will be used to direct activities conducted during response operations.

Health Hazards

_____ receives, stores, transfers, or otherwise uses the following petroleum products or hazards materials indicated in the OPA Plan.

Chemical Tier Group

Material Safety Data Sheets (MSDS) are provided. Each MSDS contains the following health and safety information:

- Name of Chemical, Trade Name, and other Synonyms,
- Manufacturer Name, Address, and Telephone Number,
- Hazardous Chemicals Contained in the Product,
- Chemical and Physical Properties of the Product,
- Appearance, Odor, and Physical State
- Solubility
- Lower and Upper Explosive Limits (LEL/UEL)
- Specific Gravity or Density
- Evaporation Rate and Vapor Pressure
- Vapor Density
- Flashpoint and Autoignition Temperature
- Melting point and Boiling point
- Reactivity, Stability, Polymerization
- Decomposition Products
- Exposure Limits,
- Acute and Chronic Health Effects,
- Routes of Exposure,
- Signs and Symptoms of Exposure,
- Safe Handling and Hygiene Practices,
- Recommended Personal Protective Equipment,
- Emergency Spill Procedures,
- Emergency Fire Procedures, and
- First Aid Procedures.

Appendix C
Health and Safety Plan

All qualified and responsible employees must receive training on the health hazards and physical properties associated with each chemical listed in the Facility Response Plan. This training must include a review of each MSDS provided in Appendix B of the Facility Response Plan.

Physical Hazards

The physical hazards associated with response to incidents covered under the Facility Response Plan include but are not limited to the following:

- Working around large equipment and machinery,
- Trenching and excavation,
- Slips, trips, and falls,
- Fire and explosion,
- Shoreline work,
- Working on boats,
- Boom deployment,
- Lifting and moving,
- Inclimate weather,
- Snakes, bees, and poison ivy,
- Working around or with uncontrolled energy sources, and
- Working in loud or noisy locations.

To mitigate exposure to physical and chemical hazards the following safety rules and practices will be followed.

- Personnel must be adequately trained in accordance with general, and construction, industry standards; including state and federal regulation and standards that cover site operations.

- Personnel must be thoroughly briefed on elements contained in the site work and safety plan and emergency response safety plan, including hazard recognition, equipment to be worn, safety practices to be followed, emergency procedures, and communications.

- Personnel protective clothing and equipment used on response incidents indicated on the site safety plan must be worn at all times. Changes made to personnel protective clothing and equipment must be approved by the safety officer and documented within the site safety plan.

- The use of the buddy system will be enforced when responding to released hazardous materials or performing hazardous operations.

- Emergencies that occur during an incident response will be addressed by a contingency plan (or site emergency plan).

- Constant visual contact must be established and maintain between team members conducting hazardous operations.

Appendix C
Health and Safety Plan

- Team members will be trained in specific job duties.
- Communications will be maintained using radio and telephone communications. In situations were these are unavailable hand signals will be used if practical.
- Wind direction, water conditions, and other weather conditions will be determined in advance as information comes available.
- Incident command will control all site operations to minimize risk to personnel and equipment and to control the spread of released materials.
- All personnel and contractors must follow the incident command system and maintain chains of command to minimize confusion and facilitate communication.
- Decontamination procedures presented in this plan will guide decontamination operations. Any changes to the decontamination procedures will be documented on the site safety plan.
- Safety equipment, including fire extinguishers, flash lights, and first aid kit must be carried by responsible individuals and on equipment used for response activities.
- Team members and response individuals shall be familiar with first aid treatments.
- All accidents, injuries and illnesses must immediately be reported to the safety officer.

Personal Protective Equipment

The level of personal protection to be worn during the control, containment and cleanup of released materials indicated in this plan will be in accordance with the NIOSH/OSHA/USCG/EPA guidance document "Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities." The level of protection and type of clothing will be determined on site by the Safety Officer with guidance from Incident Command and other trained specialists.

The following factors will be considered when choosing Personal Protective Clothing and Equipment (PPC and PPE):

- Chemical Contaminant(s),
- Concentration of Contaminants (air, water, soil),
- Weather Conditions, including temperature, wind and water directions,
- Chemical Compatibilities,
- Work Conditions,
- Decontamination Procedures,
- Fire and Explosion Hazards, and
- Permeation, Penetration, and Degradation factors for the clothing.

Appendix C
Health and Safety Plan

The following guidelines will be used to determine the level of protection necessary.

Level A - Highest level of respiratory protection. Indicated when the level of the contaminant is greater than the IDLH (Immediately dangerous to life and health) and the chemical contaminant is known to be absorbed through the skin. PPC includes Self Contained Breathing Apparatus (SCBA) and totally encapsulating suit.

Level B - Minimum level of protection for unknown situations. Indicated when level of contaminants is greater than the IDLH or the concentration of oxygen is below 19.5%. Also require when the odor threshold of the contaminant is above the PEL. PPC includes SCBA and chemically protective clothing.

Level C - Used in controlled situations when the contaminant is known. Indicated when the concentration of the contaminant is known and above the PEL and below the IDLH. PPC includes Air Purifying Respirator with cartridges that can filter the contaminants and chemically protective clothing. Limited for use in areas with oxygen concentration above 19.5%, the contaminant has an odor threshold below the PEL, and the concentration of the contaminant is not greater than the product of the protection factor for the respirator and the PEL.

Level D - Generally a work uniform including hard hat, safety glasses, impact resistant shoes, and no respiratory protection. Used in known stable work conditions when the concentration of the contaminant is below the PEL and the concentration of oxygen is greater than 19.5%.

Air Monitoring

Air monitoring will be performed to determine the environmental air quality in areas where response operations are being conducted. Qualitative monitoring will be conducted to establish the following parameters:

- Airborne concentration of contaminants,
- Migration or movement of contaminant plums,
- Presence of flammable or explosive atmospheres,
- Level of cleanup necessary,
- Determine unknown contaminants, and
- Concentration of oxygen in atmosphere.

To accomplish this the following type of air monitoring instruments will be used as required by site conditions.

- Combustible Gas Indicators
- Oxygen Meters
- Photo-ionization Detectors
- Organic Vapor Analyzers
- Colormetric Detector Tubes

Air monitoring will be conducted by a qualified individuals with training in the operations of the monitoring instrument being used. All data collected will be recorded and reported to the Safety Officer and Incident Commander.

Appendix C
Health and Safety Plan

Site Control

Site Control will be the responsibility of the Incident Commander. The Incident Commander will establish work zones for activities that are being conducted. Only authorized individuals will be allowed to enter the work zones.

Depending on the contaminant(s) and the level of protection necessary to respond to the incident, the Incident Commander may chose to enact a three zone approach. This approach includes establishing the following areas of control.

Exclusion Area - The area directly surrounding a contaminated location. This is the area of highest contamination and hazard.

Warm Zone - The warm zone or contamination reduction zone is the area were individual risk to the chemical hazard is reduced but not eliminated. Decontamination takes place within this area.

Safe Zone - The safe zone is the area where no contamination is present and support equipment and personnel are staged.

Site Control

For each incident, site maps and plans must be utilized to indicate areas which are controlled.

Decontamination

The decontamination procedure required for response activities include primarily minimizing contact with any contaminated materials or product. Additionally, disposable clothing which can be removed and discarded will reduce the need for a physical decontamination process. PPE retaining appreciable amounts of product shall be washed and rinsed with a solution of Alconox and water before removal.

For individuals working on boats, decontamination will take place immediately after docking.

Contingency Plan

The procedures indicated below will be implemented in the event of a fire or medical emergency.

Fire

All work crews and contractors must be supplied with a minimum of one multipurpose (ABC) pressurized fire extinguisher with ratings above 5BC. This fire extinguisher(s) may be used for any incipient phase fire on site. Individuals will evacuate the area for any fire beyond the incipient phase. Fires beyond incipient stage will be the responsibility of the local fire department.

Medical Emergencies

All individuals requiring medical assistance beyond initial first aid will be immediately sent to the local hospital detailed below. Contaminated individuals will be removed from the site and gross contamination will be removed by taking clothing off the individual. The safety officer or site supervisor shall notify the hospital about the possibility of contamination and steps that were taken to decontaminate the individual.

Emergency Contacts

Fire Department _____
Phone _____

Police Department _____
Phone _____

Emergency Medical _____
Phone _____

Hospital _____
Phone _____

Appendix C
Health and Safety Plan

Personnel Log Sheet

I have read and understand the requirements of the fore-mentioned health and safety plan and agree to abide by all procedures detailed.

	Name	Signature	Date
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			

Appendix D
Material Safety Data Sheet

CROSSTEX



DANGER

Safety Data Sheet

MSDS ID NO: 011
Revision date: May 10, 2013

Section 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name:	Petroleum Crude Oil Solution
Synonyms:	Earth oil, petroleum oil, rock oil
Chemical family:	Petroleum hydrocarbon mixture
Formula:	Crude oil is a complex mixture of paraffinic, cycloparaffinic and aromatic hydrocarbons covering carbon numbers ranging from C_1 to over C_{60}. It is amber to black in color.
Producer:	Crosstex Energy Services, L.P. 2501 Cedar Springs Road Suite 100 Dallas, TX 75201 www.crosstexenergy.com

Emergency Line	**866-394-9839**	**Available 24 hours**
CHEMTREC	**800-424-9300**	
Crosstex	**214-953-9500**	**Available during normal business hours** ****Ask for Compliance Dept****

Section 2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Crude oil is a volatile and extremely flammable liquid. Keep away from heat, flame and sources of ignition. This material can contain toxic levels of hydrogen sulfide vapor that accumulate in the vapor spaces of storage and transport compartments. Hydrogen sulfide vapor can cause eye, skin and respiratory tract irritation. This product may contain benzene, which may cause cancer or damage blood-forming organs. Aspiration (inadvertent suction) of liquid into the lungs can produce chemical pneumonia or even death.

OSHA-GHS Hazard Statements:
DANGER! — Highly Flammable Liquid and Vapor

Inhalation: Volatile components of this product can cause respiratory and nasal irritation, headache, dizziness, drowsiness, nausea and loss of coordination. Significant concentrations of hydrogen sulfide gas can be present in the vapor space of storage tanks and bulk transport compartments. With the loss of highly volatile components, weathered oil does not present an inhalation hazard.

Ingestion: May cause irritation of the mouth, throat and gastrointestinal tract, leading to nausea, vomiting, headache, dizziness, drowsiness and diarrhea. Minute amounts aspirated into the lungs can produce chemical pneumonitis, pulmonary edema or lung injury, which in severe cases may be fatal.

Skin contact: Moderate skin irritation may occur upon short-term exposure. Prolonged or repeated liquid contact can cause dermatitis, folliculitis or oil acne.

Eye contact: May cause slight irritation.

Carcinogenic evaluation: The International Agency for Research on Cancer (IARC) has determined there is limited evidence for the carcinogenicity of crude oil in animals. The IARC has determined there is inadequate evidence of carcinogenicity of crude oil in humans. Crude oil is not classifiable as to its carcinogenicity to humans (Group 3).

Name	IARC carcinogens:	NTP carcinogens:	ACGIH — carcinogens	OSHA — select carcinogens
Benzene 71-43-2	Supplement 7 (1987) Monograph 29 (1982)	Known human carcinogen listed	A1 — Confirmed human carcinogen	Present

Section 3. COMPOSITION / INFORMATION ON INGREDIENTS

Crude oil is a complex mixture of paraffinic, cycloparaffinic and aromatic hydrocarbons covering carbon numbers ranging from C_1 to over C_{60}. It is amber to black in color. Crude oil contains small amounts of sulfur, nitrogen and oxygen compounds as well as trace amounts of heavy metals. The most prevalent constituents of crudes from various localities are provided below. This is not a complete list of all components. Other components may be present in concentrations of less than 1%, or carcinogens present in concentrations of less than 0.1%.

Material information:

Name	CAS No.	Weight %
N-decane and decanes	872-05-9	4-10
N-pentane and isomers	109-66-0; 78-78-4	2-7
N-heptane	142-82-5	2-5
N-hexane	110-54-3	1-5
N-octane and isomers	111-65-9; 540-84-1	1-5
N-nonane	111-84-2	1-5
N-butane and isomers	106-97-8	1-5
Methylcyclohexane	108-87-2	1-4
Dimethylpentanes	Mixture	1-3
1,2,4-trimethylbenzene	95-63-6	0-2
Toluene	108-88-3	0-2
Benzene	71-43-2	0-1

Note: *The above weight percentages are represented in ranges as estimates. Due to variations in source locations, components of crude oil will vary.*

Section 4, FIRST AID MEASURES

Inhalation: Remove the affected person to fresh air; if the affected person is not breathing or breathing is irregular, provide artificial respiration, CPR and/or oxygen by trained personnel and seek emergency medical attention.

Skin contact: Remove contaminated clothing; wash affected area with soap and water; launder contaminated clothing before reuse. If irritation persists, seek medical attention.

Ingestion: Aspiration hazard if swallowed. DO NOT induce vomiting; if vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into lungs; seek immediate medical attention. Vomiting may be induced only under the supervision of a physician.

Eye contact: Check for and remove contact lenses. Flush eyes with clear, tepid running water for 15 minutes while holding eyelids open. If symptoms or irritation persist, seek medical attention.

Section 5. FIREFIGHTING MEASURES

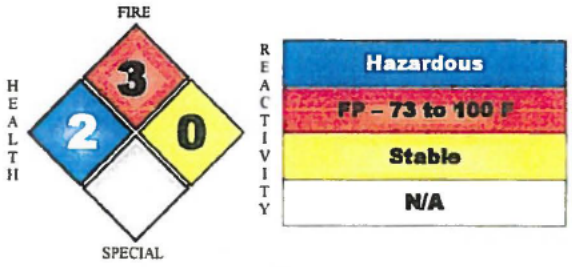
Suitable extinguishing media: Small fires — Class B fire-extinguishing media such as CO_2, dry chemical, foam (AFFF/ATC) or water spray can be used. Large fires — water spray, fog or foam (AFFF/ATC) can be used. Firefighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

Specific hazards: This product has been determined to be a flammable liquid per the OSHA Hazard Communication Standard and should be handled accordingly. Vapors may travel along the ground or be moved by ventilation and ignited by many sources such as pilot lights, sparks, electric motors, static discharge or other ignition sources at locations distant from material handling. Flashback can occur along vapor trail. For additional fire-related information, see NFPA 30 or the North American Emergency Response Guide 115.

Special protective equipment for firefighters: Avoid using straight water streams. Water may be ineffective in extinguishing low flash point fires but can be used to cool exposed surfaces. Avoid excessive water spray application. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Keep runoff water out of sewers and water sources.

NFPA rating:

Health:	**2**
Flammability:	**3**
Instability/reactivity:	**0**
Other:	**N/A**



Section 6. ACCIDENTAL RELEASE MEASURES

Personal precautions: STEPS TO BE TAKEN IN THE EVENT MATERIAL IS RELEASED OR SPILLED: Immediately contact emergency personnel. See Section 8 for minimum personal protective equipment (PPE). Additional PPE may be necessary; consult a specialist before handling this product. Evacuate and ventilate area; confine and absorb into absorbent material; place material into approved containers for disposal. For spills in excess of allowable quantities (RQ), notify the National Response Center at (800) 424-8802. Refer to CERCLA 40 CFR and SARA Title III, Section 313 40 CFR 372 for detailed instructions concerning reporting requirements.

Section 7. HANDLING AND STORAGE

Handling: Keep container closed when not in use. Protect containers from abuse and extreme temperatures. Keep away from all sources of ignition. Empty containers may contain residue that may form explosive or toxic vapors. Do not weld or cut near empty container. Use non-sparking tools when opening and closing containers. Maintain well-ventilated work areas to minimize exposure when handling this material. Comply with all applicable EPA, OSHA, NFPA and consistent state and local requirements. Use appropriate grounding and bonding practices.

Avoid skin contact. Exercise good personal hygiene, including removal of soiled clothing and prompt washing with soap and water.

Storage: Hydrocarbons are basically non-conductors of electricity and can become electrostatically charged during mixing, filtering and pumping at high flow rates or loading and transfer operations. If this charge reaches a sufficiently high level, sparks can form that may ignite the vapors of flammable liquids. Sudden release of hot organic chemical vapors or mists from process equipment operating under elevated temperature and pressure or sudden ingress of air into vacuum equipment may result in ignitions without the presence of obvious ignition sources. Nozzle spouts must be kept in contact with the containers or tank during the entire filling operation. A buildup of static electricity can occur upon re-entry into a vehicle during transfer, especially in cold or dry climate conditions. The charge is generated by the action of dissimilar fabrics (clothing or upholstery) rubbing across each other as a person enters/exits the vehicle. A flash fire can result from this discharge if sufficient flammable vapors are present. Therefore, do not get back in your vehicle while transfer is in progress.

Section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits:

Name	CAS No.	Weight %	OSHA — PEL (ppm)	ACGIH® TLV® (ppm)	NIOSH REL (ppm)
N-decane and decanes	872-05-9	4-10	Not established	Not Established	Not Established
N-pentane	78-78-4	2-7	1,000; 600 [A]	600 (pentane/isomers)	120; 610 - STEL
N-heptane	142-82-5	2-5	500	400 ppm 1639 mg/m^3	500 ppm 2000 mg/m^3
N-hexane	110-54-3	1-5	500	50	50
N-octane and isomers	111-65-9; 540-84-1	1-5	300	500	75; 385 — STEL
N-nonane	111-84-2	1-5	Not established	200	200
N-butane and isomers	75-28-5	1-5	Not established	1,000 [B]	800
Methylcyclohexane	108-87-2	1-4	500	400	400
Dimethylpentanes	Mixture	1-5	Not established	Not Established	Not established
1,2,4-trimethylbenzene	95-63-6	1-2	Not established	25	25
Toluene	108-88-3	2-5	200; 300 ceiling; 100 [A]	20 ppm	200 ppm; 300 ceiling
Benzene	71-43-2	1 5 — STEL	0.5 2.5 — STEL Skin – potential absorption	0.1 1 — STEL	

All exposure limits listed are 8-hour time weighted average (TWA) — except where noted otherwise.

TWA — Time Weighted Average is an average value of exposure over the course of an 8-hour work shift.
STEL — Short-Term Exposure Limit, a TWA exposure that occurs over a 15-minute time period
PEL — Permissible Exposure Limit is the maximum amount or concentration of a chemical that a worker may be exposed to under OSHA regulations.
[A] Federal OSHA 1989 PELs were vacated but are in use and enforced by many state OSHA plans.
[B] Aliphatic hydrocarbon gas (alkane C_1-C_4)

Engineering measures: The use of local exhaust ventilation is recommended to control emissions near the source. Provide mechanical ventilation of confined spaces. Use explosion-proof ventilation equipment.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory protection: None required while threshold limits are kept below maximum allowable concentrations; if TWA exceeds limits, NIOSH-approved respirator must be worn. Refer to 29 CFR 1910.134 for complete regulations.

Skin and body protection: Neoprene, butyl or nitrile rubber gloves

Eye protection: Chemical splash goggles. Refer to 29 CFR 1910.133.

Hygiene measures: Minimize body contact with this, as well as all chemicals in general. Wash hands before eating, drinking, smoking, or using toilet facilities. Promptly remove contaminated clothing and launder before reuse.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Black, dark green, or yellow liquid
Physical state (solid/liquid/gas):	Viscous liquid/semi-solid
Substance type (pure/mixture):	Mixture
Color:	Black, dark green, or yellow
Odor:	Strong hydrocarbon or sulfur odor
Molecular weight:	No data available
pH:	Not applicable
Boiling point/range (5-95%):	100°-1100°F
Melting point/range:	No data available
Decomposition temperature:	Not applicable
Specific gravity:	0.7-1.0
Density:	6.6-8.2 pounds/gallon
Vapor density:	1.5-3.0 (air=1)
Vapor pressure:	0-724 mm Hg @ 100°F
Evaporation rate:	No data available
Flash point:	<60° to >200°F
Auto-ignition temperature:	>500°F
Flammable limits in air — (lower):	No data available
Flammable limits in air — (upper):	No data available

Section 10. STABILITY AND REACTIVITY

Stability: This material is stable at 70°F, 760 mm pressure.

Polymerization: Will not occur.
Hazardous decomposition products: Carbon oxides (CO, CO_2), sulfur oxides (SO, SO_2), nitrogen oxides NO, NO_2)
Materials to avoid: Strong oxidizers such as nitrates, chlorates, and peroxides
Conditions to avoid: Sources of heat or ignition

Section 11. TOXICOLOGICAL INFORMATION

Acute toxicity: See table below.

Chronic toxicity:

This product contains benzene at a level of >0.1%. Repeated or prolonged exposure to benzene at concentrations in excess of the TLV may cause serious injury to blood-forming organs. Significant chronic exposure to benzene vapor has been reported to produce various blood disorders ranging from anemia to certain forms of leukemia (cancer) in humans. Benzene produced tumors in rats and mice in lifetime chronic toxicity studies, but the response has not been consistent across species, strain, sex or route of exposure. Animal studies on benzene have demonstrated immune toxicity, chromosomal aberrations, testicular effects and alterations in reproductive cycles and embryo/fetotoxicity, but not teratogenicity.

Product information (toxicological data does not exist for this mixture):

Name	CAS No.	Inhalation:	Dermal:	Oral:
Petroleum Crude Oil	8002-05-9	No data available	No data available	No data available
N-hexane	110-54-3	Rat LC_{50} 48,000ppm/4 hrs	No data available	Rat LD_{50} 25,000 mg/kg
N-pentane	109-66-0	Rat LC_{50} 364,000ppm/4 hrs	No data available	No data available
N-heptane	142-82-5	Rat LC_{50} 103,000ppm/4 hrs	No data available	No data available
Benzene	71-43-2	Rat LC_{50} 10,000ppm/7 hrs	No data available	Human LD_{Lo} 50 mg/kg

Carcinogenic and chronic health effect information: ***refer to Health Hazard Section 2***

Section 12. ECOLOGICAL INFORMATION

Ecotoxicity Effects: Coating action of oil can kill birds, plankton, algae and fish. Keep out of all bodies of water and sewage drainage systems.
Two crude oils were tested in a battery of Ecotoxicity tests. The 96 hour lethal loading (LL_{50}) values for rainbow trout were 21 and 41 milligrams/liter (mg/l). LL_{50} values for invertebrate organisms were determined to be 2.7 and 4.1 mg/l.

Section 13. DISPOSAL CONSIDERATIONS

Cleanup considerations: This product as produced is not specifically listed as an EPA RCRA hazardous waste according to federal regulations (40 CFR 261). However, when discarded or disposed of, it may meet the criteria of a "characteristic" hazardous waste. This product could also contain benzene at > 0.5 ppm and could exhibit characteristics of "toxicity" as determined by the toxicity characteristic leaching procedure (TCLP). This material could become hazardous waste or other substance(s). It is the

responsibility of the user to determine if disposal material is hazardous according to federal, state and local regulations.

Section 14. TRANSPORT INFORMATION

Please refer to 40 CFR 172.101:
DOT:

Transport information:	This product when transported via U.S. commerce would be regulated by DOT regulations.
Proper shipping name:	Petroleum crude oil
UN/identification no.:	UN 1267
Hazard class:	3
Packing group:	II
DOT reportable quantity (lbs):	Not applicable

Section 15. REGULATORY INFORMATION

U.S. TSCA (Toxic Substance Control Act)

All components of this product are listed on the U.S. Toxic Substances Control Act Chemical Inventory (TSCA Inventory) or are exempted from listing because a Low Volume Exemption has been granted in accordance with 40 CFR 723.50.

SARA Section 302: This product does not contain components listed on EPA's Extremely Hazardous Substance (EHS) List.

SARA Section 304:

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) has notification requirements for releases or spills to the environment of the Reportable Quantity (RQ or greater amounts, according to 40 CFR 302.

Name	CERCLA/SARA — Hazardous substances and their reportable quantities (RQ)
Benzene	10 pounds final RQ
N-hexane	5,000 pounds final RQ
Toluene	1,000 pounds final RQ

SARA TITLE III Sections 311/312 Hazardous Categories (40 CFR 370.21)

ACUTE:	**HEALTH HAZARD**
CHRONIC:	**HEALTH HAZARD**
FIRE:	**FIRE HAZARD**
REACTIVITY:	**NO**
SUDDEN RELEASE:	**NO**

313 REPORTABLE INGREDIENTS

This product is a toxic chemical subject to annual reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372: Benzene, N-hexane, Toluene, 1,2,4-trimethylbenzene.

NOTE: *User must consult with applicable state and local agencies for special specifics, determinations or compliance obligations regarding this product.*

Section 16. OTHER INFORMATION

The information and recommendations contained herein are based upon tests, data, and information resources believed to be reliable. However, Crosstex Energy Services, L.P., and its related operations or divisions (Crosstex) do not guarantee the accuracy or completeness, nor shall any of this information constitute a warranty, whether expressed or implied, as to the safety of goods, the merchantability of the goods or the fitness of the goods for a particular purpose. Adjustment to conform to actual conditions of usage may be required. Crosstex assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of this data. No warranty against infringement of any patent, copyright or trademark is made or implied.

Appendix E
Response Zone Habitats and Response Methods

The following summary tables and narrative are from the document "Options for Minimizing Environmental Impacts of Freshwater Spill Response," as referenced in the U.S. EPA Region 5 Regional Contingency Plan (RCP) revised November 2009. Table numbers have been retained as in the referred document for retrieval purposes.

Table 10. MEDIUM OILS: Summary of relative environmental impact from response spills in water environments.

Response Method	WATER ENVIRONMENT Open Water	Large Rivers	Small Lakes/Ponds	Small Rivers/Streams
PHYSICAL RESPONSE METHODS				
Natural Recovery	B	B	C	C
Booming	A	A	A	A
Skimming	A	A	A	A
Barriers/Berms	–	–	–	A
Physical Herding	B	B	B	B
Manual Oil Removal/Cleaning	–	B	C	C
Mechanical Oil Removal	–	B	C	C
Sorbents	B	B	A	A
Vacuum	A	A	A	A
Debris Removal	–	B	B	B
Sediment Reworking	–	–	–	–
Vegetation Removal	B	B	B	B
In-Situ Burning	A	B	B	B
Flooding	–	–	–	–
Low-Pressure, Cold-Water Flushing	–	–	–	–
High-Pressure, Cold-Water Flushing	–	–	–	–
Low-Pressure, Hot-Water Flushing	–	–	–	–
High-Pressure, Hot-Water Flushing	–	–	–	–
Steam Cleaning	–	–	–	–
Sand Blasting	–	–	–	–
CHEMICAL RESPONSE METHODS				
Dispersants	B	C	D	D
Emulsion Treating Agents	B	B	I	I
Visco-Elastic Agents	B	B	B	B
Herding Agents	B	D	B	D
Solidifiers	B	B	B	B
Chemical Shoreline Pretreatment	–	–	–	–
Shoreline Cleaning Agents	–	–	–	–
BIOLOGICAL RESPONSE METHODS				
Nutrient Enrichment	I	I	I	I
Natural Microbe Seeding	I	I	I	I

The following categories are used to compare the relative environmental impact of each response m
for the specific environment or habitat for each oil type, using the following definitions:

A = May cause the least adverse habitat impact.
B = May cause some adverse habitat impact.
C = May cause significant adverse habitat impact.
D = May cause the most adverse habitat impact.
I = Insufficient Information - impact or effectiveness of the method could not be evaluated at this
-" = Not applicable for this oil type.

Table 11. MEDIUM OILS: Summary of relative environmental impact from response methods for spills in shoreline habitats.

Response Method	SHORELINE HABITAT Bedrock	Man-Made	Sand	Vegetated Shores	Sand and Gravel	Gravel	Mud	Wetlands
PHYSICAL RESPONSE METHODS	1,2,8*	1,8	3,4	9	5	6	7,9	10
Natural Recovery	A	B	B	B	B	B	A	A
Booming	–	–	–	–	–	–	–	–
Skimming	–	–	–	–	–	–	–	–
Barriers/Berms	–	–	–	–	–	–	–	–
Physical Herding	–	–	–	–	–	–	–	–
Manual Oil Removal/Cleaning	B	B	A	B	A	B	C	C
Mechanical Oil Removal	–	–	B	C	B	C	D	D
Sorbents	A	A	A	B	A	A	A	A
Vacuum	B	B	B	B	B	B	B	B
Debris Removal	A	A	A	B	A	A	B	B
Sediment Reworking	–	–	B	D	B	B	D	D
Vegetation Removal	–	–	–	B	–	–	–	C
In-Situ Burning	B	B	B	B	B	B	C	B
Flooding	B	B	A	A	A	A	A	A
Low-Pressure, Cold-Water Flushing	A	A	B	A	A	A	C	A
High-Pressure, Cold-Water Flushing	B	A	D	C	C	B	D	D
Low-Pressure, Hot-Water Flushing	B	B	C	D	C	C	C	D
High-Pressure, Hot-Water Flushing	C	B	D	D	D	D	D	D
Steam Cleaning	D	C	–	–	D	D	–	–
Sand Blasting	D	C	–	–	–	–	–	–
CHEMICAL RESPONSE METHODS								
Dispersants	–	–	–	–	–	–	–	–
Emulsion Treating Agents	–	–	–	–	–	–	–	–
Visco-Elastic Agents	–	–	–	–	–	–	–	–
Herding Agents	–	–	–	–	–	–	–	–
Solidifiers	B	B	B	D	B	B	C	D
Chemical Shoreline Pretreatment	I	I	I	I	I	I	I	I
Shoreline Cleaning Agents	B	B	B	I	B	B	D	I
BIOLOGICAL RESPONSE METHODS								
Nutrient Enrichment	C	C	B	B	B	B	I	I
Natural Microbe Seeding	I	I	I	I	I	I	I	I

*Key to ESI codes in Table 5 on page 12.

The following categories are used to compare the relative environmental impact of each response method f or habitat for each oil type, using the following definitions:

A = May cause the least adverse habitat impact.
B = May cause some adverse habitat impact.
C = May cause significant adverse habitat impact.
D = May cause the most adverse habitat impact.
I = Insufficient Information - impact or effectiveness of the method could not be evaluated at this time.
-" = Not applicable for this oil type.

3.3 LARGE RIVERS

Habitat Description

Large rivers have varying salinities, meandering channels, and high flow rates (currents usually greater than one knot). These rivers are not necessarily navigable to large vessels. If they are, the environment can include associated locks, dams, pools, and other manmade structures. Examples of large rivers include the Mississippi River and its major tributaries, the Hudson River, the Delaware River, and the Columbia River. Water levels vary seasonally, with potential for reversal of water flow up tributaries and into backwater lakes during high water. Floodplains are common characteristics of large rivers. Floods generate high suspended sediment and debris loads. In northern regions, ice covers the surface in winter. River banks or bars are discussed in the sections on shore habitats (Sections 3.6 to 3.13), and backwater lakes are discussed in Section 3.4.

Sensitivity

Large rivers have medium sensitivity to oil spill impact because, even though they have high natural removal rates, they also have extensive biological and human use. Biological resources of concern include concentrations of migratory waterfowl and shorebirds, fish, and endangered mussel beds. Under flood conditions, river floodplains contain highly sensitive areas that are important habitats for many valuable species. Floating vegetation is present in areas of low flow. Recreational use of rivers is very high, and many are major transportation corridors. Drinking, industrial, and cooling water intakes are quite vulnerable to oil spills in this environment because of turbulent mixing, and they often shut down when slicks are present.

High currents, eddies, mid-river bars, ice formation, and flooding may complicate response measures in this habitat. Water flow across weirs and dams is of special concern because it is often turbulent and likely to emulsify oil slicks as they pass over these structures. Emulsified oil has a density close to water; it can readily suspend beneath the surface and remain in the water column as it moves through a series of locks and dams. Also, oil can adsorb onto sediment particles, which then settle out in quiet backwaters, potentially contaminating these habitats.

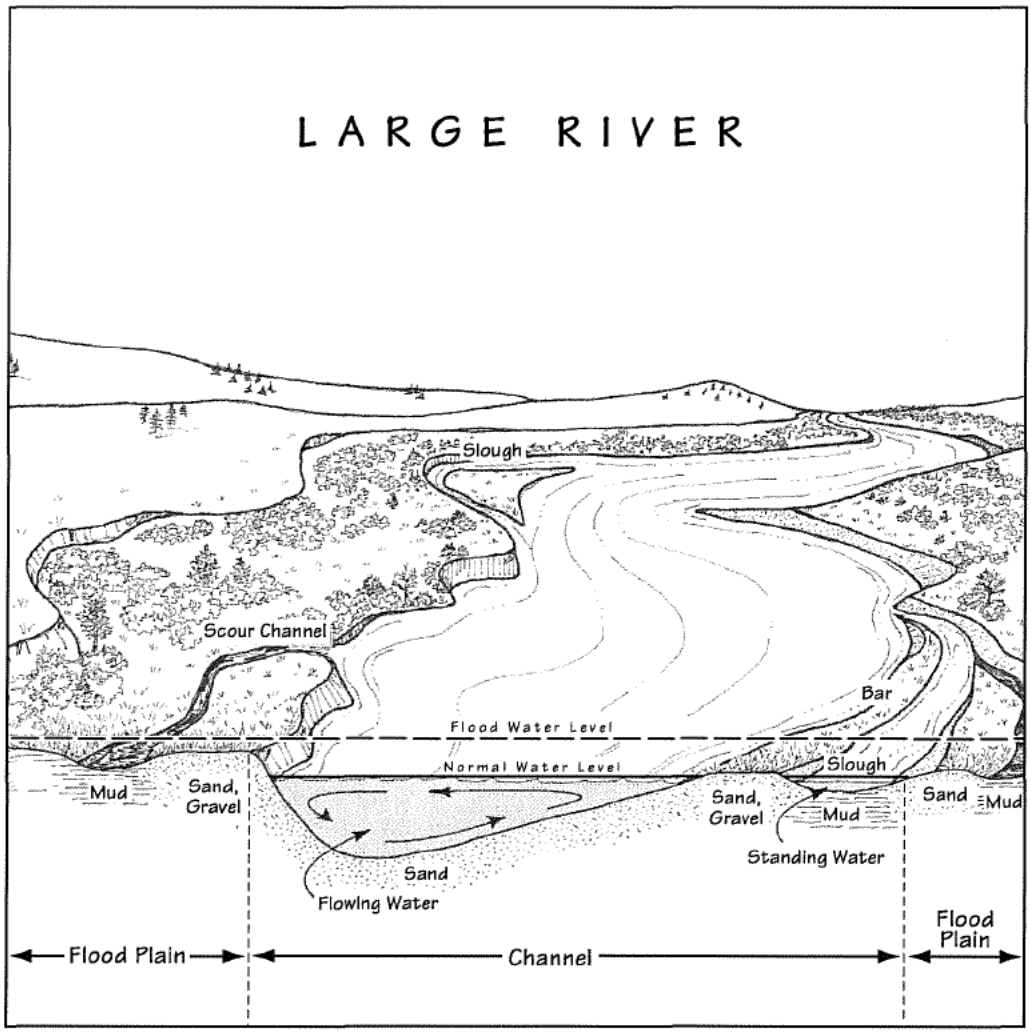

LARGE RIVER
Slough
Scour Channel
Bar
Flood Water Level
Normal Water Level
Slough
Mud
Sand, Gravel
Sand, Gravel
Mud
Sand
Mud
Standing Water
Sand
Flowing Water
Flood Plain
Flood Plain
Channel

Table 15. Relative environmental impact from response methods for LARGE RIVER environments.

Response Method	*Gasoline Products*	*Diesel-Like Oils*	*Medium Oils*	*Heavy Oils*
Booming - Deflection/Exclusion	A	A	A	A
Booming - Containment	–	A	A	A
Skimming/Vacuum	–	A	A	A
Natural Recovery	A	A	B	C
Physical Herding	B	B	B	B
Sorbents	–	B	B	B
In-Situ Burning	–	B	B	B
Emulsion Treating Agents	–	B	B	B
Vegetation Removal	–	B	B	B
Debris Removal	–	B	B	B
Visco-Elastic Agents/Solidifiers	–	B	B	–
Manual Oil Removal/Cleaning	–	–	B	B
Mechanical Oil Removal	–	–	B	B
Dispersants	D	C	C	–
Herding Agents	D	D	D	–
Nutrient Enrichment	–	–	I	I
Natural Microbe Seeding	–	–	I	I

The following categories are used to compare the relative environmental impact of each response method for the specific environment or habitat for each oil type, using the following definitions:

A = May cause the least adverse habitat impact.

B = May cause some adverse habitat impact.

C = May cause significant adverse habitat impact.

D = May cause the most adverse habitat impact.

I = Insufficient Information - impact or effectiveness of the method could not be evaluated at this time.

"-" = Not applicable for this oil type.

RESPONSE METHODS: LARGE RIVER ENVIRONMENTS

Least Adverse Habitat Impact

Booming

- Used primarily for diverting slicks towards collection points in low-current areas
- Safety concerns limit the containment of gasoline spills; however, booms can be used to exclude or deflect the spill away from sensitive resources

Skimming/Vacuum

- Not applicable to gasoline spills because of safety concerns

Some Adverse Habitat Impact

Natural Recovery

- For small gasoline and diesel-like spills, evaporation and natural dispersion would rapidly remove surface slicks
- For all other types and sizes of spills, oil recovery and/or protection of sensitive resources should be attempted

Physical Herding

- May be needed to flush oil trapped in debris, eddies, etc. toward recovery devices
- Water spray onto gasoline spills will likely enhance mixing of the product into the water column

Sorbents

- Not applicable to gasoline spills because of safety concerns and inhibition of evaporation
- May not be practical for large rivers because oil will spread and drift rapidly
- Overuse results in excess waste generation

In-Situ Burning

- May not be practical in rivers because oil will spread rapidly
- Containment and maintenance of minimum thickness for burning (1-3 millimeters) is difficult in fast currents

Emulsion-Treating Agents

- Not applicable for gasoline products, which do not emulsify

Vegetation Removal

- May be considered where oil is trapped in floating vegetation along shore and in eddies
- Removal of oiled vegetation may be required to prevent secondary oiling of wildlife or chronic sheening

Debris Removal

- River debris can trap persistent oils, causing chronic sheening and exposure of aquatic resources

Visco-Elastic Agents/Solidifiers

- Not applicable to gasoline spills because of safety concerns during application and inhibition of evaporation
- Recovery of treated oil may be difficult
- May not be practical in rivers because oil will spread and drift rapidly
- Not effective on heavy oils, which are too viscous to allow the product to mix into the oil

Manual Oil Removal/Cleaning

- Concentrations of heavy oils that have hardened into solid or semi-solid masses can be manually picked up, from boat or shore
- Hand tools can be used to pick up small accumulations of oiled debris
- Operations conducted from boats minimize potential for habitat disruption by trampling onshore

Mechanical Oil Removal

- May be needed to recover large amounts of oil/oily debris trapped in booms or along shore
- Equipment can be operated from barges with less impact; shore-based operations are likely to cause localized disruption of shoreline habitat

Probable Adverse Habitat Impact

Dispersants

- Inhibit the evaporation of gasoline spills
- Not effective on heavy or weathered oils
- For large spills, limited dilution of dispersed oil in rivers likely to raise toxicity concerns

- Impacts on water intakes downstream would have to be evaluated

Most Adverse Habitat Impact

Herding Agents

- High currents make proper application difficult and carry product away
- Not applicable to heavy oils because oil must be fluid

Insufficient Information

Nutrient Enrichment and Natural Microbe Seeding

- Not applicable to gasoline and diesel-like oil spills because they rapidly evaporate
- There is insufficient information on impact and effectiveness for other oil types, particularly for applications in rivers

3.4 SMALL LAKES AND PONDS

Habitat Description

Lakes and ponds are standing bodies of water of variable size and water depth. Waves and currents are generally very low, although the water surface can become choppy. Water levels can fluctuate widely over time, particularly on manmade lakes. Smaller ponds can completely freeze over in winter. The bottom sediments close to shore can be soft and muddy, and the surrounding land can include wet meadows and marshes. Floating vegetation can be common.

The rate of water exchange is highly variable within this group, ranging from days to years. These water bodies can include sections of a river with low flow rates (e.g., behind diversion dams) or that are somewhat isolated from regular flow (e.g., backwater lakes or oxbow lakes). Isolated water bodies, such as kettle lakes, are unique members of this category because they have no surface water outflow, and therefore have very low flushing rates. In shallow water, boat operations would be limited and most response operations would be conducted from shore.

Sensitivity

Small lakes and ponds have medium to high sensitivity to oil spill impact because of low physical removal rates, limited dilution and flushing of oil mixed into the water column, and high biological and human use. They provide valuable habitat for migrating and nesting birds and mammals, and support important fisheries. Small lakes can be the focus of local recreational activities. Associated wetlands have higher sensitivities and are discussed in Section 3.13.

Wind will control the distribution of slicks, holding the oil against a lee shore or spreading it along shore and into catchment areas. Wind shifts can completely change the location of slicks, contaminating previously clean areas. Thus, early protection of sensitive areas is important. The inlet and outlet are key areas for focusing protection efforts. Oil impacts on floating vegetation depend to a large degree on dose, with possible elimination of plants at high doses. Section 5 addresses sinking oils and response under ice conditions.

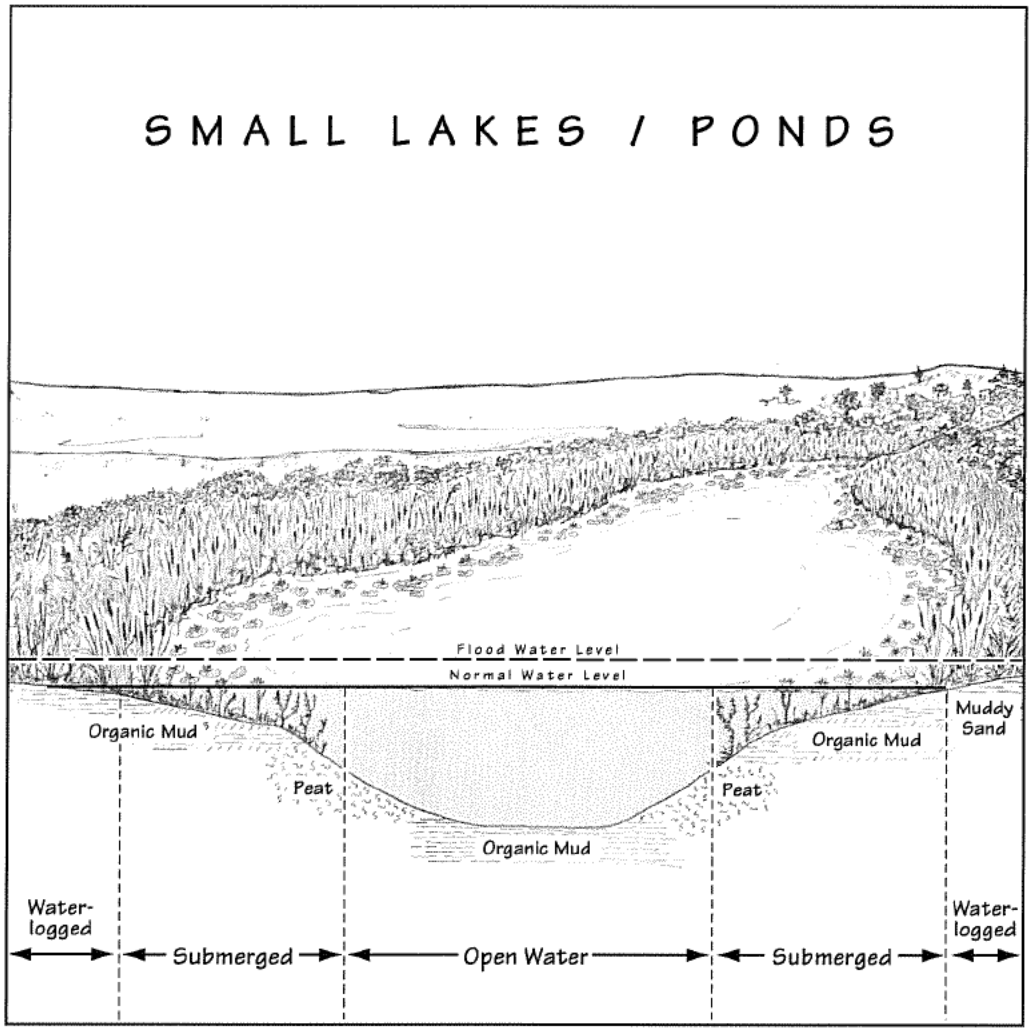

SMALL LAKES / PONDS
Flood Water Level
Normal Water Level
Organic Mud
Peat
Organic Mud
Peat
Organic Mud
Muddy Sand
Water-logged
Submerged
Open Water
Submerged
Water-logged

Table 16. Relative environmental impact from response methods for SMALL LAKE and POND environments.

Response Method	*Gasoline Products*	*Diesel-Like Oils*	*Medium Oils*	*Heavy Oils*
Booming - Deflection/Exclusion	A	A	A	A
Booming - Containment	–	A	A	A
Skimming/Vacuum	–	A	A	A
Sorbents	–	A	A	A
Natural Recovery	A	B	C	C
In-Situ Burning	B	B	B	B
Herding Agents	B	B	B	–
Debris Removal	–	B	B	B
Vegetation Removal	–	B	B	B
Physical Herding	C	B	B	B
Visco-Elastic Agents/Solidifiers	–	B	B	–
Manual Oil Removal/Cleaning	–	C	C	B
Mechanical Oil Removal	–	C	C	C
Dispersants	D	D	D	–
Emulsion Treating Agents	–	I	I	I
Nutrient Enrichment	–	I	I	I
Natural Microbe Seeding	–	I	I	I

The following categories are used to compare the relative environmental impact of each response method for the specific environment or habitat for each oil type, using the following definitions:

A = May cause the least adverse habitat impact.

B = May cause some adverse habitat impact.

C = May cause significant adverse habitat impact.

D = May cause the most adverse habitat impact.

I = Insufficient Information - impact or effectiveness could not be evaluated at this time.

"-" = Not applicable for this oil type.

RESPONSE METHODS: SMALL LAKE AND POND ENVIRONMENTS

Least Adverse Habitat Impact

Booming

- Use containment booms to keep oil from spreading
- Safety concerns limit the containment of gasoline spills; however, booms can be used to exclude or deflect the spill away from sensitive resources

Skimming/Vacuum

- Not applicable to gasoline spills because of safety concerns
- Land-based operations need site-specific restrictions and monitoring to minimize physical destruction

Sorbents

- Overuse results in excess waste generation
- Inhibit the evaporation of gasoline spills

Some Adverse Habitat Impact

Natural Recovery

- Low impact for light oils but may have significant impact for medium crudes and heavier fuel oils because they persist and affect shoreline habitats

In-Situ Burning

- Less environmental impact in winter when snow and ice provide some protection, plants are dormant, and fewer animals are present
- Safety concerns limit containment of gasoline, but may be safely used with natural containment, such as gasoline trapped in ice

Herding Agents

- Most effective under calm conditions
- Should be coupled with recovery when used to protect sensitive habitats
- Not effective on heavy oils because oil must be fluid

Debris Removal

- Debris may be associated with nests or living areas (e.g., beaver lodges), so impacts on resident animal habitat may need consideration
- Operate from small boats to minimize substrate disruption

Vegetation Removal

- If oil is trapped in floating vegetation, may be only way to recover the oil in the absence of water currents
- May be appropriate to prevent secondary oiling of wildlife

Physical Herding

- Care should be taken not to drive oil into the water column or sediment

Visco-Elastic Agents/Solidifiers

- Visco-elastic agents, by improving overall oil recovery from the water surface, reduce secondary shoreline oiling
- Not applicable to gasoline spills because of safety concerns during application and inhibition of evaporation
- Not effective on heavy oils, which are too viscous to allow the product to mix into the oil

Probable Adverse Habitat Impact

Manual Oil Removal/Cleaning

- Inherent inefficiency of manual removal of fluid oils would require large crews or repeated entries, resulting in disruption to substrate and wildlife
- Not applicable for gasoline spills because of safety concerns

Mechanical Oil Removal

- May be needed where oil has heavily contaminated bottom sediments
- May require very intrusive recovery techniques

Most Adverse Habitat Impacts

Dispersants

- Inhibit the evaporation of gasoline spills
- Shallow water depths and low dilution rates may result in high aquatic toxicity from oil/dispersant mixtures

Insufficient Information

Emulsion-Treating Agents

- Not applicable to oils that do not form emulsions, such as gasoline
- Insufficient toxicity data to evaluate environmental impact of shallow freshwater environment use

Nutrient Enrichment and Natural Microbe Seeding

- Not applicable to gasoline spills because they rapidly evaporate
- There is insufficient information on impact and effectiveness for other oil types
- There are special concerns about nutrient overloading in small, restricted water bodies

3.5 SMALL RIVERS AND STREAMS

Habitat Description

Small rivers and streams are characterized by shallow water (generally 1-2 meters) and narrow channels. Water flow can be highly variable, both throughout the seasons and with distance downstream. This grouping includes a wide range of waterbodies, from fast-flowing streams with low falls and numerous rapids over bedrock and gravel, to slow-moving bayous bordered by low muddy banks and fringed with vegetation. Sections of the channel may be choked with log jams and debris, and mid-channel bars and islands can divide water flow into multiple channels. Both boat and vehicular access can be very limited; often the only access will be at bridge crossings. Ice may further complicate response measures in this habitat.

Sensitivity

Small rivers and streams have medium to high sensitivity to oil spill impact. Oil spills may have more of an impact on small rivers and streams than on large rivers due to a variety of conditions, such as lower flow conditions, lower dilution rates, lower overall energy, and greater range of natural habitats. Fish spawn in streams and the tributaries of larger rivers; thus, the most sensitive, early life stages can be present. Fringing wetlands and adjacent floodplains are closely connected to small rivers and streams, and they are areas of high biological use and low natural removal rates.

Slicks usually contaminate both banks, and non-viscous oils are readily mixed into the entire water column in shallow streams, potentially exposing both aquatic and benthic organisms to oil. Initial weathering rates may be slower because spreading and evaporation are restricted in narrow channels and heavy vegetation cover. Fish kills are possible for spills ranging from gasoline to medium crude oils. Many different kinds of mammals, birds, reptiles, and amphibians use the stream bank habitats, and there can be localized high mortality rates of these animals. Spills can cause closure of water intakes for drinking water, irrigation, or industrial use along small rivers. A more aggressive response may be appropriate to prevent contamination of downstream habitat, particularly if water intakes, populated areas, or special habitat resources are present.

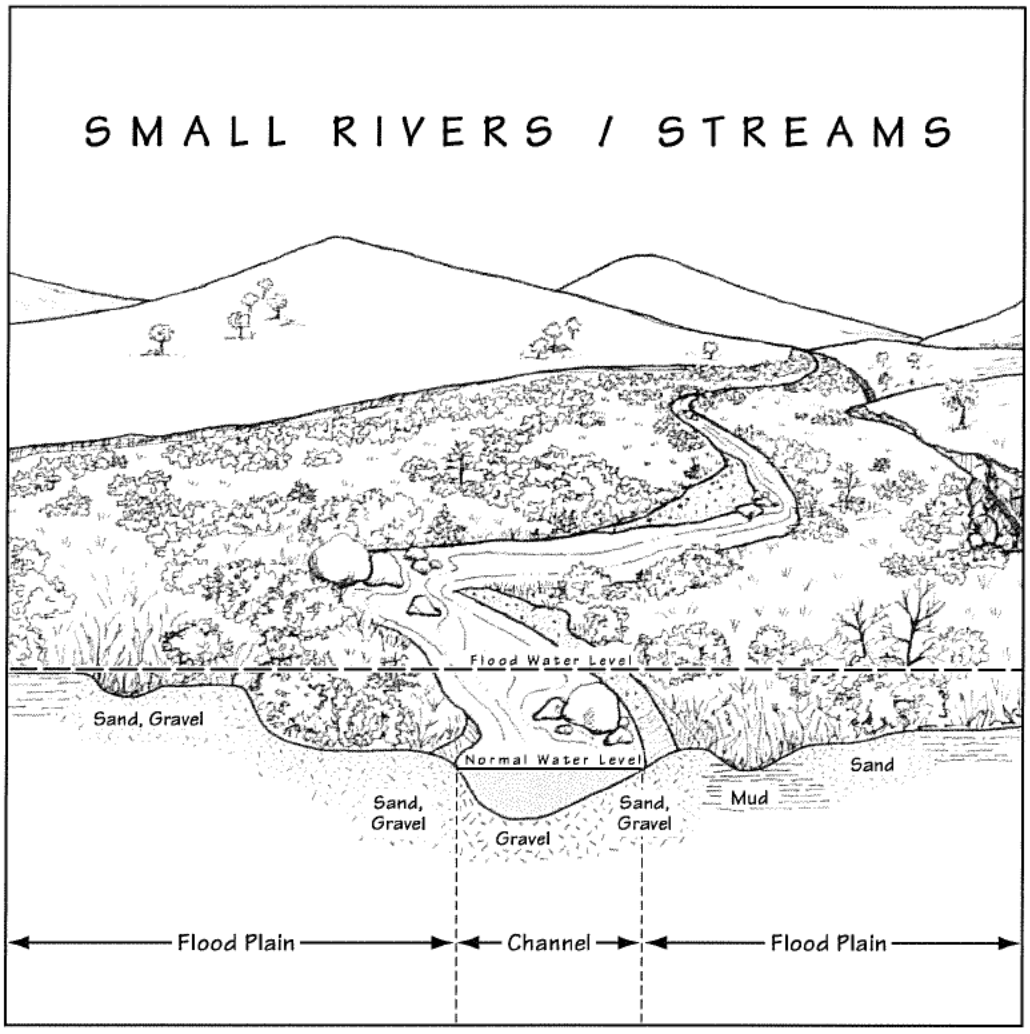

SMALL RIVERS / STREAMS
Flood Water Level
Sand, Gravel
Normal Water Level
Sand
Mud
Sand, Gravel
Gravel
Sand, Gravel
Flood Plain
Channel
Flood Plain

Table 17. Relative environmental impact from response methods for SMALL RIVER and STREAM environments.

Response Method	*Gasoline Products*	*Diesel-Like Oils*	*Medium Oils*	*Heavy Oils*
Booming - Deflection/Exclusion	A	A	A	A
Skimming	A	A	A	A
Booming - Containment	–	A	A	A
Vacuum	–	A	A	A
Sorbents	–	A	A	A
Barriers/Berms	B	A	A	A
Physical Herding	B	B	B	B
Natural Recovery	A	B	C	C
Debris Removal	–	B	B	B
Visco-Elastic Agents/Solidifiers	B	B	B	–
Vegetation Removal	–	B	B	B
In-Situ Burning	C	B	B	B
Manual Oil Removal/Cleaning	–	C	C	B
Mechanical Oil Removal	–	C	C	C
Dispersants	D	D	D	–
Herding Agents	D	D	D	–
Emulsion Treating Agents	–	I	I	I
Nutrient Enrichment	–	I	I	I
Natural Microbe Seeding	–	I	I	I

The following categories are used to compare the relative environmental impact of each response method for the specific environment or habitat for each oil type, using the following definitions:

A = May cause the least adverse habitat impact.

B = May cause some adverse habitat impact.

C = May cause significant adverse habitat impact.

D = May cause the most adverse habitat impact.

I = Insufficient Information - impact or effectiveness of the method could not be evaluated at this time.

"-" = Not applicable for this oil type.

RESPONSE METHODS: SMALL RIVER AND STREAM ENVIRONMENTS

Least Adverse Habitat Impact

Booming

- Used primarily to divert slicks towards collection points in low-current areas
- Safety concerns limit the containment of gasoline spills; however, booms can exclude or deflect the spill away from sensitive resources
- Expect low effectiveness with fast currents, shallow water, and steep banks

Skimming/Vacuum

- To protect public health and downstream resources where spreading is limited, recovery of large gasoline spills could be attempted with firefighting foam to suppress vapors and respiratory protection for workers

Sorbents

- Deploy in booms to recover sheens in low-current areas and along shore
- Trampling of stream bank and bed habitats during deployment and recovery of sorbents can disrupt streamside vegetation and drive oil into the sediment
- Overuse results in excess waste generation

Barriers/Berms

- Potential for physical disruption and sediment contamination in immediate area of the barrier/berm
- If all or most of the flow is diverted, may need to monitor water requirements to habitats downstream of the barrier to mitigate potential impacts
- Safety concerns limit actions at gasoline spills, although berms built ahead of the slick could be used to exclude oil from sensitive areas, such as side channels

Some Adverse Habitat Impact

Physical Herding

- May be only means to flush oil trapped in log jams, beaver dams, behind rocks, and in vegetation/debris along banks to downstream collection areas
- Spraying of gasoline spills can mix the oil into the water column

Natural Recovery

- For small gasoline and diesel-like oil spills, evaporation and natural dispersion would rapidly remove surface slicks
- For all other types and sizes of spills, recovery of free or pooled oil and/or protection of sensitive resources should be attempted

Debris Removal

- Will release trapped oil and speed natural flushing rates

Visco-Elastic Agents/Solidifiers

- Visco-elastic agents may speed recovery of contained oil when time is critical
- Solidifiers may immobilize even gasoline spills, preventing their transport downstream and further impact
- Ineffective on heavy oils, which are too viscous to allow the product to mix into the oil

Vegetation Removal

- May be needed to remove oil trapped in floating and fringing vegetation
- Remove oiled vegetation to prevent chronic sheening in sensitive areas or secondary oiling of wildlife
- Monitor crews to minimize physical disturbance, which can be severe

In-Situ Burning

- May be difficult to protect stream-side vegetation
- Safety concerns limit containment of gasoline, but may be safely used if natural containment is present
- Less impact in winter when snow/ice provide some protection, plants are dormant, and fewer animals are present
- May not be practical in fast flowing streams where containment and maintenance of minimum slick thickness (1-3 millimeters) may be difficult

Probable Adverse Habitat Impact

Manual Oil Removal/Cleaning

- Viable for heavy oils that have solidified versus fluid oils that have spread
- Stream bank disruption likely from movement of work crews

Mechanical Oil Removal

- Only consider when large amounts of solidified oil have accumulated in the stream channel and need to be removed quickly

Most Adverse Habitat Impact

Dispersants

- Enhanced mixing of oil into the water column with restricted dilution will increase acute toxicity to aquatic organisms

Herding Agents

- Toxicity concerns when early life stages are present
- May not be practical due to fast currents and rough water surface
- Oil must be fluid, so not appropriate to heavy oils

Insufficient Information

Emulsion-Treating Agents

- Insufficient toxicity data to evaluate environmental impact of shallow freshwater environment use
- Not applicable to oils that do not form emulsions, such as gasoline

Nutrient Enrichment and Natural Microbe Seeding

- Not applicable to gasoline spills because they rapidly evaporate
- There is insufficient information on impact and effectiveness, particularly for applications in small rivers and streams

3.6 BEDROCK HABITATS (ESI = 1A, 2, 8A)

Habitat Description

This shoreline type is characterized by an impermeable rocky substrate. The rock surface can be highly irregular, with numerous cracks and crevices. The slope of the shoreline varies from vertical rocky cliffs to shelving bedrock shores where flat or gently dipping rock layers have been cut by waves into wide platforms. Bedrock habitats are exposed to wide ranges in wave energy; headlands in the Great Lakes and other large lakes are the most exposed and bedrock shorelines in sheltered lakes are the least exposed. There can be a thin veneer of sand and gravel sediments on the rock platforms, although storm waves will strip these sediments off exposed shorelines. Boulder-sized debris can accumulate at the base of exposed rocky cliffs.

Sensitivity

Bedrock shoreline habitats have a range of sensitivities to oil spills, depending upon their degree of exposure to natural removal processes. They have few attached organisms and plants, and rocky shore productivity is typically low. However, they may provide shelter to fish and nesting sites for birds which can be present in large numbers in nearshore waters.

In *exposed* settings, oil may be partially held offshore by wave reflection off steep cliffs and platforms. Any oil that is deposited will be rapidly removed from exposed faces, although oil persistence on any specific shoreline segment is related to the incoming wave energy during, and shortly after, a spill. The most resistant oil would occur as a patchy band at or above the high water line, or deposited in any surface sediments.

In *sheltered* settings, oil will readily adhere to the rough rocky surface, forming a distinct band along the water line. Cracks and crevices will be sites of oil pooling and persistence. Oil will also penetrate and persist in any surface sediments. Medium to heavy oils can be very sticky and form thick black bands, while lighter oils are more readily removed by wave action, evaporation, and response efforts.

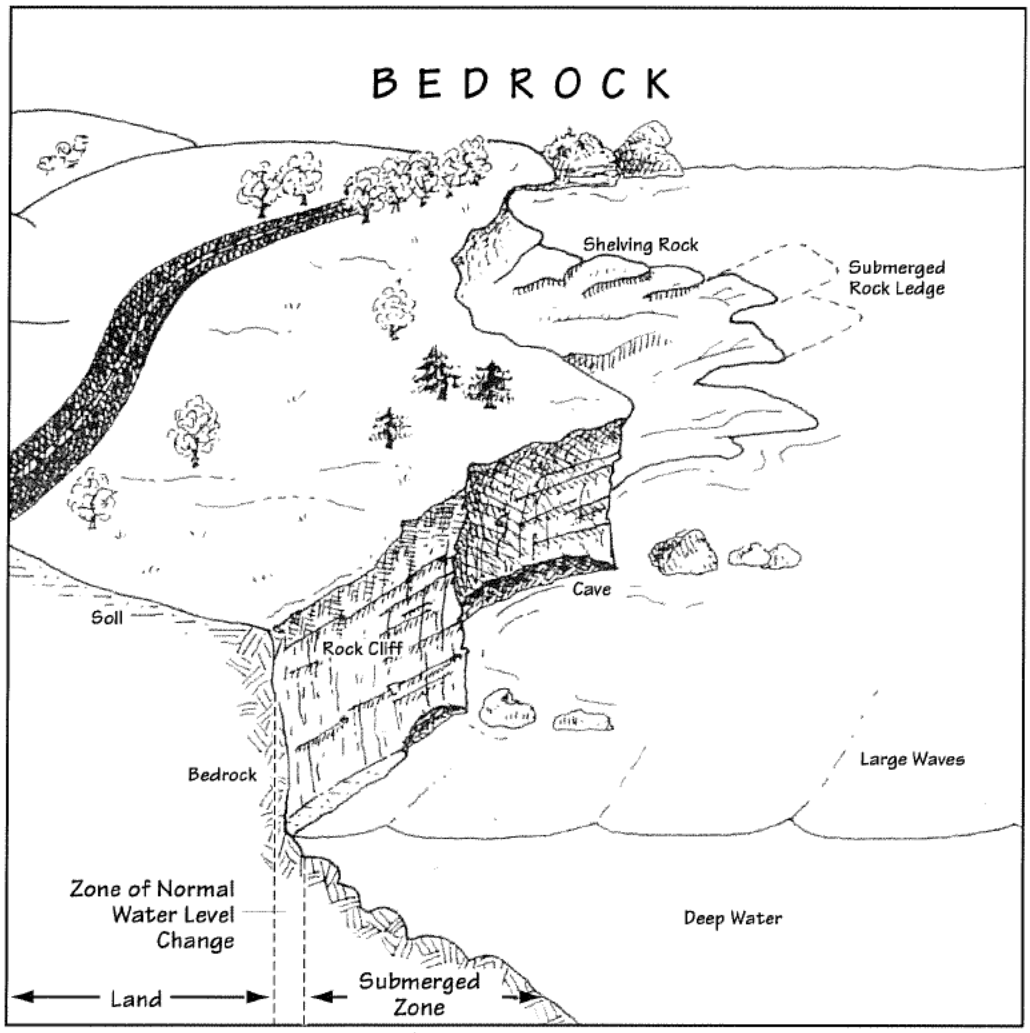

BEDROCK
Shelving Rock
Submerged
Rock Ledge
Cave
Soil
Rock Cliff
Bedrock
Large Waves
Zone of Normal
Water Level
Change
Deep Water
Land
Submerged
Zone

Table 18. Relative environmental impact from response methods for BEDROCK habitats (ESI = 1A, 2, 8A).

Response Method	*Gasoline Products*	*Diesel-Like Oils*	*Medium Oils*	*Heavy Oils*
Natural Recovery	A	A	A	B
Debris Removal	–	A	A	A
Sorbents	B	A	A	B
Flooding	B	A	B	C
Low-Pressure, Cold-Water Flushing	B	A	A	C
High-Pressure, Cold-Water Flushing	B	B	B	B
Manual Oil Removal/Cleaning	–	B	B	A
Vacuum	–	B	B	B
In-Situ Burning	–	B	B	B
Shoreline Cleaning Agents	–	–	B	B
Solidifiers	–	B	B	–
Low-Pressure, Hot-Water Flushing	–	C	B	B
Nutrient Enrichment	–	C	C	D
High-Pressure, Hot-Water Flushing	–	D	C	C
Steam Cleaning	–	D	D	D
Sand Blasting	–	D	D	D
Natural Microbe Seeding	–	I	I	I
Chemical Shoreline Pretreatment	–	I	I	I

The following categories are used to compare the relative environmental impact of each response method for the specific environment or habitat for each oil type, using the following definitions:

A = May cause the least adverse habitat impact.

B = May cause some adverse habitat impact.

C = May cause significant adverse habitat impact.

D = May cause the most adverse habitat impact.

I = Insufficient Information - impact or effectiveness of the method could not be evaluated at this time.

"-" = Not applicable for this oil type.

RESPONSE METHODS: BEDROCK HABITATS

Least Adverse Habitat Impact

Natural Recovery

- Sheltered bedrock may need cleanup because of slow natural removal rates
- Cleanup of larger spills may be needed because of the amount of oil present
- Heavy oils may persist on all but the most exposed shores

Debris Removal

- Degree of oiling that warrants debris removal and disposal depends on human and sensitive resource use of the site

Sorbents

- Overuse generates excess waste
- Physical removal rates of heavy oils will be slow, so less oil will be mobilized for recovery by sorbents

Some Adverse Habitat Impact

Flooding and Low-Pressure, Cold-Water Flushing

- Most effective on fresh, fluid oils
- Use on heavy oils is likely to leave large amounts of residual oil in the environment
- Use on gasoline spills may transport the oil to more sensitive habitats

High-Pressure, Cold-Water Flushing

- Primarily applicable to medium-crude oils while still fresh and liquid
- Can be effective in removing oil from crevices and pockets of sediment on bedrock

Manual Oil Removal/Cleaning

- Expect significant residues of diesel and medium oils with only manual removal because of their fluidity and difficulty of manual pickup
- Useful for heavy oils in patches or crevices

Vacuum

- Not applicable to gasoline spills because of safety concerns

In-Situ Burning

- Can effectively remove heavy oil accumulations
- Concerns about air pollution, thermal impact on biota, and physical nature of the residue

Shoreline Cleaning Agents

- May be only technique to remove sticky oils without hot-water, high-pressure washing
- Individual products vary in their toxicity and recoverability of the treated oil

Solidifiers

- Prevent the oil from being washed back into the water and are most appropriate for heavy accumulations of pooled oil on shelving bedrock
- Not effective on heavy oils, which are too viscous to allow the product to mix into the oil

Low-Pressure, Hot Water Flushing

- Any organisms in the application area would be adversely affected by hot water
- Most effective on heavy crudes where heat would make oil more fluid

Probable Adverse Habitat Impact

Nutrient Enrichment

- Not applicable to gasoline spills because they rapidly evaporate
- Concerns about nutrient overloading in poorly flushed areas or where nutrient toxicity, especially ammonia, might be significant
- Potentially effective for lighter oils that leave thin residues; less effective for thick, weathered oil residues

High-Pressure, Hot-Water Flushing

- Will likely kill any attached organisms; use is appropriate in limited areas only when oil removal is needed for aesthetic reasons

Most Adverse Habitat Impact

Steam Cleaning And Sand Blasting

- Highly intrusive techniques that will kill any organisms present
- Use only for aesthetic reasons in very limited areas

Insufficient Information

Natural Microbe Seeding

- There is insufficient information on impact and effectiveness

Chemical Shoreline Pretreatment

- There is insufficient information on available products, their effectiveness, or impact

3.7 MANMADE STRUCTURES (ESI = 1B, 6B, 8B)

Habitat Description

Manmade structures include vertical shore protection structures such as seawalls, piers, and bulkheads, as well as riprap revetments and groins, breakwaters, and jetties. Vertical structures can be constructed of concrete, wood, and corrugated metal. They usually extend below the water surface, although seawalls can have beaches or riprap in front of them. Riprap revetments are constructed of boulder-sized pieces of rock, rubble, or formed concrete pieces (e.g., tetrapods), placed parallel to the shoreline for shore protection. Riprap groins are oriented perpendicular to shore to trap sediment; jetties are designed to protect and maintain channels; and breakwaters are offshore structures constructed to protect an area from wave attack. Riprap structures have very large void spaces and are permeable, while seawalls and bulkheads have impermeable, solid substrates. These structures are very common along developed shores, particularly in harbors, marinas, and residential areas. The range in degree of exposure to waves and currents varies widely, from very low in dead-end canals, to very high on offshore breakwaters. Boat wakes can generate wave energy in otherwise sheltered areas.

Sensitivity

Manmade structures have a range of sensitivities to oil spills, depending on the degree of exposure to natural removal processes. Biological communities and use are sparse. Often, there are sources of pollutants or habitat degradation nearby, such as urban runoff, chronic small oil spills in marinas, poor water quality, and limited water circulation. More intrusive cleanup techniques are often conducted due to their lower biological use, higher public demand for oil removal for aesthetic reasons, and need to minimize human exposure to oil in populated areas. It is acknowledged that manmade structures can vary in permeability, cohesion, and mobility and, in turn, how they are affected by oiling. In this document, however, manmade structures have been grouped together so that the higher degree of cleanup often required can be adequately addressed.

Vertical structures are generally impermeable to oil penetration, but oil can heavily coat rough surfaces, forming a band at the water line. During storms, oil can splash over the top and contaminate terrestrial habitats. Riprap poses significant cleanup problems because of large void spaces between the riprap and heavy accumulations of debris. Large amounts of oil can become trapped in the riprap, where it is difficult to remove and a potential source of sheening.

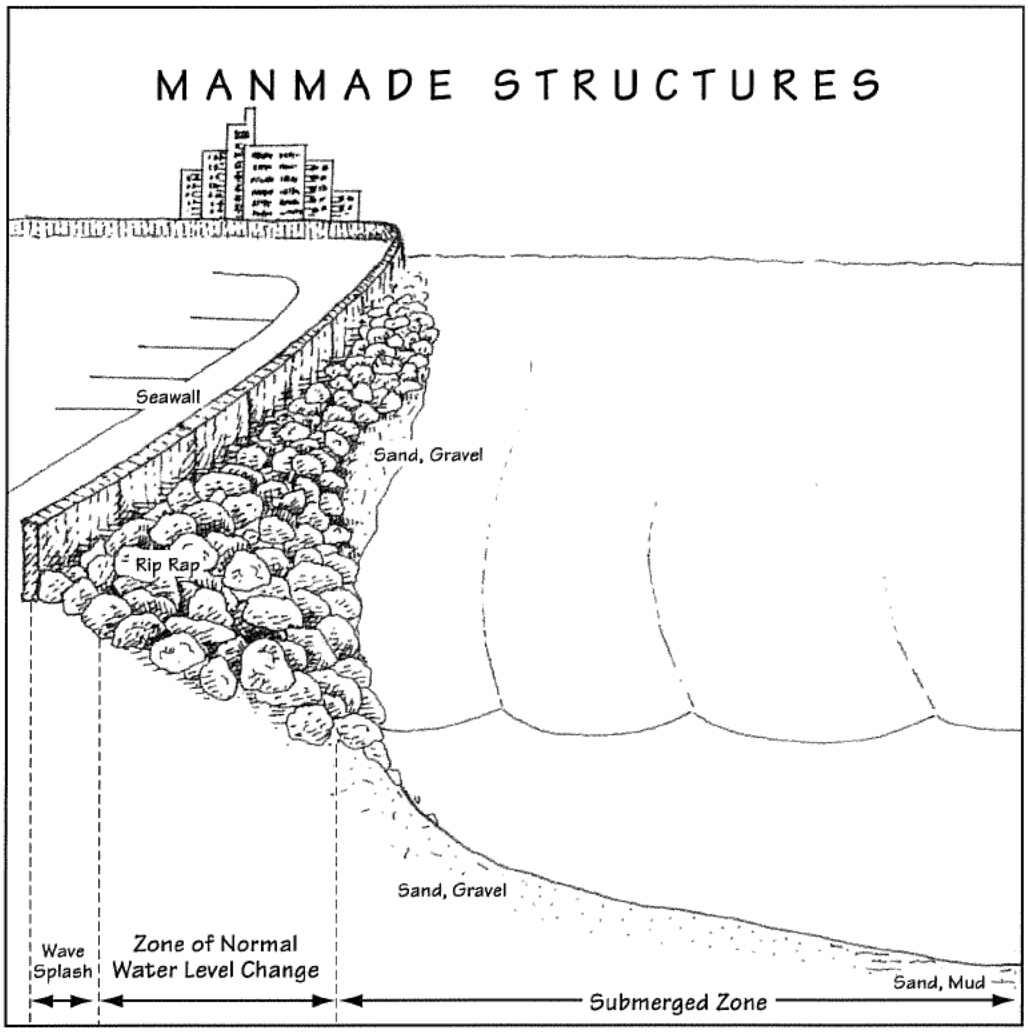

MANMADE STRUCTURES
Seawall
Sand, Gravel
Rip Rap
Sand, Gravel
Wave Splash
Zone of Normal Water Level Change
Submerged Zone
Sand, Mud

Table 19. Relative environmental impact from response methods for MANMADE structures (ESI = 1B, 6B, 8B).

Response Method	*Gasoline Products*	*Diesel-Like Oils*	*Medium Oils*	*Heavy Oils*
Manual Oil Removal/Cleaning	–	A	A	A
Debris Removal	–	A	A	A
High-Pressure, Cold-Water Flushing	B	A	A	B
Sorbents	B	A	A	B
Vacuum	–	B	A	A
Natural Recovery	A	A	B	B
Flooding	B	A	A	C
Low-Pressure, Cold-Water Flushing	B	A	A	C
Low-Pressure, Hot-Water Flushing	–	B	B	B
High-Pressure, Hot-Water Flushing	–	B	B	B
Shoreline Cleaning Agents	–	B	B	B
Solidifiers	B	B	B	–
In-Situ Burning	–	B	B	B
Nutrient Enrichment	–	C	C	D
Steam Cleaning	–	C	C	C
Sand Blasting	–	C	C	C
Chemical Shoreline Pretreatment	–	I	I	I
Natural Microbe Seeding	–	I	I	I

The following categories are used to compare the relative environmental impact of each response method for the specific environment or habitat for each oil type, using the following definitions:

A = May cause the least adverse habitat impact.

B = May cause some adverse habitat impact.

C = May cause significant adverse habitat impact.

D = May cause the most adverse habitat impact.

I = Insufficient Information - impact or effectiveness of the method could not be evaluated at this time.

"-" = Not applicable for this oil type.

RESPONSE METHODS: MANMADE STRUCTURES

Least Adverse Habitat Impact

Manual Oil Removal/Cleaning and Debris Removal

- Effective for removing debris and small, persistent pockets of oil

High-Pressure, Cold-Water Flushing

- Effective for removing sticky oils from solid surfaces and flushing pooled oil from riprap crevices, even for gasoline in populated areas
- May flush oiled sediments (if present) into nearshore bottom habitats
- Use on heavy oils is likely to leave large amounts of residual oil in the environment
- Use on gasoline spills may transport the oil to more sensitive habitats

Sorbents

- Use along riprap structures to recover residual sheening oil after other cleanup methods have been conducted, even for gasoline
- Physical removal rates of heavy oils will be slow, so less oil will be mobilized for recovery by sorbents
- Overuse results in excess waste generation

Vacuum

- Early use of vacuum on pooled oil in crevices can increase the oil recovery rate and minimize oil losses during flushing
- Can only remove thick oil from accessible areas, so high residual oil likely

Natural Recovery

- Most effective for lighter oils and more exposed settings
- Heavier oils may necessitate removing persistent residues

Some Adverse Habitat Impact

Flooding

- Not applicable to seawalls; on riprap, only effective when the oil is fluid
- May be used on riprap in developed areas, even for gasoline spills, where pockets of the spilled product pose human health concerns
- Use on heavy oils is likely to leave large amounts of residual oil in the environment
- Use on gasoline spills may transport the oil to more sensitive habitats

Low-Pressure, Cold-Water Flushing

- Only effective when the oil is fluid
- Directed water spray can help remove trapped oil, even for gasoline
- Use on heavy oils is likely to leave large amounts of residual oil in the environment
- Use on gasoline spills may transport the oil to more sensitive habitats

Low-Pressure, Hot-Water Flushing and High-Pressure, Hot-Water Flushing

- Assumes that there are no biological communities in or immediately downslope from treatment area
- High water temperatures are often needed to liquefy heavy oils
- High water pressures are often needed to remove weathered oils from solid substrates and riprap

Shoreline Cleaning Agents

- Individual products vary in their toxicity and ability to recover the treated oil

Solidifiers

- Appropriate to recover and control chronic sheening, even for gasoline
- Not effective on heavy oils, which are too viscous to allow the product to mix into the oil

In-Situ Burning

- Thick oil likely to occur as isolated pockets that are difficult to access and burn
- There will be concerns about air pollution and physical nature of the residue
- Public safety issues for burning in developed areas will be of special concern

Probable Adverse Habitat Impact

Nutrient Enrichment

- Not applicable to gasoline spills because they rapidly evaporate
- Concerns about nutrient overloading in poorly flushed areas or where nutrient toxicity, especially ammonia, might be significant
- Potentially effective for lighter oils that leave thin residues; less effective for thick, weathered oil residues

Steam Cleaning and Sand Blasting

- Used when removing persistent oil is required for aesthetic reasons

Insufficient Information

Chemical Shoreline Pretreatment

- There is insufficient information on available products, their effectiveness, and impact

Natural Microbe Seeding

- There is insufficient information on impact and effectiveness, particularly for applications on manmade structures

3.8 SAND HABITATS (ESI = 4)

Habitat Description

Sand habitats have a substrate composed of sediments that are predominantly finer than 2 millimeters but greater than silt or clay-sized material (see Appendix B for grain sizes). The shoreline may consist of well-sorted sands of one principal size, or of poorly sorted mixtures of muddy sand, gravelly sand, or a combination of these two. When the sediments are fine-grained sand, beaches may be wide and flat; where the sediments are coarse-grained sand, they usually are steeper and narrower. Sandy shorelines may be naturally eroding, accreting, or stable, and groins or breakwaters may be placed to trap sand and maintain some beaches. Exposed sand beaches can undergo rapid erosional or depositional changes during storms. In developed areas, sand beaches can be artificially created by man and are commonly used for recreation. Sand bars and banks along rivers are also included in this habitat.

Sensitivity

Sand habitats have low to medium sensitivity to oil spills. They generally do not have sizable biological communities except where the habitat tends to be protected and consists of poorly sorted muddy sediments. Thus, ecological effects are likely to be of limited extent because of the low natural biological productivity. In developed areas, sand beaches are considered sensitive because of their high recreational use.

During small spills, oil will concentrate in a band along the swash line. Maximum penetration into fine-grained sand will be less than 15 centimeters; penetration in coarse sand can reach 25 centimeters or greater. Clean sand can bury oiled layers quickly, creating more difficult cleanup issues. On heavily used recreational beaches, extensive cleanup is usually required to remove as much of the oil as possible. When large amounts of sediment must be removed, it may be necessary to replace these sediments with clean material. Traffic on sand can push oil deeper.

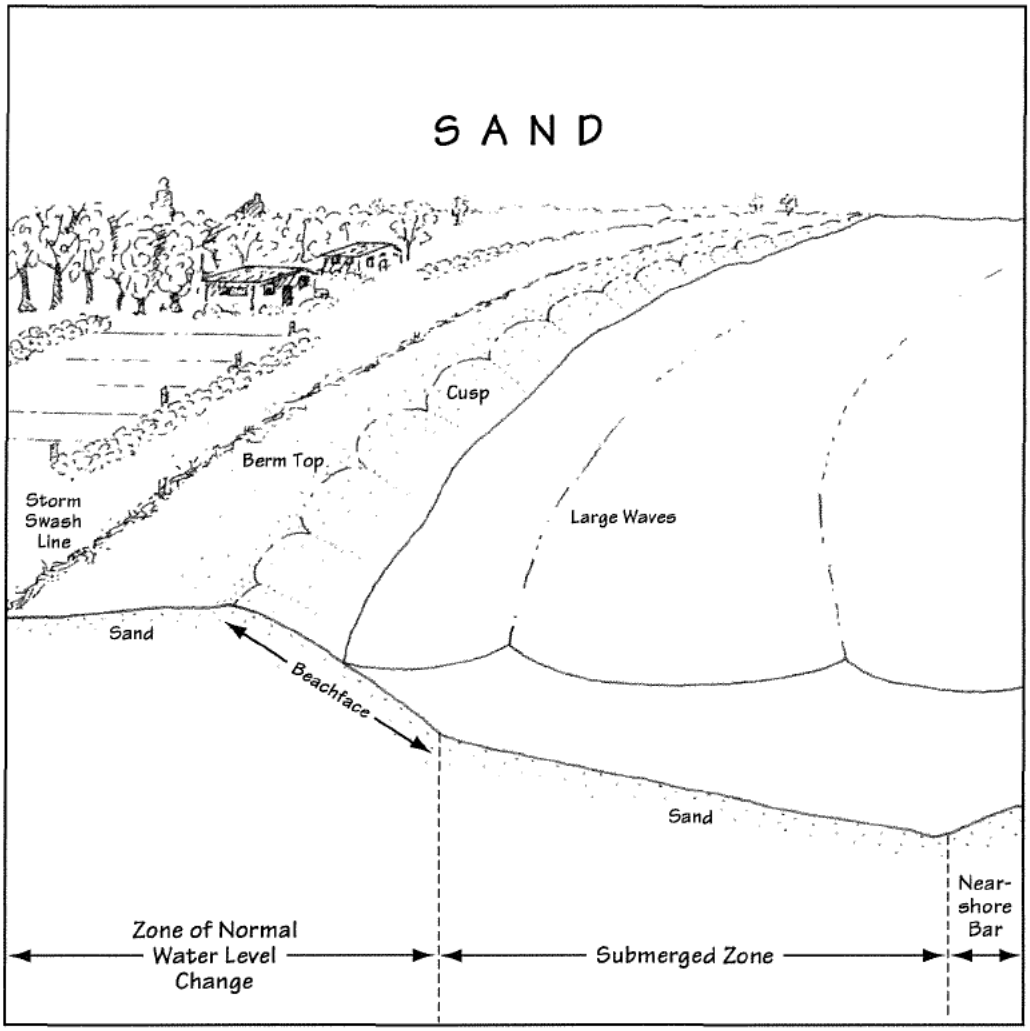

SAND
Cusp
Berm Top
Storm
Swash
Line
Large Waves
Sand
Beachface
Sand
Near-
shore
Bar
Zone of Normal
Water Level
Change
Submerged Zone

Table 20. Relative environmental impact from response methods for SAND habitats (ESI = 4).

Response Method	*Gasoline Products*	*Diesel-Like Oils*	*Medium Oils*	*Heavy Oils*
Debris Removal	–	A	A	A
Natural Recovery	A	A	B	B
Flooding	B	A	A	B
Sorbents	–	A	A	B
Manual Oil Removal/Cleaning	D	B	A	A
Mechanical Oil Removal	D	B	B	A
Low-Pressure, Cold-Water Flushing	B	B	B	B
Vacuum	–	B	B	B
Sediment Reworking	D	B	B	B
Nutrient Enrichment	–	B	B	C
Shoreline Cleaning Agents	–	–	B	B
Solidifiers	–	B	B	–
In-Situ Burning	–	–	B	B
Low-Pressure, Hot-Water Flushing	D	C	C	B
High-Pressure, Cold-Water Flushing	D	D	D	D
High-Pressure, Hot-Water Flushing	D	D	D	D
Chemical Shoreline Pretreatment	–	I	I	I
Natural Microbe Seeding	–	I	I	I

The following categories are used to compare the relative environmental impact of each response method for the specific environment or habitat for each oil type, using the following definitions:

A = May cause the least adverse habitat impact.

B = May cause some adverse habitat impact.

C = May cause significant adverse habitat impact.

D = May cause the most adverse habitat impact.

I = Insufficient Information - impact or effectiveness of the method could not be evaluated at this time.

"-" = Not applicable for this oil type.

RESPONSE METHODS: SAND HABITATS

Least Adverse Habitat Impact

Debris Removal

- Degree of oiling that warrants debris removal and disposal depends on use by humans and sensitive resources

Natural Recovery

- Lower impact for small spills, lighter oil types, and remote areas

Flooding

- Only effective when the oil is fluid and on the sand surface, rather than penetrated or buried
- Use on heavy oils is likely to leave large amounts of residual oil in the environment
- Use on gasoline spills may transport the oil to more sensitive habitats

Sorbents

- Not applicable to gasoline spills because they rapidly evaporate
- Physical removal rates of heavy oils will be slow, so less oil will be mobilized for recovery by sorbents
- Overuse results in excess waste generation

Some Adverse Habitat Impact

Manual Oil Removal/Cleaning

- Minimizes sediment removal and problems of erosion and waste disposal
- Effective when oil is mostly on the surface, not buried beneath clean sand
- Gasoline tends to quickly evaporate; therefore habitat disruption, worker safety concerns, and waste generated by manual cleanup are not balanced by benefits in removing oil

Mechanical Oil Removal

- Tends to remove large amounts of clean sand with the oiled sand
- Use on high-use beaches where rapid removal of oil is required and where long stretches of shoreline are heavily oiled

- Gasoline tends to quickly evaporate; therefore habitat disruption, worker safety concerns, and waste generated from mechanical cleanup are not balanced by benefits in removing oil

Low-Pressure, Cold-Water Flushing

- Only effective when the oil is fluid and adheres loosely to the sediments
- Optimize pressure to minimize the amount of sand washed downslope

Vacuum

- Early use of vacuum on pooled, liquid oil can prevent deeper penetration
- Will minimize amount of sorbent waste when used with flushing efforts
- Can vacuum heavy, non-sticky oil from sand substrates completely, but slowly

Sediment Reworking

- Appropriate for lightly oiled and stained sediments, to speed removal rates, and as a final step to polish recreational beaches
- Because gasoline tends to quickly evaporate, habitat disruption, worker safety concerns, and waste generated from sediment reworking are not balanced by benefits in removing oil

Nutrient Enrichment

- Potentially effective for lighter oils that leave thin residues; less effective for thick, weathered oil residues
- May be concern about nutrient overloading in poorly flushed areas
- Not applicable to gasoline spills because they rapidly evaporate

Shoreline Cleaning Agents

- May be only technique to remove viscous oils without removing sediment
- Individual products vary in their toxicity and ability to recover the treated oil

Solidifiers

- Not applicable to gasoline spills because they rapidly evaporate
- Early use may prevent pooled oil from penetrating deeper
- Not effective on heavy oils, which are too viscous to allow the product to mix into the oil

In-Situ Burning

- Can effectively remove pooled surface oil accumulations
- Concerns about air pollution, physical nature of the residue, and thermal impact on biota
- May have to dig trenches to accumulate oil in pools
- Lighter oils will penetrate the sand, leaving insufficient surface concentrations to burn

Probable Adverse Habitat Impact

Low-Pressure, Hot-Water Flushing

- May be needed to soften and lift sticky oil off the sand surface
- Any organisms present will be adversely affected by hot water

Most Adverse Habitat Impact

High-Pressure, Cold-Water Flushing And High-Pressure, Hot-Water Flushing

- High-pressure water jets will fluidize sand-sized sediments, erode the beach, and wash the oiled sediment into nearshore habitats

Insufficient Information

Chemical Shoreline Pretreatment

- More information needed on available products, their effectiveness, and impact

Natural Microbe Seeding

- There is insufficient information on impact and effectiveness in freshwater habitats

3.9 MIXED SAND AND GRAVEL HABITATS (ESI = 3, 5)

Habitat Description

Mixed sand and gravel habitats are characterized by a substrate that is composed predominantly of a mixture of sand- to cobble-sized sediments (see Appendix B for grain sizes). These habitats may vary from a well-sorted cobble layer overlying finer-grained (sand-sized) sediments to mixtures of sand, pebble, and cobble. Typically, well-sorted beaches are exposed to some wave or current action that separates and transports finer-grained sediments; however, the sediment distribution does not necessarily indicate the energy at a particular shoreline. On depositional beaches multiple berms can be formed at the different water levels generated during storms. In glaciated areas, the gravel component can include very large boulders. Natural replenishment rates are very slow for gravel, compared to sand. Mixed sand and gravel habitats occur as beaches along the Great Lakes and as point bars along rivers and streams.

Sensitivity

Mixed sand and gravel habitats have medium sensitivity to oil spills. Biological communities are very sparse because of sediment mobility, desiccation, and low organic matter. Most invertebrates living in this habitat are deep burrowers, such as some oligochaete worms and insect larvae. Characteristic insects are mayflies, stoneflies, caddisflies, and midges, although mayflies and stoneflies are scarce or absent where silt is present. The nearshore habitat is used by fish for spawning and protects fry and larvae. There are also limited numbers of birds and mammals.

Viscous oils reaching these habitats may not penetrate into the sediments because the pore spaces between sediments are filled with sand. Therefore, deep oil penetration and long-term persistence are lower than on gravel substrates. However, oil can still occur at depths below those of annual reworking, particularly if the oil is deposited high on the beach out of the reach of normal wave activity or is rapidly buried. Erosion can be a concern when large quantities of sediment are physically removed. In more sheltered areas, asphalt pavements can form if heavy surface oil deposits are not removed. Once formed, these pavements are very stable and can persist for years.

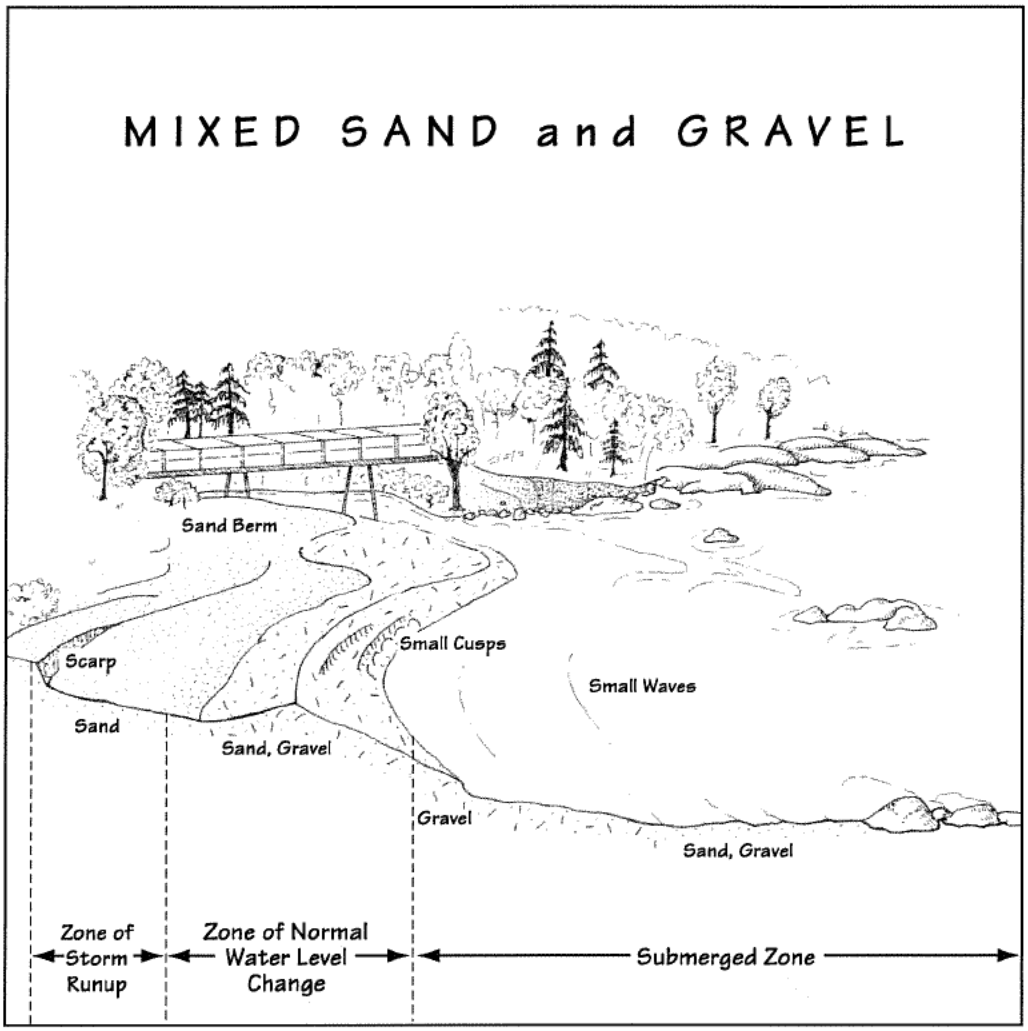

MIXED SAND and GRAVEL
Sand Berm
Scarp
Small Cusps
Small Waves
Sand
Sand, Gravel
Gravel
Sand, Gravel
Zone of Storm Runup
Zone of Normal Water Level Change
Submerged Zone

Table 21. Relative environmental impact from response methods for MIXED SAND and GRAVEL habitats (ESI = 3, 5).

Response Method	*Gasoline Products*	*Diesel-Like Oils*	*Medium Oils*	*Heavy Oils*
Debris Removal	–	A	A	A
Flooding	A	A	A	C
Natural Recovery	A	A	B	B
Low-Pressure, Cold-Water Flushing	B	A	A	B
Sorbents	–	A	A	B
Vacuum	–	B	B	B
Manual Oil Removal/Cleaning	D	B	A	A
Sediment Reworking	D	B	B	B
Mechanical Oil Removal	D	C	B	B
Shoreline Cleaning Agents	–	–	B	B
Nutrient Enrichment	–	B	B	C
In-Situ Burning	–	–	B	B
Solidifiers	–	–	B	–
High-Pressure, Cold-Water Flushing	C	C	C	C
Low-Pressure, Hot-Water Flushing	D	C	C	B
High-Pressure, Hot-Water Flushing	D	D	D	D
Steam Cleaning	–	D	D	D
Chemical Shoreline Pretreatment	–	I	I	I
Natural Microbe Seeding	–	I	I	I

The following categories are used to compare the relative environmental impact of each response method for the specific environment or habitat for each oil type, using the following definitions:

A = May cause the least adverse habitat impact.

B = May cause some adverse habitat impact.

C = May cause significant adverse habitat impact.

D = May cause the most adverse habitat impact.

I = Insufficient Information - impact or effectiveness of the method could not be evaluated at this time.

"-" = Not applicable for this oil type.

RESPONSE METHODS: MIXED SAND AND GRAVEL HABITATS

Least Adverse Habitat Impact

Debris Removal

- Degree of oiling that warrants debris removal and disposal depends on amount of use by humans and sensitive resources

Flooding

- Most effective when the oil is fluid and adheres loosely to the sediments
- Use on heavy oils is likely to leave large amounts of residual oil in the environment

Natural Recovery

- Least impact for small spills, lighter oil types, and remote areas

Low-Pressure, Cold-Water Flushing

- Most effective when the oil is fluid and adheres loosely to the sediments
- Excessive pressures can cause erosion
- Use on heavy oils is likely to leave large amounts of residual oil in the environment
- Use on gasoline spills may transport the oil to more sensitive habitats

Sorbents

- Overuse generates excess waste
- Useful for recovering sheens, even for gasoline spills
- Physical removal rates of heavy oils will be slow, so less oil will be mobilized for recovery by sorbents

Some Adverse Habitat Impact

Vacuum

- Early use of vacuum on pooled, liquid oil can prevent deeper penetration

Manual Oil Removal/Cleaning

- Gasoline tends to evaporate quickly; therefore manual cleanup causes habitat disruption, worker safety concerns, and generates waste with no benefits due to removing oil

- Minimizes sediment removal and problems of erosion and waste disposal
- Preferable when oil is mostly on the surface, not deeply penetrated or buried

Sediment Reworking

- Use to break up heavy surface oil or expose persistent subsurface oil deposits, particularly where sediment removal will cause erosion
- Use where there is sufficient exposure to waves to rework the sediments into their original profile and distribution
- Gasoline tends to evaporate quickly; therefore sediment reworking causes habitat disruption, worker safety concerns, and generates waste with no benefits due to removing oil

Mechanical Oil Removal

- Tends to remove large amounts of sediment with the oil
- Applicable for heavier oil types, which are difficult to remove otherwise
- Gasoline tends to evaporate quickly; therefore mechanical cleanup causes habitat disruption, worker safety concerns, and generates waste with no benefits from removing oil

Shoreline Cleaning Agents

- May be only technique to remove viscous oils without removing sediment
- Individual products vary in their toxicity and ability to recover the treated oil

Nutrient Enrichment

- Not applicable to gasoline spills because they rapidly evaporate
- Potentially effective for lighter oils that leave thin residues; less effective for thick, weathered oil residues
- Most applicable as a secondary technique after gross oil removal
- Concerns about nutrient overloading in poorly flushed areas

In-Situ Burning

- Can effectively remove pooled surface oil accumulations
- Concerns about air pollution, physical nature of the residue, and thermal impact on biota
- May have to dig trenches to accumulate oil in pools
- Lighter oils will not remain on the sediment surface

Solidifiers

- Early use may prevent pooled oil from penetrating deeper
- Not applicable to gasoline spills because they rapidly evaporate
- May be useful in recovering sheens when deployed as booms and pillows
- Not effective on heavy oils, which are too viscous to allow the product to mix into the oil
- Could use for lighter oils with correct product and situation

Probable Adverse Habitat Impact

High-Pressure, Cold-Water Flushing

- High-pressure water jets will flush oiled sediments into nearshore habitats
- Excessive pressures can cause erosion if large amounts of sand are present

Low-Pressure, Hot-Water Flushing

- Any organisms present will be affected by hot water
- Use on gasoline spills may transport the oil to more sensitive habitats

Most Adverse Habitat Impact

High-Pressure, Hot-Water Flushing

- Will flush oiled sand into nearshore zone and affect any organisms present

Steam Cleaning

- Highly intrusive technique; will kill any organisms present
- Potential for released oil to penetrate deeper into the sediments

Insufficient Information

Chemical Shoreline Pretreatment

- Need more information on available products, their effectiveness, and impact

Natural Microbe Seeding

- There is insufficient information on impact and effectiveness in freshwater habitats

3.10 GRAVEL HABITATS (ESI = 6A)

Habitat Description

Gravel habitats are characterized by a substrate that is composed predominantly of gravel-sized sediments. By definition (see the grain-size chart in Appendix B), gravel includes sediments ranging in size from granules (greater than 2 millimeters) to boulders (greater than 256 millimeters). The sand fraction on the surface is usually less than ten percent, although the sand content can increase to 20 percent with depth. These sediments are highly permeable because there are few sand-sized sediments to fill the pore spaces between the individual gravel particles. Gravel substrates may also have low bearing capacity and, consequently, may not support vehicular traffic. Typically, well-sorted beaches are exposed to some wave or current action that reworks the sediments and removes the finer-grained sediments. However, the sediment distribution does not necessarily indicate the energy setting at a particular shoreline; sheltered beaches can still have a large gravel source. In glaciated areas, the gravel can include very large boulders. On depositional beaches, zones of pure pebbles or cobbles can form into multiple berms at the different water levels generated during storms. Gravel shorelines tend to be steeper than those composed of sand or mud. Natural replenishment rates are very slow for gravel compared to sand. Gravel habitats occur as beaches along the Great Lakes and as bars along rivers and streams.

Sensitivity

Gravel habitats have medium sensitivity to oil spills. Biological communities are very sparse because of sediment mobility, desiccation, and low organic matter. Characteristic insects are mayflies, stoneflies, caddisflies, and midges, all with larvae living among the sediments. Flatworms, leeches, and crustaceans may be found on the gravel undersides. The nearshore habitat is used by fish for spawning and provides protection for fry and larvae.

Gravel habitats are ranked higher in sensitivity than sand and gravel habitats because deep penetration of stranded oil into the permeable substrate is likely. Oil can penetrate to depths below those of annual reworking, resulting in long-term persistence of the oil. The slow replenishment rate makes removing oiled gravel highly undesirable. Also, formation of persistent asphalt pavements is likely where there is high accumulation of persistent oils.

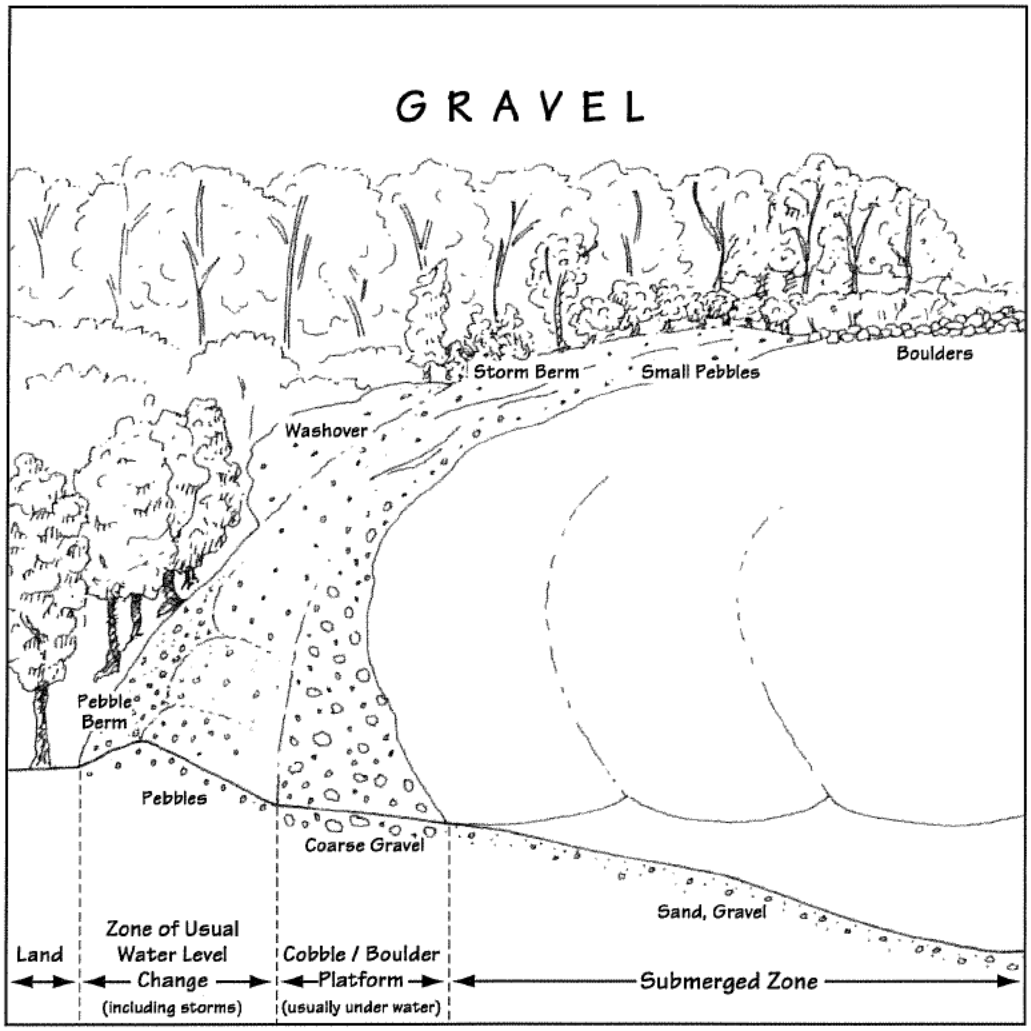

GRAVEL
Boulders
Storm Berm
Small Pebbles
Washover
Pebble Berm
Pebbles
Coarse Gravel
Sand, Gravel
Land
Zone of Usual Water Level Change
(including storms)
Cobble / Boulder Platform
(usually under water)
Submerged Zone

Table 22. Relative environmental impact from response methods for GRAVEL habitats (ESI = 6A).

Response Methods	*Gasoline Products*	*Diesel-Like Oils*	*Medium Oils*	*Heavy Oils*
Debris Removal	–	A	A	A
Low-Pressure, Cold-Water Flushing	A	A	A	B
Flooding	A	A	A	C
Natural Recovery	A	A	B	B
Sorbents	–	A	A	B
Vacuum	–	B	B	B
High-Pressure, Cold-Water Flushing	C	B	B	B
Nutrient Enrichment	–	B	B	C
Manual Oil Removal/Cleaning	D	B	B	A
Sediment Reworking	D	B	B	B
Shoreline Cleaning Agents	–	–	B	B
In-Situ Burning	–	–	B	B
Solidifiers	–	–	B	–
Low-Pressure, Hot-Water Flushing	D	C	C	B
Mechanical Oil Removal	D	D	C	C
High-Pressure, Hot-Water Flushing	D	D	D	D
Steam Cleaning	–	D	D	D
Chemical Shoreline Pretreatment	–	I	I	I
Natural Microbe Seeding	–	I	I	I

The following categories are used to compare the relative environmental impact of each response method for the specific environment or habitat for each oil type, using the following definitions:

A = May cause the least adverse habitat impact.

B = May cause some adverse habitat impact.

C = May cause significant adverse habitat impact.

D = May cause the most adverse habitat impact.

I = Insufficient Information - impact or effectiveness of the method could not be evaluated at this time.

"-" = Not applicable for this oil type.

RESPONSE METHODS: GRAVEL HABITATS

Least Adverse Habitat Impact

Debris Removal

- Degree of oiling that warrants debris removal and disposal depends on use by humans and sensitive resources

Low-Pressure, Cold-Water Flushing

- Only effective when the oil is fluid and loosely adheres to the sediments
- Usually used in conjunction with vacuum and sorbents
- Use on heavy oils is likely to leave large amounts of residual oil in the environment

Flooding

- Only effective when the oil is fluid and adheres loosely to the sediments
- Usually used with various flushing techniques
- Use on heavy oils is likely to leave large amounts of residual oil in the environment

Natural Recovery

- Least impact for small spills, lighter oil types, remote areas, and eroding areas

Sorbents

- Overuse generates excess waste
- Useful for recovering sheens, even for gasoline spills
- Physical removal rates of heavy oils will be slow, so less oil will be mobilized for recovery by sorbents

Some Adverse Habitat Impact

Vacuum

- Early use of vacuum on pooled, liquid oil can prevent deeper penetration

High-Pressure, Cold-Water Flushing

- High-pressure water jet is likely to flush finer sediments into nearshore submerged habitats
- Very viscous oils will require extremely high pressure to mobilize them

Nutrient Enrichment

- Not applicable to gasoline spills because they rapidly evaporate
- Concerns about nutrient overloading in poorly flushed areas or where nutrient toxicity, especially ammonia, might be significant
- Potentially effective for lighter oils that leave thin residues; less effective for thick, weathered oil residues

Manual Oil Removal/Cleaning

- Gasoline tends to quickly evaporate; therefore manual cleanup causes habitat disruption, worker safety concerns, and generates waste with no benefits from removing oil
- Minimizes sediment removal and problems of erosion and waste disposal
- Deep penetration of oil in porous gravel reduces effectiveness

Sediment Reworking

- Used where gravel removal is not feasible because of erosion concerns
- Sufficient exposure to waves is required to rework the sediments into their original profile and distribution
- Gasoline tends to evaporate quickly; therefore sediment reworking causes habitat disruption, worker safety concerns, and generates waste with no benefits from removing oil

Shoreline Cleaning Agents

- May be only technique to remove viscous oils without removing sediment or using hot-water flushing
- Individual products vary in their toxicity and ability to recover the treated oil

In-Situ Burning

- Can effectively remove pooled surface oil accumulations
- May have to dig trenches to accumulate oil in pools
- Lighter oils will not remain on the sediment surface
- Concerns about air pollution, physical nature of the residue, and thermal impact on biota

Solidifiers

- Early use may prevent pooled oil from penetrating deeper

- Not effective on heavy oils, which are too viscous to allow the product to mix into the oil
- May be useful in recovering sheens when deployed as booms and pillows

Probable Adverse Habitat Impact

Low-Pressure, Hot-Water Flushing

- May be needed to flush viscous or deeply penetrated oil
- Any organisms present will be adversely affected by hot water

Mechanical Oil Removal

- Likely to remove large amounts of gravel with the oil
- Foot and vehicular traffic on gravel could mix oil deeper into the sediments

Most Adverse Habitat Impact

High-Pressure, Hot-Water Flushing

- High-pressure water jets are likely to flush oiled sediments into nearshore submerged habitats
- Any organisms present will be adversely affected by hot water and high pressure

Steam Cleaning

- Highly intrusive technique; will kill any organisms present
- Potential for released oil to penetrate deeper into the porous sediments

Insufficient Information

Chemical Shoreline Pretreatment

- Need more information on available products, their effectiveness, and impact

Natural Microbe Seeding

- There is insufficient information on impact and effectiveness in freshwater habitats

3.11 VEGETATED SHORELINE HABITATS (ESI = 9A)

Habitat Description

Vegetated shoreline habitats consist of the non-wetland vegetated banks that are common features of river systems and lakes. Bank slopes may be gentle or steep, and the vegetation consists of grasses, bushes, or trees common to the adjacent terrestrial habitats. The substrate is not water-saturated and can range from clay to gravel. The banks may flood seasonally and are exposed to relatively high-energy removal processes, at least periodically. Along undeveloped shorelines, there can be leafy litter and woody debris trapped among the vegetation. In developed areas, yards and gardens may abut the lake or river.

Sensitivity

Vegetated shoreline habitats are considered to have medium to high sensitivity to oil spills. They are not particularly important habitats for sensitive animals and plants, although many animals use vegetated banks for drinking, washing food, crossing bodies of water, and feeding.

Bank plants oiled during a flood period could be susceptible, especially if the flood rapidly subsides, allowing oil to penetrate into bank sediments and to contact root systems. Small plants, particularly annuals, are likely to be most damaged. Stranded oil could remain in the habitat until another flood reaches the same level and provides a mechanism for natural flushing. On steep banks, the oil is likely to form a band, or multiple bands, at the waterline. On gentle banks, there is a greater potential for oil to accumulate in pools, penetrate the substrate, and coat large areas of vegetation, thus raising the issue of shoreline cleanup. In developed urban and suburban areas, human use and aesthetics would be the main reasons for cleanup.

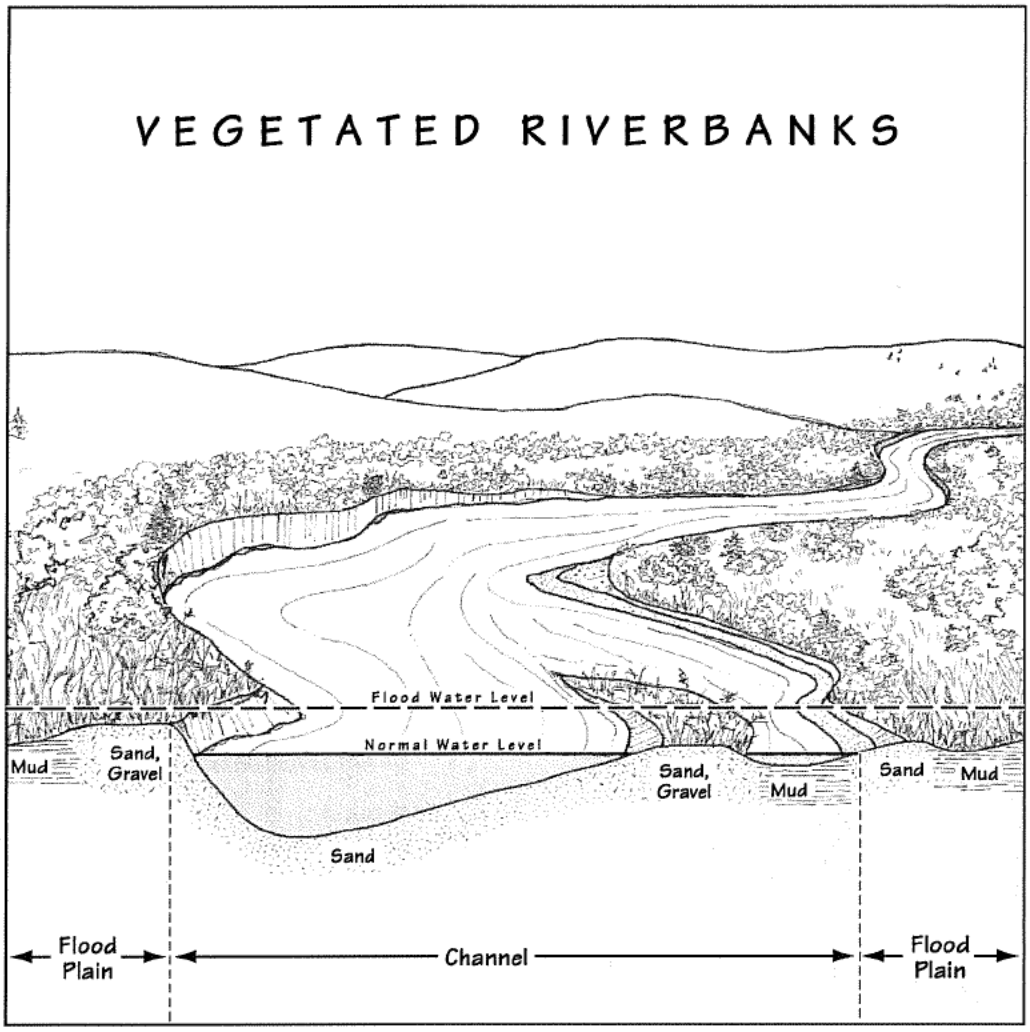

VEGETATED RIVERBANKS
Flood Water Level
Normal Water Level
Mud
Sand, Gravel
Sand
Sand, Gravel
Mud
Sand
Mud
Flood Plain
Channel
Flood Plain

Table 23. Relative environmental impact from response methods for VEGETATED SHORELINE habitats (ESI = 9A).

Response Method	*Gasoline Products*	*Diesel-Like Oils*	*Medium Oils*	*Heavy Oils*
Natural Recovery	A	A	B	B
Flooding	B	A	A	B
Low-Pressure, Cold-Water Flushing	B	A	A	B
Sorbents	–	A	B	B
Manual Oil Removal/Cleaning	D	B	B	B
Debris Removal	–	B	B	B
Vacuum	–	B	B	B
Vegetation Removal	D	B	B	B
Nutrient Enrichment	–	B	B	B
In-Situ Burning	–	B	B	B
High-Pressure, Cold-Water Flushing	D	C	C	D
Mechanical Oil Removal	D	C	C	C
Low-Pressure, Hot-Water Flushing	D	D	D	D
High-Pressure, Hot-Water Flushing	D	D	D	D
Sediment Reworking	D	D	D	D
Solidifiers	–	D	D	–
Chemical Shoreline Pretreatment	–	I	I	I
Shoreline Cleaners	–	I	I	I
Natural Microbe Seeding	–	I	I	I

The following categories are used to compare the relative environmental impact of each response method for the specific environment or habitat for each oil type, using the following definitions:

A = May cause the least adverse habitat impact.

B = May cause some adverse habitat impact.

C = May cause significant adverse habitat impact.

D = May cause the most adverse habitat impact.

I = Insufficient Information - impact or effectiveness of the method could not be evaluated at this time.

"-" = Not applicable for this oil type.

RESPONSE METHODS: VEGETATED SHORELINE HABITATS

Least Adverse Habitat Impact

Natural Recovery

- Low impact for small or moderate-size spills and lighter oils
- More impact for large spills of medium- or high-viscosity oils

Flooding

- Operationally difficult and marginally effective for steep banks
- Appropriate for gentle banks where persistent oil has pooled, assuming that the released oil can be directed towards recovery devices or sorbents
- Use on heavy oils is likely to leave large amounts of residual oil in the environment
- Use on gasoline spills may transport the oil to more sensitive habitats

Low-Pressure, Cold-Water Flushing

- Effective for washing oil stranded on the banks into the water for recovery
- Vegetation cover minimizes the potential for sediment erosion from flushing
- Use on heavy oils is likely to leave large amounts of residual oil in the environment
- Use on gasoline spills may transport the oil to more sensitive habitats

Some Adverse Habitat Impact

Sorbents

- Useful for recovering sheens, even for gasoline spills
- Physical removal rates of medium and heavy oils will be slow, so less oil will be mobilized for recovery by sorbents
- Overuse generates excess waste

Manual Oil Removal/Cleaning

- Some mixing of oil into the substrate and trampling of vegetation is unavoidable with foot traffic in oiled areas
- Gasoline tends to quickly evaporate; therefore habitat disruption, worker safety concerns, and waste generated by manual cleanup are not balanced by benefits in removing oil

Debris Removal

- Degree of oiling that warrants debris removal and disposal depends on use by humans and sensitive resources
- Minimal concerns where substrate is firm or work is conducted from boats

Vacuum

- Potential damage where substrate will not support vehicular traffic
- Most effective where access is good and substrate can support vehicles
- Only useful when oil is pooled

Vegetation Removal

- Usually not necessary to reduce oil impact on vegetation
- May be required in areas used by sensitive animals

Nutrient Enrichment

- Applicable where nutrients are a limiting factor for oil degradation
- More effective after gross oil removal is completed
- Not applicable to gasoline spills because they rapidly evaporate

In-Situ Burning

- May be the least physically damaging means of oil removal from the banks
- Least impact for grassy areas versus banks covered with trees and shrubs

Probable Adverse Habitat Impact

High-Pressure, Cold-Water Flushing

- High-pressure water spray will disturb plants and erode sediments
- Use on heavy oils is likely to leave large amounts of residual oil in the environment
- Use on gasoline spills may transport the oil to more sensitive habitats

Mechanical Oil Removal

- Excessive physical disruption likely from use of equipment

Most Adverse Habitat Impact

Low-Pressure, Hot-Water Flushing

- Hot water could kill plants and potentially erode and degrade habitat

High-Pressure, Hot-Water Flushing

- Combination of high pressure and hot water poses high risk of sediment and vegetation loss

Sediment Reworking

- Will result in extensive habitat disruption

Solidifiers

- Not applicable to gasoline spills because they rapidly evaporate
- Application of loose particulates may impede removal of oil mixed with, and adhered to, vegetation, litter, and debris
- May be useful in recovering sheens when deployed as booms and pillows
- Not effective on heavy oils, which are too viscous to allow the product to mix into the oil or penetrate netting or fabric encasing the loose particulates

Insufficient Information

Chemical Shoreline Pretreatment

- There is insufficient information on impact and effectiveness in freshwater vegetation

Shoreline Cleaning Agents

- More information needed on available products, their effectiveness, and impact of use on vegetated bank habitats
- Individual products vary in their toxicity and ability to recover the treated oil

Natural Microbe Seeding

- There is insufficient information on impact and effectiveness in freshwater vegetated shorelines

3.12 MUD HABITATS (ESI = 9B)

Habitat Description

Mud habitats are characterized by a substrate composed predominantly of silt and clay sediments, although they may be mixed with varying amounts of sand or gravel (see Appendix B for grain-size chart). The sediments are mostly water saturated and have low bearing strength. In general, mud shorelines have a low gradient, although some steep banks also may consist of mud. The mud habitats generally are low energy and sheltered from wave action and high currents. Adjacent nearshore areas are usually shallow with muddy sediments. These fine-grained habitats often are associated with wetlands; Section 3.13 discusses habitats where aquatic vegetation dominates. Bare or sparsely vegetated mud substrates are rare along Great Lake shorelines. However, they commonly occur along river floodplains and lake bottoms, where they can be exposed during seasonal low water levels.

Sensitivity

Mud habitats are highly sensitive to oil spills and subsequent response activities. Shoreline sediments are likely to be rich in organic matter and support an abundance of infauna. Muddy habitats are important feeding grounds for birds and rearing areas for fish.

Oil will not penetrate muddy sediments because of their low permeability and high water content, except through decaying root and stem holes or animal burrows. There can be high concentrations and pools of oil on the surface. Natural removal rates can be very slow, chronically exposing sensitive resources to the oil. The low bearing capacity of these shorelines means that response actions can easily leave long-lasting imprints, cause significant erosion, and mix the oil deeper into the sediments. When subsurface sediments are contaminated, oil will weather slowly and may persist for years. Response methods may be hampered by limited access, wide areas of shallow water, fringing vegetation, and soft substrate.

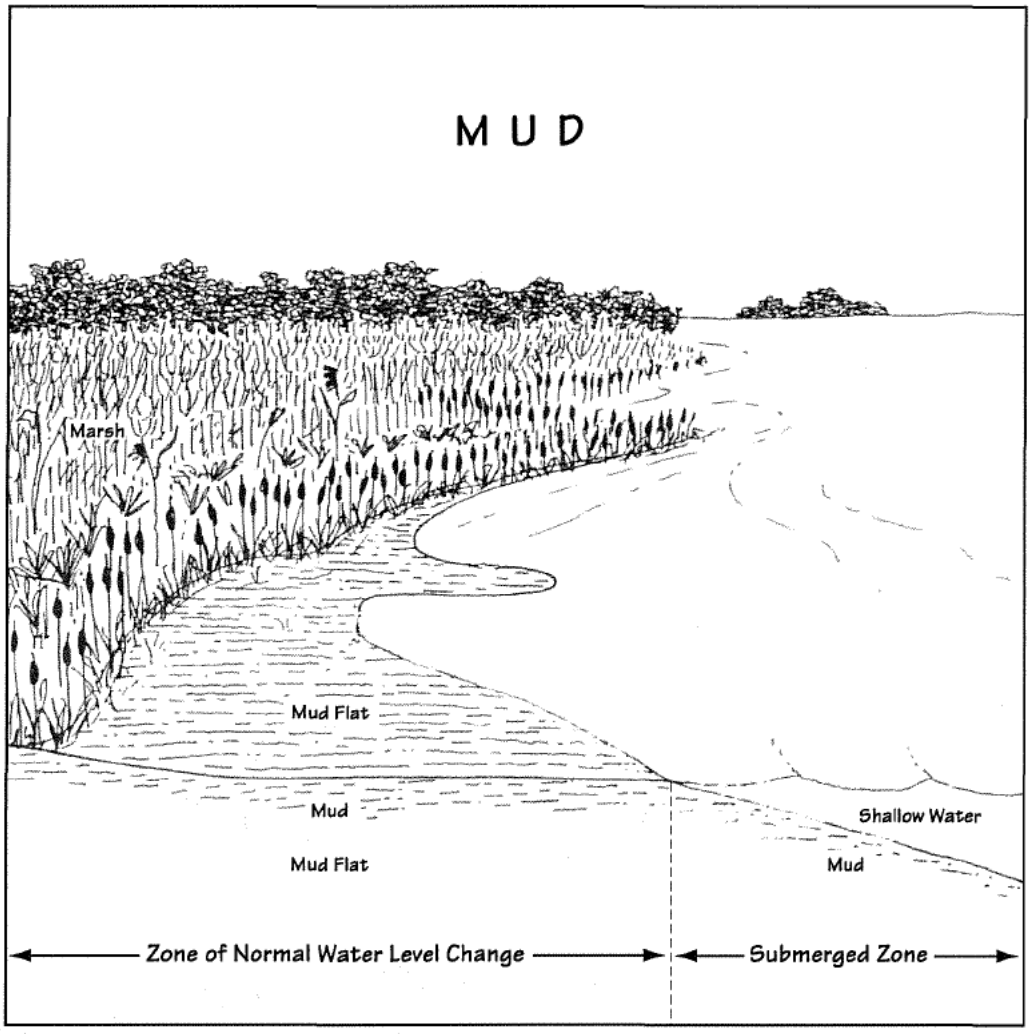

MUD
Marsh
Mud Flat
Mud
Mud Flat
Shallow Water
Mud
Zone of Normal Water Level Change
Submerged Zone

Table 24. Relative environmental impact from response methods for MUD habitats (ESI = 9B).

Response Method	*Gasoline Products*	*Diesel-Like Oils*	*Medium Oils*	*Heavy Oils*
Natural Recovery	A	A	A	B
Flooding	B	A	A	A
Sorbents	B	A	A	B
Debris Removal	–	B	B	B
Vacuum	–	C	B	B
In-Situ Burning	C	C	C	C
Low-Pressure, Cold-Water Flushing	D	C	C	C
Manual Oil Removal/Cleaning	D	D	C	C
Low-Pressure, Hot-Water Flushing	D	D	C	C
Solidifiers	D	D	C	–
Mechanical Oil Removal	D	D	D	D
High-Pressure, Cold-Water Flushing	D	D	D	D
High-Pressure, Hot-Water Flushing	D	D	D	D
Sediment Reworking	D	D	D	D
Shoreline Cleaning Agents	–	D	D	D
Natural Microbe Seeding	–	I	I	I
Nutrient Enrichment	–	I	I	I
Chemical Shoreline Pretreatment	I	I	I	I

The following categories are used to compare the relative environmental impact of each response method for the specific environment or habitat for each oil type, using the following definitions:

A = May cause the least adverse habitat impact.

B = May cause some adverse habitat impact.

C = May cause significant adverse habitat impact.

D = May cause the most adverse habitat impact.

I = Insufficient Information - impact or effectiveness of the method could not be evaluated at this time.

"-" = Not applicable for this oil type.

RESPONSE METHODS: MUD HABITATS

Least Adverse Habitat Impact

Natural Recovery

- Least impact for small spills and lighter oils, to prevent disruptions associated with cleanup efforts
- For large spills or heavy oils, expect long-term persistence in low-energy settings

Flooding

- Effective only for fresh, fluid oils
- Local topography may limit the ability to control where the water and released oil flow and effectiveness of recovery
- Use on gasoline spills may transport the oil to more sensitive habitats

Sorbents

- Useful as long as the oil is mobilized and recovered by the sorbent
- Overuse generates excess waste
- Careful placement and recovery is necessary to minimize substrate disruption

Some Adverse Habitat Impact

Debris Removal

- Degree of oiling that warrants debris removal and disposal depends on use by sensitive resources
- Extensive disruption of soft substrate likely

Vacuum

- Not applicable to gasoline spills because of safety concerns
- Use to remove oil pooled on the surface
- Avoid digging trenches to collect oil because they can introduce oil deeper into the sediment
- Disruption of soft substrates can be limited by placing boards on the surface and controlling access routes

Probable Adverse Habitat Impact

In-Situ Burning

- Heat may impact biological productivity of habitat, especially where there is no standing water to act as a heat sink on top of the mud

Low-Pressure, Cold-Water Flushing

- Mud is readily suspended if substrate is not firm
- Not effective for higher-viscosity oils that will not move with low pressure
- Local topography may limit the ability to control where the water and released oil flow and effectiveness of recovery
- Use on gasoline spills may transport the oil to more sensitive habitats

Manual Oil Removal/Cleaning

- Use where persistent oil occurs in moderate to heavy amounts, or where sensitive resources must be protected
- Response crews may trample soft substrates, mix oil deeper into the sediments, and contaminate clean areas

Low-Pressure, Hot-Water Flushing

- Physical and thermal impacts to habitat likely

Most Adverse Habitat Impact

Solidifiers

- High likelihood of disruption and mixing of oil deeper into the substrate during application and retrieval
- Not effective on heavy oils, which are too viscous to allow the product to mix into the oil

Mechanical Oil Removal

- Soft substrate will not support vehicular traffic
- Will probably cause extensive physical habitat disruption

High-Pressure, Cold-Water Flushing and High-Pressure, Hot-Water Flushing

- High-pressure water will cause extensive sediment suspension and erosion
- Potential for burial of oiled sediments and transport of oil to adjacent areas

Sediment Reworking

- Will extensively disrupt physical habitat
- Increases oil penetration, burial, and persistence

Shoreline Cleaning Agents

- Current products are designed for use with high-pressure flushing; since used with flushing, water pressure needs to be considered
- Individual products vary in their toxicity and ability to recover the treated oil

Insufficient Information

Natural Microbe Seeding and Nutrient Enrichment

- Not applicable to gasoline spills because they rapidly evaporate
- There is insufficient information on impact and effectiveness in mud habitats

Chemical Shoreline Pretreatment

- There is insufficient information about direct toxicity of the products, disturbances resulting from application and retrieval, effectiveness, and net benefit

3.13 WETLAND HABITATS (ESI = 10A, 10B)

Habitat Description

Wetlands are characterized by water, unique soils that differ from adjacent upland areas, and vegetation adapted to wet conditions. Wetlands include a range of habitats such as marshes, bogs, bottomland hardwood forests, fens, playas, prairie potholes, and swamps. Substrate, vegetation, hydrology, seasonality, and biological use of inland wetlands are highly variable, making characterization difficult. The surfaces of wetlands usually have a low gradient and vegetated areas are typically at or under the water level. There can be distinct channels or drainages with flowing water, except at the exposed outer fringe; however, natural physical processes are minimal. Water levels may vary seasonally, and the wetland may be simply a zone of water-saturated soils during the dry season. Where mud habitats dominate the wetland, refer to Section 3.12 for a discussion of applicable response methods.

Sensitivity

Wetlands are highly sensitive to oil spills. The biological diversity in these habitats is significant and they provide critical habitat for many types of animals and plants. Oil spills affect both the habitat (vegetation and sediments) and the organisms that directly and indirectly rely on the habitat. Surprisingly little is known about oil impact on freshwater plants, although there are likely differences between robust perennials with substantial underground systems and cycles of winter die-back, and annuals that lack underground nutrient reserves. Detritus-based food webs are fundamentally important in wetlands; oil could possibly affect these by slowing decomposition rates of plant material.

Wetlands support populations of fish, amphibians, reptiles, birds, and mammals, with many species reliant upon wetlands for their reproduction and early life stages when they are most sensitive to oil. Many endangered animals and plants occur only in wetlands, and spills in such areas would be of particular conservation concern. Migratory waterbirds depend heavily on wetlands as summer breeding locations, migration stopovers, and winter habitats. The threat of direct oiling of animals using the wetland often drives efforts to remove the oil. If oil and/or cleanup efforts causes a loss of the more sensitive plants or modifies the ecosystem structure, then feeding and breeding of dependent wildlife may be affected.

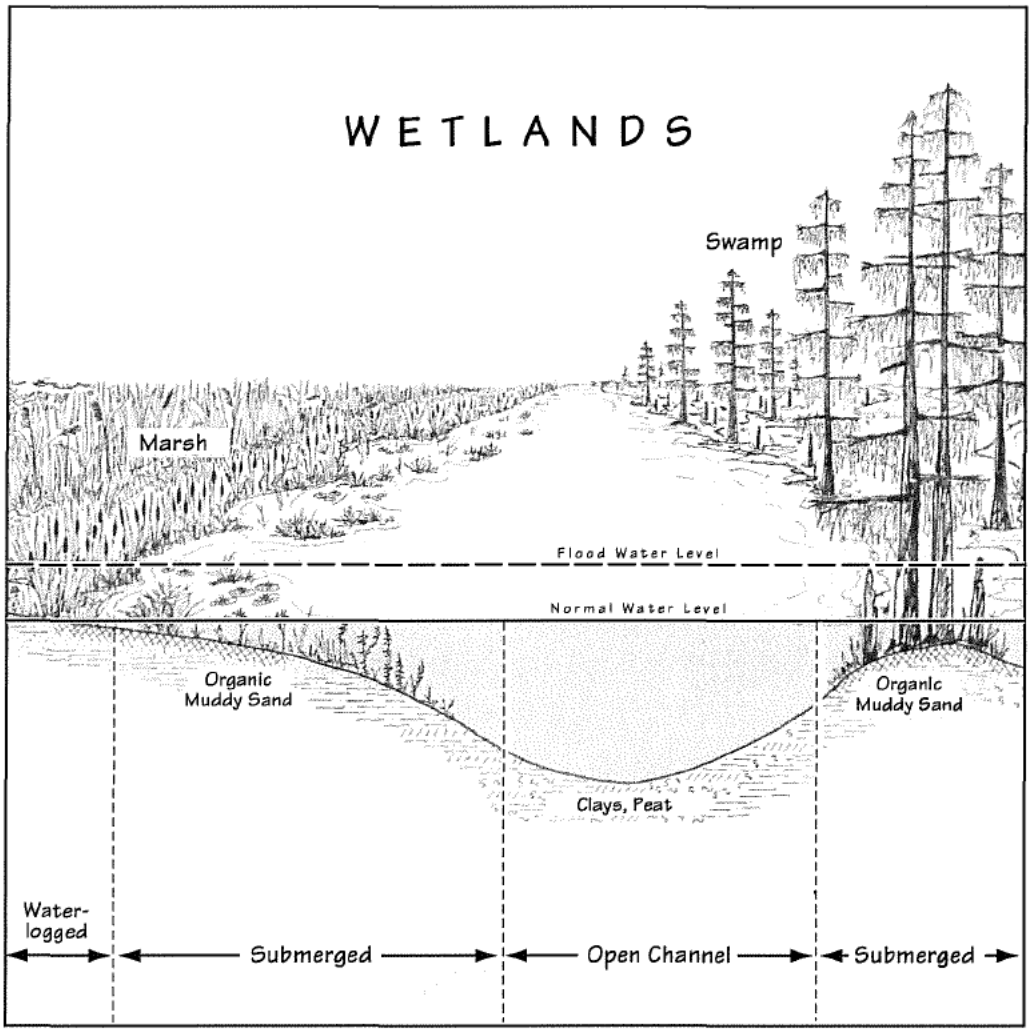

WETLANDS
Swamp
Marsh
Flood Water Level
Normal Water Level
Organic
Muddy Sand
Clays, Peat
Organic
Muddy Sand
Water-
logged
Submerged
Open Channel
Submerged

Table 25. Relative environmental impact from response methods for WETLAND habitats (ESI = 10A, 10B).

Response Method	*Gasoline Products*	*Diesel-Like Oils*	*Medium Oils*	*Heavy Oils*
Natural Recovery	A	A	A	B
Sorbents	C	A	A	A
Flooding	B	A	A	B
Low-Pressure, Cold-Water Flushing	B	A	A	B
In-Situ Burning	B	B	B	B
Vacuum	–	B	B	B
Debris Removal	–	B	B	B
Vegetation Removal	D	C	C	C
Manual Oil Removal/Cleaning	D	D	C	C
High-Pressure, Cold-Water Flushing	D	D	D	D
Low-Pressure, Hot-Water Flushing	D	D	D	D
High-Pressure, Hot-Water Flushing	D	D	D	D
Mechanical Oil Removal	D	D	D	D
Sediment Reworking	D	D	D	D
Solidifiers	D	D	D	–
Shoreline Cleaning Agents	–	I	I	I
Nutrient Enrichment	–	I	I	I
Natural Microbe Seeding	–	I	I	I
Chemical Shoreline Pretreatment	–	I	I	I

The following categories are used to compare the relative environmental impact of each response method for the specific environment or habitat for each oil type, using the following definitions:

A = May cause the least adverse habitat impact.

B = May cause some adverse habitat impact.

C = May cause significant adverse habitat impact.

D = May cause the most adverse habitat impact.

I = Insufficient Information - impact or effectiveness of the method could not be evaluated at this time.

"-" = Not applicable for this oil type.

RESPONSE METHODS: WETLAND HABITATS

Least Adverse Habitat Impact

Natural Recovery

- Least impact for small to moderate spills and lighter oils; avoids damage often associated with cleanup activities
- Some cleanup may be warranted where large numbers of animals are likely to become oiled during wetland use

Sorbents

- Care is necessary during placement and recovery to minimize disturbance of substrate and vegetation
- Overuse generates excess waste

Flooding

- Erosion of substrate and vegetation may be a problem
- Can be used selectively to remove localized heavy oiling
- Can be difficult to direct water and oil flow towards recovery devices
- Use on heavy oils is likely to leave large amounts of residual oil in the environment
- Use on gasoline spills may transport the oil to more sensitive habitats

Low-Pressure, Cold-Water Flushing

- If water pressures are too high, the substrate and vegetation may be disturbed
- Use on heavy oils is likely to leave large amounts of residual oil in the environment
- Use on gasoline spills may transport the oil to more sensitive habitats

Some Adverse Habitat Impact

In-Situ Burning

- May be one of the least physically damaging means of heavy oil removal
- Presence of a water layer on marsh surface can protect roots
- Time of year (vegetation growth stage) is important consideration
- May be appropriate for gasoline spills trapped in ice

Vacuum

- Can be effective in removal of pooled oil from the marsh surface

- Trampling of vegetation and substrate can be limited by placing boards on the surface and limiting traffic

Debris Removal

- The removal of heavily oiled and mobile debris may reduce the tracking of oil off-site and contamination of wildlife

Probable Adverse Habitat Impact

Vegetation Removal

- Used to prevent oiling of sensitive animals using the wetland
- Most appropriate for oils that form a thick, sticky coating on the vegetation, such as medium and heavy oils
- May delay recovery of the vegetation due to both oil impact and physical destruction by cleanup crews
- Trampling of vegetation may be reduced by controlling access routes, using boards placed on surface, or conducting operations from boats

Manual Oil Removal/Cleaning

- Used where persistent oil occurs in heavy amounts and where sensitive resources using the wetlands are likely to be oiled
- Response crews may trample roots and mix oil deeper into the sediments

Most Adverse Habitat Impact

High-Pressure, Cold-Water Flushing

- High-pressure spray will disrupt sediments, root systems, and animals

Low-Pressure, Hot-Water Flushing and High-Pressure, Hot-Water Flushing

- Hot water will likely kill the vegetation

Mechanical Oil Removal

- Using vehicles in soft substrate will probably cause extensive physical disruption
- Can completely alter the marsh substrate, hydrology, and vegetation patterns for many years
- Use in heavily oiled wetlands when all other techniques have failed and there is an overriding reason for oil removal

Sediment Reworking

- No benefit from mixing oil deeper into fine-grained and organic soils

Solidifiers

- Not applicable to gasoline spills because they rapidly evaporate
- Use likely to increase adherence to vegetation and slow weathering/removal rates of residual oil
- Not effective on heavy oils, which are too viscous to allow the product to mix into the oil

Insufficient Information

Shoreline Cleaning Agents

- More information needed on available products, their effectiveness, and impact of use on vegetated bank habitats
- Individual products vary in their toxicity and recoverability of the treated oil

Nutrient Enrichment and Natural Microbe Seeding

- Not applicable to gasoline spills because they rapidly evaporate
- Concerns include eutrophication and acute toxicity, particularly from ammonia, because of shallow waters and low mixing rates
- There is insufficient information on impact and effectiveness in wetlands

Chemical Shoreline Pretreatment

- There is insufficient information about product toxicity, disturbances resulting from application and retrieval, effectiveness, and net benefit

Appendix F
Occurrences of Federally Listed Species

Response Zone Counties' Occurrences of Federally Listed Species and their Habitat

Revised October 2012 – www.fws.gov/midwest/endangered/lists/pdf/ohioctylist2012.pdf

County	Species	Status	Habitat
Athens	Indiana bat *(Myotis sodalis)*	Endangered	Hibernaria = Caves and mines; Maternity and foraging habitat = small stream corridors with well developed riparian woods; upland forests
	American burying beetle *(Nicrophorus americanus)*	Endangered	
	Fanshell mussel *(Cyprogenia stegaria)* (=C. irrorata)	Endangered	Found in areas of packed sand and gravel at locations in a good current
	Pink mucket pearly mussel *(Lampsilis abrupta)* *(= L. orbiculata)*	Endangered	The lower Ohio River and its larger tributaries
	Sheepnose *(Plethobasus cyphyus)*	Endangered	Shallow areas in larger rivers and streams
	Snuffbox *(Epioblasma triquetra)*	Endangered	Small to medium-sized creeks and some larger rivers, in areas with a swift current
Coshocton	Indiana bat (Myotis sodalis)	Endangered	Hibernaria = Caves and mines; Maternity and foraging habitat = small stream corridors with well developed riparian woods; upland forests
	Clubshell mussel *(Pleurobema clava)*	Endangered	Found in coarse sand and gravel areas of runs and riffles within streams and small rivers
	Fanshell mussel *(Cyprogenia stegaria)* (=C. irrorata)	Endangered	Found in areas of packed sand and gravel at locations in a good current
	Purple cat's paw pearlymussel *(Epioblasma obliquata obliquata)*	Endangered	Gravel riffles of medium to large rivers
	Rabbitsfoot *(Quadrula cylindrica)*	Proposed as Threatened	Proposed critical habitat – Walhonding River
	Rayed bean *(Villosa fabalis)*	Endangered	Smaller, headwater creeks, but they are sometimes found in large rivers

Coshocton	Sheepnose *(Plethobasus cyphyus)*	Endangered	Shallow areas in larger rivers and streams
	Snuffbox *(Epioblasma triquetra)*	Endangered	Small to medium-sized creeks and some larger rivers, in areas with a swift current
Holmes	Indiana bat *(Myotis sodalis)*	Endangered	Hibernaria = Caves and mines; Maternity and foraging habitat = small stream corridors with well developed riparian woods; upland forests
	Eastern prairie fringed orchid *(Platanthera leucophaea)*	Threatened	Mesic to wet prairies and meadows
Licking	Indiana bat *(Myotis sodalis)*	Endangered	Hibernaria = Caves and mines; Maternity and foraging habitat = small stream corridors with well developed riparian woods; upland forests
	Eastern massasauga *(Sistrurus catenatus)*	Candidate	Wetlands and adjacent uplands
Morgan	Indiana bat *(Myotis sodalis)*	Endangered	Hibernaria = Caves and mines; Maternity and foraging habitat = small stream corridors with well developed riparian woods; upland forests
	Fanshell mussel *(Cyprogenia stegaria)* (=C. irrorata)	Endangered	Found in areas of packed sand and gravel at locations in a good current
	Pink mucket pearly mussel *(Lampsilis abrupta)* *(= L. orbiculata)*	Endangered	The lower Ohio River and its larger tributaries
	Sheepnose *(Plethobasus cyphyus)*	Endangered	Shallow areas in larger rivers and streams
	Snuffbox *(Epioblasma triquetra)*	Endangered	Small to medium-sized creeks and some larger rivers, in areas with a swift current
	American burying beetle *(Nicrophorus americanus)*	Endangered	
Muskingum	Indiana bat *(Myotis sodalis)*	Endangered	Hibernaria = Caves and mines; Maternity and foraging habitat = small stream corridors with well developed riparian woods; upland forests
	Fanshell mussel *(Cyprogenia stegaria)*	Endangered	Found in areas of packed sand and gravel at locations in a good current

Muskingum	Rabbitsfoot *(Quadrula cylindrica)*	Proposed as Threatened	Muskingum River
	Sheepnose *(Plethobasus cyphyus)*	Endangered	Shallow areas in larger rivers and streams
	Snuffbox *(Epioblasma triquetra)*	Endangered	Small to medium-sized creeks and some larger rivers, in areas with a swift current
Perry	Indiana bat *(Myotis sodalis)*	Endangered	Hibernaria = Caves and mines; Maternity and foraging habitat = small stream corridors with well developed riparian woods; upland forests
	American burying beetle *(Nicrophorus americanus)*	Endangered	
Washington	Indiana bat *(Myotis sodalis)*	Endangered	Hibernaria = Caves and mines; Maternity and foraging habitat = small stream corridors with well developed riparian woods; upland forests
	Fanshell mussel *(Cyprogenia stegaria)* (=C. irrorata)	Endangered	Found in areas of packed sand and gravel at locations in a good current
	Pink mucket pearly mussel *(Lampsilis abrupta)* *(= L. orbiculata)*	Endangered	The lower Ohio River and its larger tributaries
	Sheepnose *(Plethobasus cyphyus)*	Endangered	Shallow areas in larger rivers and streams
	Snuffbox *(Epioblasma triquetra)*	Endangered	Small to medium-sized creeks and some larger rivers, in areas with a swift current

Appendix G
Inland Sensitivity Atlas Information

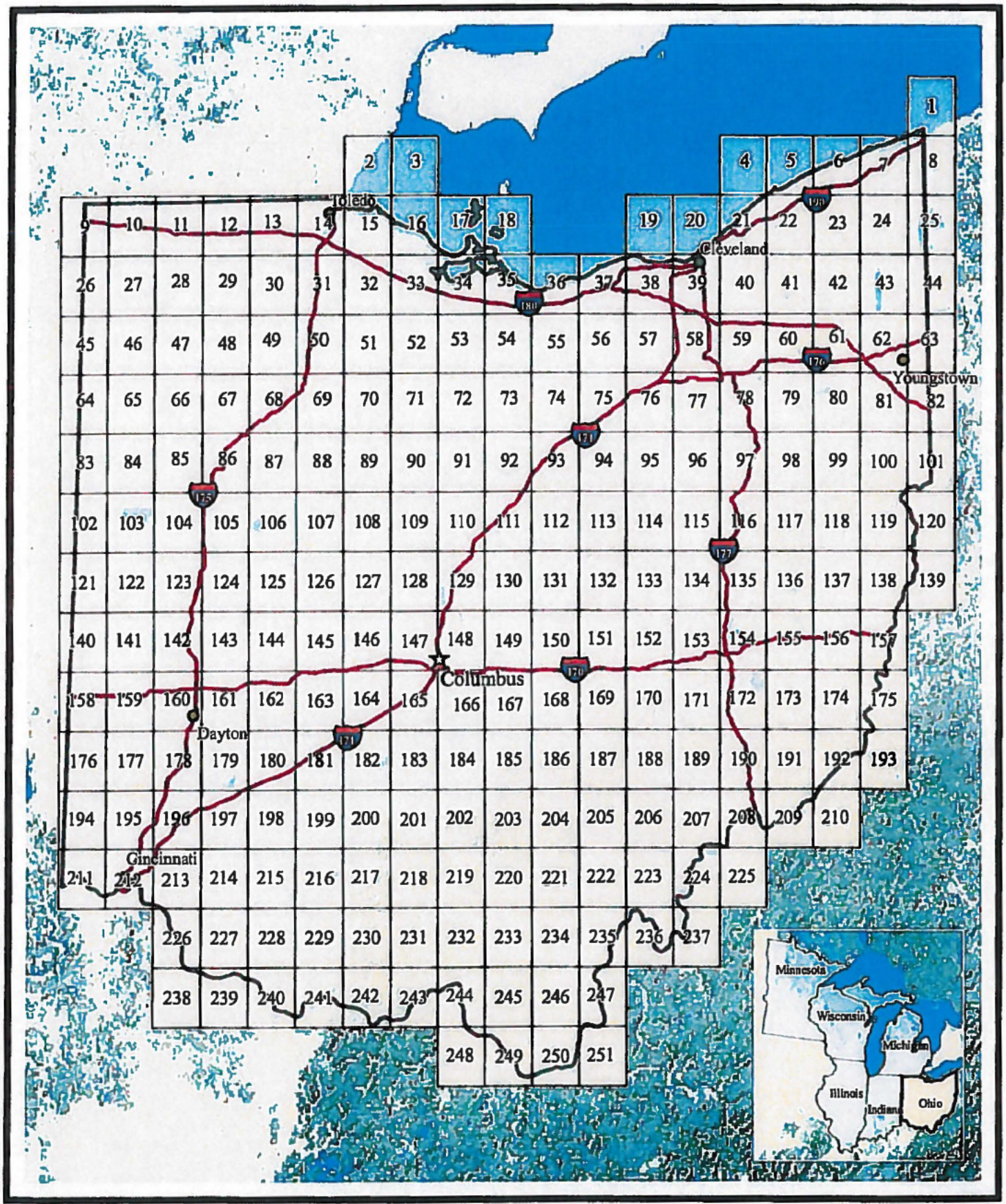
Inland Sensitivity Atlas

Ohio

Statewide Revision 2008

U.S. Environmental Protection Agency Region 5

Region 5 Inland Sensitivity Atlas - Ohio



Maps and figures have been redacted in accordance with the FOIA Exemption 7(F).

Appendix B: Sensitive Species and Natural Communities

The following table identifies by icon number the sensitive species groupings shown in the Inland Sensitivity Atlas for the State of Ohio and provides more detail pertaining to the sensitivity of the grouping. A 'Y' in the State Status or Federal Status indicates that the species is classified as either endangered or threatened. An "endangered" species is one that is in danger of extinction throughout all or a significant portion of its range. A "threatened" species is one that is likely to become endangered in the foreseeable future. The Global Rank reflects an assessment of the condition of the species or ecological community across its entire range. A 'Y' in the Global Rank column indicates one of the following classifications:

G1=Critically Imperiled—At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.

G2=Imperiled—At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.

G3=Vulnerable—At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.

Species within this table have an endangered or threatened status according to state and federal registers, or are in consideration for being given status. The presence of a global ranking for these species is indicated where one exists. In instances where state and federal registers do not contain status information, species groups are listed that have a global rank of G1, G2 or G3.

The following table does not provide an exhaustive database of natural community and rare species data. ***It is strongly recommended that responders and planners contact the appropriate state and federal agencies for the most current and complete information about the presence and extent of sensitive species.***

Icon	Species Group	Federally Listed	State Listed	Globally Listed
1	Aquatic/Riparian Birds	N	N	N
2	Aquatic/Riparian Birds	N	N	N
3	Aquatic/Riparian Birds	N	N	N
4	Aquatic/Riparian Birds	N	N	N
5	Aquatic/Riparian Birds	N	N	N
6	Aquatic/Riparian Birds	N	N	N
7	Aquatic/Riparian Birds	N	N	N
8	Aquatic/Riparian Birds	N	N	N
9	Aquatic/Riparian Birds	N	N	N
10	Aquatic/Riparian Birds	N	N	N
11	Aquatic/Riparian Birds	N	N	N
12	Aquatic/Riparian Birds	N	N	N

Appendix B: Sensitive Species and Natural Communities

13	Aquatic/Riparian Birds	N	N	N
14	Aquatic/Riparian Birds	N	N	N
15	Aquatic/Riparian Birds	N	N	N
16	Aquatic/Riparian Birds	N	N	N
17	Aquatic/Riparian Birds	N	N	N
18	Aquatic/Riparian Birds	N	N	N
19	Aquatic/Riparian Birds	N	N	N
20	Aquatic/Riparian Birds	N	N	N
21	Aquatic/Riparian Birds	N	N	N
22	Aquatic/Riparian Birds	N	N	N
23	Aquatic/Riparian Birds	N	N	N
24	Aquatic/Riparian Birds	N	Y	N
25	Aquatic/Riparian Birds	N	Y	N
26	Aquatic/Riparian Birds	N	Y	N
27	Aquatic/Riparian Birds	N	Y	N
28	Aquatic/Riparian Birds	N	Y	N
29	Aquatic/Riparian Birds	N	Y	N
30	Aquatic/Riparian Birds	N	Y	N
31	Aquatic/Riparian Birds	N	Y	N
32	Aquatic/Riparian Birds	N	Y	N
33	Aquatic/Riparian Birds	N	Y	N
34	Aquatic/Riparian Birds	N	Y	N
35	Aquatic/Riparian Birds	N	Y	N
36	Aquatic/Riparian Fish	N	N	N
37	Aquatic/Riparian Fish	N	N	N
38	Aquatic/Riparian Fish	N	N	N
39	Aquatic/Riparian Fish	N	N	N
40	Aquatic/Riparian Fish	N	N	N
41	Aquatic/Riparian Fish	N	N	N
42	Aquatic/Riparian Fish	N	N	N

Appendix B: Sensitive Species and Natural Communities

43	Aquatic/Riparian Fish	N	N	N
44	Aquatic/Riparian Fish	N	N	N
45	Aquatic/Riparian Fish	N	N	N
46	Aquatic/Riparian Fish	N	N	N
47	Aquatic/Riparian Fish	N	N	N
48	Aquatic/Riparian Fish	N	N	N
49	Aquatic/Riparian Fish	N	N	N
50	Aquatic/Riparian Fish	N	N	N
51	Aquatic/Riparian Fish	N	N	N
52	Aquatic/Riparian Fish	N	N	N
53	Aquatic/Riparian Fish	N	N	Y
54	Aquatic/Riparian Fish	N	Y	N
55	Aquatic/Riparian Fish	N	Y	N
56	Aquatic/Riparian Fish	N	Y	N
57	Aquatic/Riparian Fish	N	Y	N
58	Aquatic/Riparian Fish	N	Y	N
59	Aquatic/Riparian Fish	N	Y	N
60	Aquatic/Riparian Fish	N	Y	N
61	Aquatic/Riparian Fish	N	Y	N
62	Aquatic/Riparian Fish	N	Y	N
63	Aquatic/Riparian Fish	N	Y	N
64	Aquatic/Riparian Fish	N	Y	Y
65	Aquatic/Riparian Fish	N	Y	Y
66	Aquatic/Riparian Fish	N	Y	Y
67	Aquatic/Riparian Fish	N	Y	Y
68	Aquatic/Riparian Fish	N	Y	Y
69	Aquatic/Riparian Fish	N	Y	Y
70	Aquatic/Riparian Fish	N	Y	Y
71	Aquatic/Riparian Invertebrates	N	N	N
72	Aquatic/Riparian Invertebrates	N	N	N

Appendix B: Sensitive Species and Natural Communities

73	Aquatic/Riparian Invertebrates	N	N	N
74	Aquatic/Riparian Invertebrates	N	N	N
75	Aquatic/Riparian Invertebrates	N	N	N
76	Aquatic/Riparian Invertebrates	N	N	N
77	Aquatic/Riparian Invertebrates	N	N	N
78	Aquatic/Riparian Invertebrates	N	N	N
79	Aquatic/Riparian Invertebrates	N	N	N
80	Aquatic/Riparian Invertebrates	N	N	N
81	Aquatic/Riparian Invertebrates	N	N	N
82	Aquatic/Riparian Invertebrates	N	N	N
83	Aquatic/Riparian Invertebrates	N	N	N
84	Aquatic/Riparian Invertebrates	N	N	N
85	Aquatic/Riparian Invertebrates	N	N	N
86	Aquatic/Riparian Invertebrates	N	N	N
87	Aquatic/Riparian Invertebrates	N	N	N
88	Aquatic/Riparian Invertebrates	N	N	Y
89	Aquatic/Riparian Invertebrates	N	N	Y
90	Aquatic/Riparian Invertebrates	N	N	Y
91	Aquatic/Riparian Invertebrates	N	N	Y
92	Aquatic/Riparian Invertebrates	N	N	Y
93	Aquatic/Riparian Invertebrates	N	N	Y
94	Aquatic/Riparian Invertebrates	N	N	Y
95	Aquatic/Riparian Invertebrates	N	N	Y
96	Aquatic/Riparian Invertebrates	N	Y	N
97	Aquatic/Riparian Invertebrates	N	Y	N
98	Aquatic/Riparian Invertebrates	N	Y	N
99	Aquatic/Riparian Invertebrates	N	Y	N
100	Aquatic/Riparian Invertebrates	N	Y	N
101	Aquatic/Riparian Invertebrates	N	Y	N
102	Aquatic/Riparian Invertebrates	N	Y	N

Appendix B: Sensitive Species and Natural Communities

103	Aquatic/Riparian Invertebrates	N	Y	N
104	Aquatic/Riparian Invertebrates	N	Y	N
105	Aquatic/Riparian Invertebrates	N	Y	N
106	Aquatic/Riparian Invertebrates	N	Y	N
107	Aquatic/Riparian Invertebrates	N	Y	N
108	Aquatic/Riparian Invertebrates	N	Y	N
109	Aquatic/Riparian Invertebrates	N	Y	N
110	Aquatic/Riparian Invertebrates	N	Y	N
111	Aquatic/Riparian Invertebrates	N	Y	N
112	Aquatic/Riparian Invertebrates	N	Y	Y
113	Aquatic/Riparian Invertebrates	N	Y	Y
114	Aquatic/Riparian Invertebrates	N	Y	Y
115	Aquatic/Riparian Invertebrates	N	Y	Y
116	Aquatic/Riparian Invertebrates	Y	Y	Y
117	Aquatic/Riparian Invertebrates	Y	Y	Y
118	Aquatic/Riparian Invertebrates	Y	Y	Y
119	Aquatic/Riparian Invertebrates	Y	Y	Y
120	Aquatic/Riparian Invertebrates	Y	Y	Y
120	Multiple Species Groupings	N	N	N
121	Aquatic/Riparian Mammals	N	N	N
122	Aquatic/Riparian Mammals	N	N	N
123	Aquatic/Riparian Mammals	N	N	N
124	Aquatic/Riparian Mammals	N	N	N
125	Aquatic/Riparian Mammals	N	Y	N
126	Aquatic/Riparian Mammals	N	Y	Y
127	Aquatic/Riparian Mammals	Y	Y	Y
128	Aquatic/Riparian Plants	N	N	N
129	Aquatic/Riparian Plants	N	N	Y
130	Aquatic/Riparian Plants	N	Y	N
131	Aquatic/Riparian Plants	N	Y	N

Appendix B: Sensitive Species and Natural Communities

132	Aquatic/Riparian Plants	N	Y	N
133	Aquatic/Riparian Plants	N	Y	N
134	Aquatic/Riparian Plants	N	Y	N
135	Aquatic/Riparian Plants	N	Y	N
136	Aquatic/Riparian Plants	N	Y	N
137	Aquatic/Riparian Plants	N	Y	N
138	Aquatic/Riparian Plants	N	Y	N
139	Aquatic/Riparian Plants	N	Y	Y
140	Aquatic/Riparian Plants	N	Y	Y
141	Aquatic/Riparian Plants	N	Y	Y
142	Aquatic/Riparian Plants	N	Y	Y
143	Aquatic/Riparian Plants	Y	Y	Y
144	Aquatic/Riparian Reptiles/Amphibians	N	N	N
145	Aquatic/Riparian Reptiles/Amphibians	N	N	N
146	Aquatic/Riparian Reptiles/Amphibians	N	N	N
147	Aquatic/Riparian Reptiles/Amphibians	N	N	N
148	Aquatic/Riparian Reptiles/Amphibians	N	N	N
149	Aquatic/Riparian Reptiles/Amphibians	N	N	N
150	Aquatic/Riparian Reptiles/Amphibians	N	N	N
151	Aquatic/Riparian Reptiles/Amphibians	N	N	N
152	Aquatic/Riparian Reptiles/Amphibians	N	N	N
153	Aquatic/Riparian Reptiles/Amphibians	N	N	N
154	Aquatic/Riparian Reptiles/Amphibians	N	N	N
155	Aquatic/Riparian Reptiles/Amphibians	N	N	N
156	Aquatic/Riparian Reptiles/Amphibians	N	N	N
157	Aquatic/Riparian Reptiles/Amphibians	N	N	Y
158	Aquatic/Riparian Reptiles/Amphibians	N	N	Y
159	Aquatic/Riparian Reptiles/Amphibians	N	Y	N
160	Aquatic/Riparian Reptiles/Amphibians	N	Y	N
161	Aquatic/Riparian Reptiles/Amphibians	N	Y	N

Appendix B: Sensitive Species and Natural Communities

162	Aquatic/Riparian Reptiles/Amphibians	N	Y	N
163	Aquatic/Riparian Reptiles/Amphibians	N	Y	N
164	Aquatic/Riparian Reptiles/Amphibians	N	Y	Y
165	Aquatic/Riparian Reptiles/Amphibians	Y	Y	Y
166	Aquatic/Riparian Reptiles/Amphibians	Y	Y	Y
167	Aquatic/Riparian Reptiles/Amphibians	Y	Y	Y
222	Multiple Species Groupings	N	Y	N
223	Multiple Species Groupings	N	N	Y
225	Multiple Species Groupings	Y	N	Y
226	Multiple Species Groupings	N	Y	Y
227	Multiple Species Groupings	Y	Y	Y
279	Terrestrial/Upland Birds	N	N	N
280	Terrestrial/Upland Birds	N	N	N
281	Terrestrial/Upland Birds	N	N	N
282	Terrestrial/Upland Birds	N	Y	N
283	Terrestrial/Upland Birds	N	Y	N
284	Terrestrial/Upland Invertebrates	N	Y	Y
285	Terrestrial/Upland Mammals	N	N	N
286	Terrestrial/Upland Plants	N	N	N
287	Terrestrial/Upland Plants	N	N	N
288	Terrestrial/Upland Plants	N	N	N
289	Terrestrial/Upland Plants	N	N	N
290	Terrestrial/Upland Plants	N	N	N
291	Terrestrial/Upland Plants	N	N	Y
292	Terrestrial/Upland Plants	N	N	Y
293	Terrestrial/Upland Plants	N	Y	N
294	Terrestrial/Upland Plants	N	Y	N
295	Terrestrial/Upland Plants	N	Y	N
296	Terrestrial/Upland Plants	N	Y	N
297	Terrestrial/Upland Plants	Y	Y	Y

Appendix B: Sensitive Species and Natural Communities

298	Terrestrial/Upland Plants	Y	Y	Y
299	Terrestrial/Upland Reptiles/Amphibians	N	N	N
300	Terrestrial/Upland Reptiles/Amphibians	N	Y	Y
341	Aquatic/Riparian Invertebrates	N	Y	N
342	Aquatic/Riparian Invertebrates	N	Y	N
343	Aquatic/Riparian Invertebrates	N	Y	N
344	Aquatic/Riparian Plants	N	N	N
345	Aquatic/Riparian Plants	N	N	N
346	Aquatic/Riparian Plants	N	N	N
347	Aquatic/Riparian Plants	N	N	N
348	Aquatic/Riparian Plants	N	N	N
349	Aquatic/Riparian Plants	N	N	N
350	Aquatic/Riparian Plants	N	N	N
351	Aquatic/Riparian Plants	N	N	N
352	Aquatic/Riparian Plants	N	N	N
353	Aquatic/Riparian Plants	N	N	N
354	Aquatic/Riparian Plants	N	N	N
355	Aquatic/Riparian Plants	N	N	N
356	Aquatic/Riparian Plants	N	N	N
357	Aquatic/Riparian Plants	N	N	N
358	Aquatic/Riparian Plants	N	N	N
359	Aquatic/Riparian Plants	N	N	N
360	Aquatic/Riparian Plants	N	N	N
361	Aquatic/Riparian Plants	N	N	N
362	Aquatic/Riparian Plants	N	N	N
363	Aquatic/Riparian Plants	N	N	N
364	Aquatic/Riparian Plants	N	N	N
365	Aquatic/Riparian Plants	N	N	N
366	Aquatic/Riparian Plants	N	N	N
367	Aquatic/Riparian Plants	N	N	N

Appendix B: Sensitive Species and Natural Communities

368	Aquatic/Riparian Plants	N	N	N
369	Aquatic/Riparian Plants	N	N	N
370	Aquatic/Riparian Plants	N	N	N
371	Aquatic/Riparian Plants	N	N	N
372	Aquatic/Riparian Plants	N	N	N
373	Aquatic/Riparian Plants	N	N	N
374	Aquatic/Riparian Plants	N	N	N
375	Aquatic/Riparian Plants	N	N	N
376	Aquatic/Riparian Plants	N	N	N
377	Aquatic/Riparian Plants	N	N	N
378	Aquatic/Riparian Plants	N	N	N
379	Aquatic/Riparian Plants	N	N	N
380	Aquatic/Riparian Plants	N	N	N
381	Aquatic/Riparian Plants	N	N	N
382	Aquatic/Riparian Plants	N	N	N
383	Aquatic/Riparian Plants	N	N	N
384	Aquatic/Riparian Plants	N	N	N
385	Aquatic/Riparian Plants	N	N	N
386	Aquatic/Riparian Plants	N	N	N
387	Aquatic/Riparian Plants	N	N	N
388	Aquatic/Riparian Plants	N	N	N
389	Aquatic/Riparian Plants	N	N	N
390	Aquatic/Riparian Plants	N	N	N
391	Aquatic/Riparian Plants	N	N	N
392	Aquatic/Riparian Plants	N	N	N
393	Aquatic/Riparian Plants	N	N	N
394	Aquatic/Riparian Plants	N	N	N
395	Aquatic/Riparian Plants	N	N	N
396	Aquatic/Riparian Plants	N	N	N
397	Aquatic/Riparian Plants	N	N	N

Appendix B: Sensitive Species and Natural Communities

398	Aquatic/Riparian Plants	N	N	N
399	Aquatic/Riparian Plants	N	N	N
400	Aquatic/Riparian Plants	N	N	N
401	Aquatic/Riparian Plants	N	N	N
402	Aquatic/Riparian Plants	N	N	N
403	Aquatic/Riparian Plants	N	N	N
404	Aquatic/Riparian Plants	N	N	N
405	Aquatic/Riparian Plants	N	N	N
406	Aquatic/Riparian Plants	N	N	N
407	Aquatic/Riparian Plants	N	N	N
408	Aquatic/Riparian Plants	N	N	N
409	Aquatic/Riparian Plants	N	N	N
410	Aquatic/Riparian Plants	N	N	N
411	Aquatic/Riparian Plants	N	N	N
412	Aquatic/Riparian Plants	N	N	N
413	Aquatic/Riparian Plants	N	N	N
414	Aquatic/Riparian Plants	N	N	N
415	Aquatic/Riparian Plants	N	N	N
416	Aquatic/Riparian Plants	N	N	N
417	Aquatic/Riparian Plants	N	N	N
418	Aquatic/Riparian Plants	N	N	N
419	Aquatic/Riparian Plants	N	N	N
420	Aquatic/Riparian Plants	N	N	N
421	Aquatic/Riparian Plants	N	N	N
422	Aquatic/Riparian Plants	N	N	N
423	Aquatic/Riparian Plants	N	N	N
424	Aquatic/Riparian Plants	N	N	N
425	Aquatic/Riparian Plants	N	N	N
426	Aquatic/Riparian Plants	N	N	N
427	Aquatic/Riparian Plants	N	N	N

Appendix B: Sensitive Species and Natural Communities

428	Aquatic/Riparian Plants	N	N	N
429	Aquatic/Riparian Plants	N	N	N
430	Aquatic/Riparian Plants	N	N	N
431	Aquatic/Riparian Plants	N	N	N
432	Aquatic/Riparian Plants	N	N	N
433	Aquatic/Riparian Plants	N	N	N
434	Aquatic/Riparian Plants	N	N	N
435	Aquatic/Riparian Plants	N	N	N
436	Aquatic/Riparian Plants	N	N	N
437	Aquatic/Riparian Plants	N	N	N
438	Aquatic/Riparian Plants	N	N	N
439	Aquatic/Riparian Plants	N	N	N
440	Aquatic/Riparian Plants	N	N	N
441	Aquatic/Riparian Plants	N	N	N
442	Aquatic/Riparian Plants	N	N	N
443	Aquatic/Riparian Plants	N	N	N
444	Aquatic/Riparian Plants	N	N	N
445	Aquatic/Riparian Plants	N	N	N
446	Aquatic/Riparian Plants	N	N	N
447	Aquatic/Riparian Plants	N	N	N
448	Aquatic/Riparian Plants	N	N	N
449	Aquatic/Riparian Plants	N	N	N
450	Aquatic/Riparian Plants	N	N	N
451	Aquatic/Riparian Plants	N	N	N
452	Aquatic/Riparian Plants	N	N	N
453	Aquatic/Riparian Plants	N	N	N
454	Aquatic/Riparian Plants	N	N	N
455	Aquatic/Riparian Plants	N	N	N
456	Aquatic/Riparian Plants	N	N	N
457	Aquatic/Riparian Plants	N	N	Y

Appendix B: Sensitive Species and Natural Communities

458	Aquatic/Riparian Plants	N	N	Y
459	Aquatic/Riparian Plants	N	N	Y
460	Aquatic/Riparian Plants	N	N	Y
461	Aquatic/Riparian Plants	N	Y	N
462	Aquatic/Riparian Plants	N	Y	N
463	Aquatic/Riparian Plants	N	Y	N
464	Aquatic/Riparian Plants	N	Y	N
465	Aquatic/Riparian Plants	N	Y	N
466	Aquatic/Riparian Plants	N	Y	N
467	Aquatic/Riparian Plants	N	Y	N
468	Aquatic/Riparian Plants	N	Y	N
469	Aquatic/Riparian Plants	N	Y	N
470	Aquatic/Riparian Plants	N	Y	N
471	Aquatic/Riparian Plants	N	Y	N
472	Aquatic/Riparian Plants	N	Y	N
473	Aquatic/Riparian Plants	N	Y	N
474	Aquatic/Riparian Plants	N	Y	N
475	Aquatic/Riparian Plants	N	Y	N
476	Aquatic/Riparian Plants	N	Y	N
477	Aquatic/Riparian Plants	N	Y	N
478	Aquatic/Riparian Plants	N	Y	N
479	Aquatic/Riparian Plants	N	Y	N
480	Aquatic/Riparian Plants	N	Y	N
481	Aquatic/Riparian Plants	N	Y	N
482	Aquatic/Riparian Plants	N	Y	N
483	Aquatic/Riparian Plants	N	Y	N
484	Aquatic/Riparian Plants	N	Y	N
485	Aquatic/Riparian Plants	N	Y	N
486	Aquatic/Riparian Plants	N	Y	N
487	Aquatic/Riparian Plants	N	Y	N

Appendix B: Sensitive Species and Natural Communities

488	Aquatic/Riparian Plants	N	Y	N
489	Aquatic/Riparian Plants	N	Y	N
490	Aquatic/Riparian Plants	N	Y	N
491	Aquatic/Riparian Plants	N	Y	N
492	Aquatic/Riparian Plants	N	Y	N
493	Aquatic/Riparian Plants	N	Y	N
494	Aquatic/Riparian Plants	N	Y	N
495	Aquatic/Riparian Plants	N	Y	N
496	Aquatic/Riparian Plants	N	Y	N
497	Aquatic/Riparian Plants	N	Y	N
498	Aquatic/Riparian Plants	N	Y	N
499	Aquatic/Riparian Plants	N	Y	N
500	Aquatic/Riparian Plants	N	Y	N
501	Aquatic/Riparian Plants	N	Y	N
502	Aquatic/Riparian Plants	N	Y	N
503	Aquatic/Riparian Plants	N	Y	N
504	Aquatic/Riparian Plants	N	Y	N
505	Aquatic/Riparian Plants	N	Y	N
506	Aquatic/Riparian Plants	N	Y	N
507	Aquatic/Riparian Plants	N	Y	N
508	Aquatic/Riparian Plants	N	Y	N
509	Aquatic/Riparian Plants	N	Y	N
510	Aquatic/Riparian Plants	N	Y	N
511	Aquatic/Riparian Plants	N	Y	N
512	Aquatic/Riparian Plants	N	Y	N
513	Aquatic/Riparian Plants	N	Y	N
514	Aquatic/Riparian Plants	N	Y	N
515	Aquatic/Riparian Plants	N	Y	N
516	Aquatic/Riparian Plants	N	Y	N
517	Aquatic/Riparian Plants	N	Y	N

Appendix B: Sensitive Species and Natural Communities

518	Aquatic/Riparian Plants	N	Y	N
519	Aquatic/Riparian Plants	N	Y	N
520	Aquatic/Riparian Plants	N	Y	N
521	Aquatic/Riparian Plants	N	Y	N
522	Aquatic/Riparian Plants	N	Y	N
523	Aquatic/Riparian Plants	N	Y	N
524	Aquatic/Riparian Plants	N	Y	N
525	Aquatic/Riparian Plants	N	Y	N
526	Aquatic/Riparian Plants	N	Y	N
527	Aquatic/Riparian Plants	N	Y	N
528	Aquatic/Riparian Plants	N	Y	N
529	Aquatic/Riparian Plants	N	Y	N
530	Aquatic/Riparian Plants	N	Y	N
531	Aquatic/Riparian Plants	N	Y	N
532	Aquatic/Riparian Plants	N	Y	N
533	Aquatic/Riparian Plants	N	Y	N
534	Aquatic/Riparian Plants	N	Y	N
535	Aquatic/Riparian Plants	N	Y	N
536	Aquatic/Riparian Plants	N	Y	N
537	Aquatic/Riparian Plants	N	Y	N
538	Aquatic/Riparian Plants	N	Y	N
539	Aquatic/Riparian Plants	N	Y	N
540	Aquatic/Riparian Plants	N	Y	N
541	Aquatic/Riparian Plants	N	Y	N
542	Aquatic/Riparian Plants	N	Y	N
543	Aquatic/Riparian Plants	N	Y	N
544	Aquatic/Riparian Plants	N	Y	N
545	Aquatic/Riparian Plants	N	Y	N
546	Aquatic/Riparian Plants	N	Y	N
547	Aquatic/Riparian Plants	N	Y	N

Appendix B: Sensitive Species and Natural Communities

548	Aquatic/Riparian Plants	N	Y	N
549	Aquatic/Riparian Plants	N	Y	N
550	Aquatic/Riparian Plants	N	Y	N
551	Aquatic/Riparian Plants	N	Y	N
552	Aquatic/Riparian Plants	N	Y	N
553	Aquatic/Riparian Plants	N	Y	N
554	Aquatic/Riparian Plants	N	Y	N
555	Aquatic/Riparian Plants	N	Y	N
556	Aquatic/Riparian Plants	N	Y	N
557	Aquatic/Riparian Plants	N	Y	N
558	Aquatic/Riparian Plants	N	Y	N
559	Aquatic/Riparian Plants	N	Y	N
560	Aquatic/Riparian Plants	N	Y	N
561	Aquatic/Riparian Plants	N	Y	N
562	Aquatic/Riparian Plants	N	Y	N
563	Aquatic/Riparian Plants	N	Y	N
564	Aquatic/Riparian Plants	N	Y	N
565	Aquatic/Riparian Plants	N	Y	N
566	Aquatic/Riparian Plants	N	Y	N
567	Aquatic/Riparian Plants	N	Y	N
568	Aquatic/Riparian Plants	N	Y	N
569	Aquatic/Riparian Plants	N	Y	N
570	Aquatic/Riparian Plants	N	Y	N
571	Aquatic/Riparian Plants	N	Y	N
572	Aquatic/Riparian Plants	N	Y	N
573	Aquatic/Riparian Plants	N	Y	N
574	Aquatic/Riparian Plants	N	Y	N
575	Aquatic/Riparian Plants	N	Y	N
576	Aquatic/Riparian Plants	N	Y	N
577	Aquatic/Riparian Plants	N	Y	N

Appendix B: Sensitive Species and Natural Communities

578	Aquatic/Riparian Plants	N	Y	N
579	Aquatic/Riparian Plants	N	Y	N
580	Aquatic/Riparian Plants	N	Y	N
581	Aquatic/Riparian Plants	N	Y	N
582	Aquatic/Riparian Plants	N	Y	N
583	Aquatic/Riparian Plants	N	Y	N
584	Aquatic/Riparian Plants	N	Y	N
585	Aquatic/Riparian Plants	N	Y	N
586	Aquatic/Riparian Plants	N	Y	N
587	Aquatic/Riparian Plants	N	Y	N
588	Aquatic/Riparian Plants	N	Y	N
589	Aquatic/Riparian Plants	N	Y	N
590	Aquatic/Riparian Plants	N	Y	N
591	Aquatic/Riparian Plants	N	Y	N
592	Aquatic/Riparian Plants	N	Y	N
593	Aquatic/Riparian Plants	N	Y	N
594	Aquatic/Riparian Plants	N	Y	N
595	Aquatic/Riparian Plants	N	Y	N
596	Aquatic/Riparian Plants	N	Y	N
597	Aquatic/Riparian Plants	N	Y	N
598	Aquatic/Riparian Plants	N	Y	N
599	Aquatic/Riparian Plants	N	Y	N
600	Aquatic/Riparian Plants	N	Y	N
601	Aquatic/Riparian Plants	N	Y	N
602	Aquatic/Riparian Plants	N	Y	N
603	Aquatic/Riparian Plants	N	Y	N
604	Aquatic/Riparian Plants	N	Y	N
605	Aquatic/Riparian Plants	N	Y	N
606	Aquatic/Riparian Plants	N	Y	N
607	Aquatic/Riparian Plants	N	Y	N

Appendix B: Sensitive Species and Natural Communities

608	Aquatic/Riparian Plants	N	Y	N
609	Aquatic/Riparian Plants	N	Y	N
610	Aquatic/Riparian Plants	N	Y	N
611	Aquatic/Riparian Plants	N	Y	N
612	Aquatic/Riparian Plants	N	Y	N
613	Aquatic/Riparian Plants	N	Y	N
614	Aquatic/Riparian Plants	N	Y	N
615	Aquatic/Riparian Plants	N	Y	N
616	Aquatic/Riparian Plants	N	Y	N
617	Aquatic/Riparian Plants	N	Y	N
618	Aquatic/Riparian Plants	N	Y	N
619	Aquatic/Riparian Plants	N	Y	N
620	Aquatic/Riparian Plants	N	Y	N
621	Aquatic/Riparian Plants	N	Y	N
622	Aquatic/Riparian Plants	N	Y	N
623	Aquatic/Riparian Plants	N	Y	N
624	Aquatic/Riparian Plants	N	Y	N
625	Aquatic/Riparian Plants	N	Y	N
626	Aquatic/Riparian Plants	N	Y	N
627	Aquatic/Riparian Plants	N	Y	N
628	Aquatic/Riparian Plants	N	Y	N
629	Aquatic/Riparian Plants	N	Y	N
630	Aquatic/Riparian Plants	N	Y	N
631	Aquatic/Riparian Plants	N	Y	N
632	Aquatic/Riparian Plants	N	Y	N
633	Aquatic/Riparian Plants	N	Y	N
634	Aquatic/Riparian Plants	N	Y	N
635	Aquatic/Riparian Plants	N	Y	N
636	Aquatic/Riparian Plants	N	Y	N
637	Aquatic/Riparian Plants	N	Y	N

Appendix B: Sensitive Species and Natural Communities

638	Aquatic/Riparian Plants	N	Y	N
639	Aquatic/Riparian Plants	N	Y	N
640	Aquatic/Riparian Plants	N	Y	N
641	Aquatic/Riparian Plants	N	Y	N
642	Aquatic/Riparian Plants	N	Y	N
643	Aquatic/Riparian Plants	N	Y	N
644	Aquatic/Riparian Plants	N	Y	Y
645	Aquatic/Riparian Plants	N	Y	Y
646	Aquatic/Riparian Plants	N	Y	Y
647	Aquatic/Riparian Plants	N	Y	Y
648	Aquatic/Riparian Plants	N	Y	Y
649	Aquatic/Riparian Plants	N	Y	Y
650	Aquatic/Riparian Plants	N	Y	Y
651	Aquatic/Riparian Plants	N	Y	Y
652	Aquatic/Riparian Plants	Y	Y	Y
903	Terrestrial/Upland Plants	N	N	N
904	Terrestrial/Upland Plants	N	N	N
905	Terrestrial/Upland Plants	N	N	N
906	Terrestrial/Upland Plants	N	N	N
907	Terrestrial/Upland Plants	N	N	N
908	Terrestrial/Upland Plants	N	N	N
909	Terrestrial/Upland Plants	N	N	N
910	Terrestrial/Upland Plants	N	N	N
911	Terrestrial/Upland Plants	N	N	N
912	Terrestrial/Upland Plants	N	N	N
913	Terrestrial/Upland Plants	N	N	N
914	Terrestrial/Upland Plants	N	N	N
915	Terrestrial/Upland Plants	N	N	N
916	Terrestrial/Upland Plants	N	N	N
917	Terrestrial/Upland Plants	N	N	N

Appendix B: Sensitive Species and Natural Communities

918	Terrestrial/Upland Plants	N	N	N
919	Terrestrial/Upland Plants	N	N	N
920	Terrestrial/Upland Plants	N	N	N
921	Terrestrial/Upland Plants	N	N	N
922	Terrestrial/Upland Plants	N	N	N
923	Terrestrial/Upland Plants	N	N	N
924	Terrestrial/Upland Plants	N	N	N
925	Terrestrial/Upland Plants	N	N	N
926	Terrestrial/Upland Plants	N	N	N
927	Terrestrial/Upland Plants	N	N	N
928	Terrestrial/Upland Plants	N	N	N
929	Terrestrial/Upland Plants	N	N	N
930	Terrestrial/Upland Plants	N	N	N
931	Terrestrial/Upland Plants	N	N	N
932	Terrestrial/Upland Plants	N	N	N
933	Terrestrial/Upland Plants	N	N	N
934	Terrestrial/Upland Plants	N	N	N
935	Terrestrial/Upland Plants	N	N	N
936	Terrestrial/Upland Plants	N	N	N
937	Terrestrial/Upland Plants	N	N	N
938	Terrestrial/Upland Plants	N	N	N
939	Terrestrial/Upland Plants	N	N	N
940	Terrestrial/Upland Plants	N	N	N
941	Terrestrial/Upland Plants	N	N	N
942	Terrestrial/Upland Plants	N	N	N
943	Terrestrial/Upland Plants	N	N	N
944	Terrestrial/Upland Plants	N	N	N
945	Terrestrial/Upland Plants	N	N	N
946	Terrestrial/Upland Plants	N	N	N
947	Terrestrial/Upland Plants	N	N	N

Appendix B: Sensitive Species and Natural Communities

948	Terrestrial/Upland Plants	N	N	N
949	Terrestrial/Upland Plants	N	N	N
950	Terrestrial/Upland Plants	N	N	N
951	Terrestrial/Upland Plants	N	N	N
952	Terrestrial/Upland Plants	N	N	N
953	Terrestrial/Upland Plants	N	N	N
954	Terrestrial/Upland Plants	N	N	N
955	Terrestrial/Upland Plants	N	N	N
956	Terrestrial/Upland Plants	N	N	N
957	Terrestrial/Upland Plants	N	N	N
958	Terrestrial/Upland Plants	N	N	N
959	Terrestrial/Upland Plants	N	N	N
960	Terrestrial/Upland Plants	N	N	N
961	Terrestrial/Upland Plants	N	N	N
962	Terrestrial/Upland Plants	N	N	N
963	Terrestrial/Upland Plants	N	N	N
964	Terrestrial/Upland Plants	N	N	N
965	Terrestrial/Upland Plants	N	N	N
966	Terrestrial/Upland Plants	N	N	N
967	Terrestrial/Upland Plants	N	N	N
968	Terrestrial/Upland Plants	N	N	N
969	Terrestrial/Upland Plants	N	N	N
970	Terrestrial/Upland Plants	N	N	N
971	Terrestrial/Upland Plants	N	N	N
972	Terrestrial/Upland Plants	N	N	N
973	Terrestrial/Upland Plants	N	N	N
974	Terrestrial/Upland Plants	N	N	N
975	Terrestrial/Upland Plants	N	N	N
976	Terrestrial/Upland Plants	N	N	N
977	Terrestrial/Upland Plants	N	N	N

Appendix B: Sensitive Species and Natural Communities

978	Terrestrial/Upland Plants	N	N	N
979	Terrestrial/Upland Plants	N	N	N
980	Terrestrial/Upland Plants	N	N	N
981	Terrestrial/Upland Plants	N	N	N
982	Terrestrial/Upland Plants	N	N	N
983	Terrestrial/Upland Plants	N	N	N
984	Terrestrial/Upland Plants	N	N	N
985	Terrestrial/Upland Plants	N	N	N
986	Terrestrial/Upland Plants	N	N	N
987	Terrestrial/Upland Plants	N	N	N
988	Terrestrial/Upland Plants	N	N	N
989	Terrestrial/Upland Plants	N	N	N
990	Terrestrial/Upland Plants	N	N	N
991	Terrestrial/Upland Plants	N	N	N
992	Terrestrial/Upland Plants	N	N	N
993	Terrestrial/Upland Plants	N	N	N
994	Terrestrial/Upland Plants	N	N	N
995	Terrestrial/Upland Plants	N	N	N
996	Terrestrial/Upland Plants	N	N	N
997	Terrestrial/Upland Plants	N	N	N
998	Terrestrial/Upland Plants	N	N	N
999	Terrestrial/Upland Plants	N	N	N
1000	Terrestrial/Upland Plants	N	N	N
1001	Terrestrial/Upland Plants	N	N	N
1002	Terrestrial/Upland Plants	N	N	N
1003	Terrestrial/Upland Plants	N	N	N
1004	Terrestrial/Upland Plants	N	N	N
1005	Terrestrial/Upland Plants	N	N	N
1006	Terrestrial/Upland Plants	N	N	N
1007	Terrestrial/Upland Plants	N	N	Y

Appendix B: Sensitive Species and Natural Communities

1008	Terrestrial/Upland Plants	N	N	Y
1009	Terrestrial/Upland Plants	N	N	Y
1010	Terrestrial/Upland Plants	N	N	Y
1011	Terrestrial/Upland Plants	N	Y	N
1012	Terrestrial/Upland Plants	N	Y	N
1013	Terrestrial/Upland Plants	N	Y	N
1014	Terrestrial/Upland Plants	N	Y	N
1015	Terrestrial/Upland Plants	N	Y	N
1016	Terrestrial/Upland Plants	N	Y	N
1017	Terrestrial/Upland Plants	N	Y	N
1018	Terrestrial/Upland Plants	N	Y	N
1019	Terrestrial/Upland Plants	N	Y	N
1020	Terrestrial/Upland Plants	N	Y	N
1021	Terrestrial/Upland Plants	N	Y	N
1022	Terrestrial/Upland Plants	N	Y	N
1023	Terrestrial/Upland Plants	N	Y	N
1024	Terrestrial/Upland Plants	N	Y	N
1025	Terrestrial/Upland Plants	N	Y	N
1026	Terrestrial/Upland Plants	N	Y	N
1027	Terrestrial/Upland Plants	N	Y	N
1028	Terrestrial/Upland Plants	N	Y	N
1029	Terrestrial/Upland Plants	N	Y	N
1030	Terrestrial/Upland Plants	N	Y	N
1031	Terrestrial/Upland Plants	N	Y	N
1032	Terrestrial/Upland Plants	N	Y	N
1033	Terrestrial/Upland Plants	N	Y	N
1034	Terrestrial/Upland Plants	N	Y	N
1035	Terrestrial/Upland Plants	N	Y	N
1036	Terrestrial/Upland Plants	N	Y	N
1037	Terrestrial/Upland Plants	N	Y	N

Appendix B: Sensitive Species and Natural Communities

1038	Terrestrial/Upland Plants	N	Y	N
1039	Terrestrial/Upland Plants	N	Y	N
1040	Terrestrial/Upland Plants	N	Y	N
1041	Terrestrial/Upland Plants	N	Y	N
1042	Terrestrial/Upland Plants	N	Y	N
1043	Terrestrial/Upland Plants	N	Y	N
1044	Terrestrial/Upland Plants	N	Y	N
1045	Terrestrial/Upland Plants	N	Y	N
1046	Terrestrial/Upland Plants	N	Y	N
1047	Terrestrial/Upland Plants	N	Y	N
1048	Terrestrial/Upland Plants	N	Y	N
1049	Terrestrial/Upland Plants	N	Y	N
1050	Terrestrial/Upland Plants	N	Y	N
1051	Terrestrial/Upland Plants	N	Y	N
1052	Terrestrial/Upland Plants	N	Y	N
1053	Terrestrial/Upland Plants	N	Y	N
1054	Terrestrial/Upland Plants	N	Y	N
1055	Terrestrial/Upland Plants	N	Y	N
1056	Terrestrial/Upland Plants	N	Y	N
1057	Terrestrial/Upland Plants	N	Y	N
1058	Terrestrial/Upland Plants	N	Y	N
1059	Terrestrial/Upland Plants	N	Y	N
1060	Terrestrial/Upland Plants	N	Y	N
1061	Terrestrial/Upland Plants	N	Y	N
1062	Terrestrial/Upland Plants	N	Y	N
1063	Terrestrial/Upland Plants	N	Y	N
1064	Terrestrial/Upland Plants	N	Y	N
1065	Terrestrial/Upland Plants	N	Y	N
1066	Terrestrial/Upland Plants	N	Y	N
1067	Terrestrial/Upland Plants	N	Y	N

Appendix B: Sensitive Species and Natural Communities

1068	Terrestrial/Upland Plants	N	Y	N
1069	Terrestrial/Upland Plants	N	Y	N
1070	Terrestrial/Upland Plants	N	Y	N
1071	Terrestrial/Upland Plants	N	Y	N
1072	Terrestrial/Upland Plants	N	Y	N
1073	Terrestrial/Upland Plants	N	Y	N
1074	Terrestrial/Upland Plants	N	Y	N
1075	Terrestrial/Upland Plants	N	Y	N
1076	Terrestrial/Upland Plants	N	Y	N
1077	Terrestrial/Upland Plants	N	Y	N
1078	Terrestrial/Upland Plants	N	Y	N
1079	Terrestrial/Upland Plants	N	Y	N
1080	Terrestrial/Upland Plants	N	Y	N
1081	Terrestrial/Upland Plants	N	Y	N
1082	Terrestrial/Upland Plants	N	Y	N
1083	Terrestrial/Upland Plants	N	Y	N
1084	Terrestrial/Upland Plants	N	Y	N
1085	Terrestrial/Upland Plants	N	Y	N
1086	Terrestrial/Upland Plants	N	Y	N
1087	Terrestrial/Upland Plants	N	Y	N
1088	Terrestrial/Upland Plants	N	Y	N
1089	Terrestrial/Upland Plants	N	Y	N
1090	Terrestrial/Upland Plants	N	Y	N
1091	Terrestrial/Upland Plants	N	Y	N
1092	Terrestrial/Upland Plants	N	Y	N
1093	Terrestrial/Upland Plants	N	Y	N
1094	Terrestrial/Upland Plants	N	Y	N
1095	Terrestrial/Upland Plants	N	Y	N
1096	Terrestrial/Upland Plants	N	Y	N
1097	Terrestrial/Upland Plants	N	Y	N

Appendix B: Sensitive Species and Natural Communities

1098	Terrestrial/Upland Plants	N	Y	N
1099	Terrestrial/Upland Plants	N	Y	N
1100	Terrestrial/Upland Plants	N	Y	N
1101	Terrestrial/Upland Plants	N	Y	N
1102	Terrestrial/Upland Plants	N	Y	N
1103	Terrestrial/Upland Plants	N	Y	N
1104	Terrestrial/Upland Plants	N	Y	N
1105	Terrestrial/Upland Plants	N	Y	N
1106	Terrestrial/Upland Plants	N	Y	N
1107	Terrestrial/Upland Plants	N	Y	N
1108	Terrestrial/Upland Plants	N	Y	N
1109	Terrestrial/Upland Plants	N	Y	N
1110	Terrestrial/Upland Plants	N	Y	N
1111	Terrestrial/Upland Plants	N	Y	N
1112	Terrestrial/Upland Plants	N	Y	N
1113	Terrestrial/Upland Plants	N	Y	N
1114	Terrestrial/Upland Plants	N	Y	N
1115	Terrestrial/Upland Plants	N	Y	N
1116	Terrestrial/Upland Plants	N	Y	N
1117	Terrestrial/Upland Plants	N	Y	N
1118	Terrestrial/Upland Plants	N	Y	N
1119	Terrestrial/Upland Plants	N	Y	N
1120	Terrestrial/Upland Plants	N	Y	N
1121	Terrestrial/Upland Plants	N	Y	N
1122	Terrestrial/Upland Plants	N	Y	N
1123	Terrestrial/Upland Plants	N	Y	N
1124	Terrestrial/Upland Plants	N	Y	N
1125	Terrestrial/Upland Plants	N	Y	N
1126	Terrestrial/Upland Plants	N	Y	N
1127	Terrestrial/Upland Plants	N	Y	N

Appendix B: Sensitive Species and Natural Communities

1128	Terrestrial/Upland Plants	N	Y	N
1129	Terrestrial/Upland Plants	N	Y	N
1130	Terrestrial/Upland Plants	N	Y	N
1131	Terrestrial/Upland Plants	N	Y	N
1132	Terrestrial/Upland Plants	N	Y	N
1133	Terrestrial/Upland Plants	N	Y	N
1134	Terrestrial/Upland Plants	N	Y	N
1135	Terrestrial/Upland Plants	N	Y	N
1136	Terrestrial/Upland Plants	N	Y	N
1137	Terrestrial/Upland Plants	N	Y	N
1138	Terrestrial/Upland Plants	N	Y	N
1139	Terrestrial/Upland Plants	N	Y	N
1140	Terrestrial/Upland Plants	N	Y	N
1141	Terrestrial/Upland Plants	N	Y	N
1142	Terrestrial/Upland Plants	N	Y	N
1143	Terrestrial/Upland Plants	N	Y	N
1144	Terrestrial/Upland Plants	N	Y	N
1145	Terrestrial/Upland Plants	N	Y	N
1146	Terrestrial/Upland Plants	N	Y	N
1147	Terrestrial/Upland Plants	N	Y	N
1148	Terrestrial/Upland Plants	N	Y	N
1149	Terrestrial/Upland Plants	N	Y	N
1150	Terrestrial/Upland Plants	N	Y	N
1151	Terrestrial/Upland Plants	N	Y	N
1152	Terrestrial/Upland Plants	N	Y	N
1153	Terrestrial/Upland Plants	N	Y	N
1154	Terrestrial/Upland Plants	N	Y	N
1155	Terrestrial/Upland Plants	N	Y	N
1156	Terrestrial/Upland Plants	N	Y	N
1157	Terrestrial/Upland Plants	N	Y	N

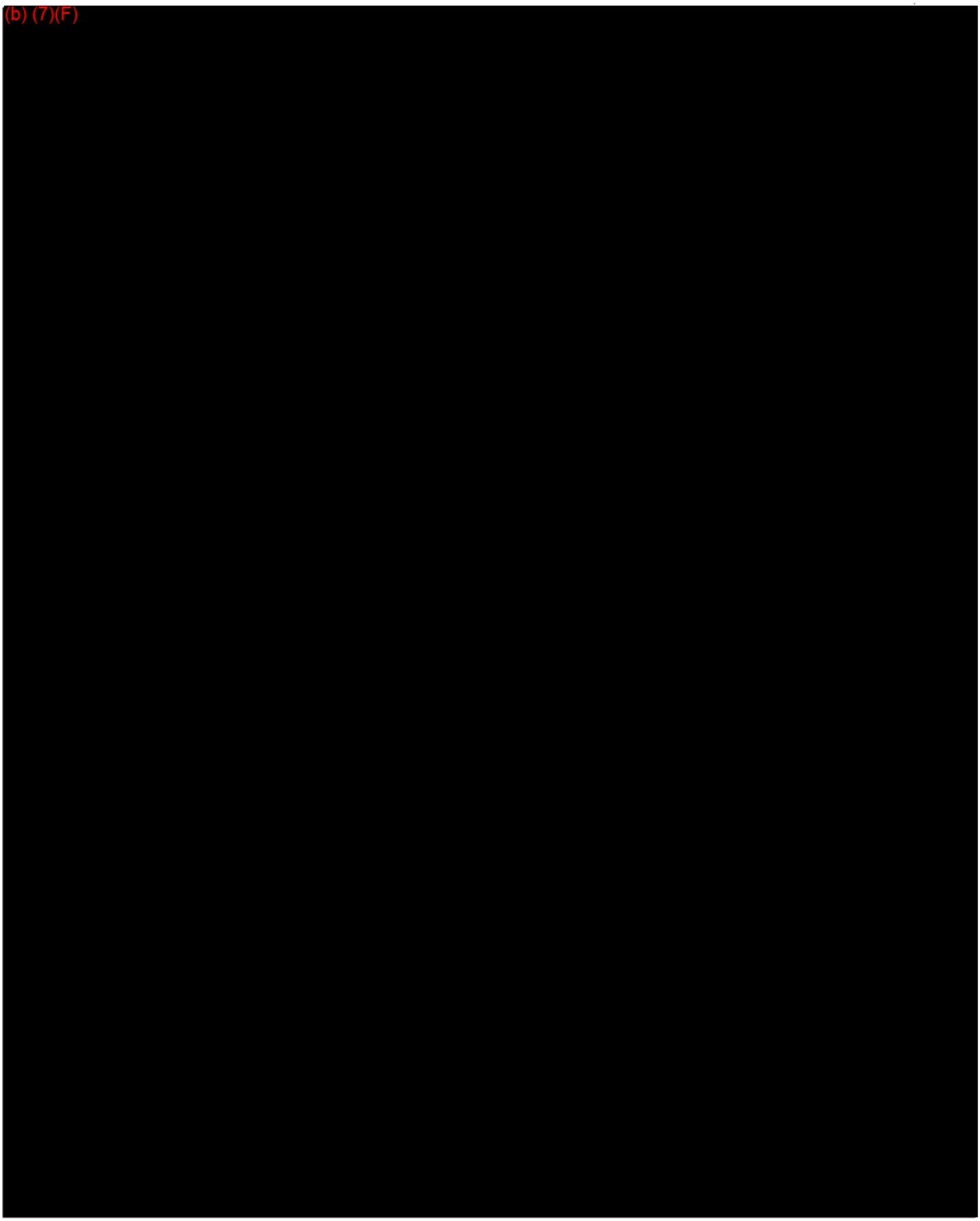
Appendix B: Sensitive Species and Natural Communities

1158	Terrestrial/Upland Plants	N	Y	N
1159	Terrestrial/Upland Plants	N	Y	N
1160	Terrestrial/Upland Plants	N	Y	N
1161	Terrestrial/Upland Plants	N	Y	N
1162	Terrestrial/Upland Plants	N	Y	N
1163	Terrestrial/Upland Plants	N	Y	N
1164	Terrestrial/Upland Plants	N	Y	N
1165	Terrestrial/Upland Plants	N	Y	N
1166	Terrestrial/Upland Plants	N	Y	N
1167	Terrestrial/Upland Plants	N	Y	N
1168	Terrestrial/Upland Plants	N	Y	N
1169	Terrestrial/Upland Plants	N	Y	N
1170	Terrestrial/Upland Plants	N	Y	N
1171	Terrestrial/Upland Plants	N	Y	N
1172	Terrestrial/Upland Plants	N	Y	N
1173	Terrestrial/Upland Plants	N	Y	N
1174	Terrestrial/Upland Plants	N	Y	N
1175	Terrestrial/Upland Plants	N	Y	N
1176	Terrestrial/Upland Plants	N	Y	N
1177	Terrestrial/Upland Plants	N	Y	N
1178	Terrestrial/Upland Plants	N	Y	N
1179	Terrestrial/Upland Plants	N	Y	N
1180	Terrestrial/Upland Plants	N	Y	N
1181	Terrestrial/Upland Plants	N	Y	N
1182	Terrestrial/Upland Plants	N	Y	N
1183	Terrestrial/Upland Plants	N	Y	Y
1184	Terrestrial/Upland Plants	N	Y	Y
1185	Terrestrial/Upland Plants	N	Y	Y
1186	Terrestrial/Upland Plants	N	Y	Y
1187	Terrestrial/Upland Plants	N	Y	Y

Appendix B: Sensitive Species and Natural Communities

1188	Terrestrial/Upland Plants	N	Y	Y
1189	Terrestrial/Upland Plants	N	Y	Y
1190	Terrestrial/Upland Plants	N	Y	Y
1191	Terrestrial/Upland Plants	N	Y	Y
1192	Terrestrial/Upland Plants	Y	Y	Y

Please see the supporting information enclosed with plan.


(b) (7)(F)

Appendix I – Abnormal Operation Conditions

Abnormal operating conditions are conditions identified by the operator that may indicate a malfunction of a component or deviation from normal operations that may indicate a condition exceeding design limits or result in a hazard to persons, property, or the environment. Whenever crude oil is being pumped in any pipeline section an employee at our control center monitors the flow to detect abnormal operating conditions. Operation personnel are trained to detect and identify possible causes and respond to abnormal operations. The following sections describe the investigative and corrective action procedures that may be used to correct abnormal operating conditions. The abnormal operating condition report in the Operations and Maintenance Manual should be completed when a condition occurs.

(b) (7)(F) [redacted]

[redacted]

Increase or Decrease in Pressure or Flow Rate

An increase or decrease in pressure or flow rate would be identified by the employee monitoring the pipeline or by activation of the high/low pressure shutdown if the high or low pressure developed rapidly. If any of these conditions are abnormal the pipeline would be shutdown and if operating personnel are not already at the location they would be dispatched. If the problem was low pressure the operator would verify the pressure on a manual gauge. If the pressure was found to actually be abnormally low the line section will either be walked or flown to verify that a leak has not occurred. If the problem was high pressure, the operator would verify that the high pressure condition exists. The receiving station will check that all valves are in the correct position. If all valves are in the correct position it is possible that the increase is due to a change in oil quality. The crude oil that is gathered is subject to various qualities, effecting viscosity, water content, gravity, etc. These variables may result in a high pressure condition. If no mechanical conditions are found causing the condition, that pump would be started at a reduced flow rate to reduce pressure and a cleaning pig would be launched.

Loss of Communication

In the event of loss of communications, secondary communication systems are available. In addition to the telephone, the gathering stations are equipped with computers with internet capabilities. All employees have company issued cell phones and company trucks are equipped with workpads. Workpads have the capability to email and instant message. If all communications are lost, the affected pipeline would be shutdown until secondary communication systems have verified that the discharge and receiving station can be manned to monitor pressure and hand gauge the tanks to monitor flow.

Operation of Any Safety Device

Safety devices that could be operated are high/low pressure shutdown controls and high/low tank level indicators. Procedures to identify and mitigate abnormally high/low pressure conditions are discussed above in the Increase or Decrease in Pressure or Flow Rate section. If a high tank level indicator would be activated, any additional flow into the tank would be stopped. Operating personnel would be notified and made aware of the conditions to ensure that no additional oil gathering trucks would unload into the tank until the condition is corrected by reducing the crude oil level. If a low level indicator would be activated, the discharge pump would be shutdown remotely or by the station operator to eliminate possible damage to the pump and prevent air/vapors from entering the pipeline.

Any Other Malfunction or Deviation

Any component malfunction on the pipeline, deviation from normal operation, or personnel error that could cause a hazard to people, property or the environment will be investigated and documented. If the malfunction or deviation is due to personnel error appropriate disciplinary action will be taken.

Normal Operation Variations

After any abnormal operation condition has ended, all aspects of the pipeline operation will be monitored closely to ensure that there are no further problems. The monitoring will check any variation from normal at adequate critical locations in the pipeline system to determine continued safe operation and integrity. The monitoring will include checking tank liquid levels, operating and/or standing pressures, flows and valve positions. If determined necessary, any suspected areas of the pipeline will be physically inspected or inspected by aircraft.

Correcting Variations from Normal Operations

Variations from normal operation will be corrected prior to operating any pipeline section. The majority of the variations can be corrected using the procedures in the prior sections. If the variation cannot be corrected utilizing the knowledge and experience of our operating personnel, outside engineering consultants will be contacted for assistance.

Notification of Responsible Operations Personnel During an Abnormal Operating Condition

All operators and management will be notified when an abnormal operation condition occurs or appears to be developing. If the abnormal condition could indicate a possible spill, emergency response employees will also be contacted.

Notification is accomplished by face to face communication, landline telephone, cellular phone, or computer email messages. It is important that the communications include all relevant facts regarding the abnormal condition.

Review of Abnormal Operating Conditions Personnel

A periodic review of operating personnel will be conducted to determine the effectiveness of the procedures controlling abnormal operations. The procedures will be changed when deficiencies are found and operating personnel will receive additional training if necessary. The abnormal operating condition report from the Operations and Maintenance Manual will be the basis for the periodic review.

Appendix J
Incident Documentation Forms

NATIONAL INCIDENT MANAGEMENT SYSTEM
INCIDENT COMMAND SYSTEM

ICS FORMS BOOKLET
FEMA 502-2

September 2010

INTRODUCTION TO ICS FORMS

The National Incident Management System (NIMS) Incident Command System (ICS) Forms Booklet, FEMA 502-2, is designed to assist emergency response personnel in the use of ICS and corresponding documentation during incident operations. This booklet is a companion document to the NIMS ICS Field Operations Guide (FOG), FEMA 502-1, which provides general guidance to emergency responders on implementing ICS. This booklet is meant to complement existing incident management programs and does not replace relevant emergency operations plans, laws, and ordinances. These forms are designed for use within the Incident Command System, and are not targeted for use in Area Command or in multiagency coordination systems.

These forms are intended for use as tools for the creation of Incident Action Plans (IAPs), for other incident management activities, and for support and documentation of ICS activities. Personnel using the forms should have a basic understanding of NIMS, including ICS, through training and/or experience to ensure they can effectively use and understand these forms. These ICS Forms represent an all-hazards approach and update to previously used ICS Forms. While the layout and specific blocks may have been updated, the functionality of the forms remains the same. It is recommended that all users familiarize themselves with the updated forms and instructions.

A general description of each ICS Form's purpose, suggested preparation, and distribution are included immediately after the form, including block-by-block completion instructions to ensure maximum clarity on specifics, or for those personnel who may be unfamiliar with the forms.

The ICS organizational charts contained in these forms are examples of how an ICS organization is typically developed for incident response. However, the flexibility and scalability of ICS allow modifications, as needed, based on experience and particular incident requirements.

These forms are designed to include the essential data elements for the ICS process they address. The use of these standardized ICS Forms is encouraged to promote consistency in the management and documentation of incidents in the spirit of NIMS, and to facilitate effective use of mutual aid. In many cases, additional pages can be added to the existing ICS Forms when needed, and several forms are set up with this specific provision. The section after the ICS Forms List provides details on adding appendixes or fields to the forms for jurisdiction- or discipline-specific needs.

It may be appropriate to compile and maintain other NIMS-related forms with these ICS Forms, such as resource management and/or ordering forms that are used to support incidents. Examples of these include the following Emergency Management Assistance Compact (EMAC) forms: REQ-A (Interstate Mutual Aid Request), Reimbursement Form R-1 (Interstate Reimbursement Form), and Reimbursement Form R-2 (Intrastate Reimbursement Form).

ICS FORMS LIST

This table lists all of the ICS Forms included in this publication.

Notes:

- In the following table, the ICS Forms identified with an asterisk (*) are typically included in an IAP.
- Forms identified with two asterisks (**) are additional forms that could be used in the IAP.
- The other ICS Forms are used in the ICS process for incident management activities, but are not typically included in the IAP.
- The date and time entered in the form blocks should be determined by the Incident Command or Unified Command. Local time is typically used.

ICS Form #:	Form Title:	Typically Prepared by:
ICS 201	**Incident Briefing**	Initial Incident Commander
*ICS 202	**Incident Objectives**	Planning Section Chief
*ICS 203	**Organization Assignment List**	Resources Unit Leader
*ICS 204	**Assignment List**	Resources Unit Leader and Operations Section Chief
*ICS 205	**Incident Radio Communications Plan**	Communications Unit Leader
**ICS 205A	**Communications List**	Communications Unit Leader
*ICS 206	**Medical Plan**	Medical Unit Leader (reviewed by Safety Officer)
ICS 207	**Incident Organization Chart** *(wall-mount size, optional 8½" x 14")*	Resources Unit Leader
**ICS 208	**Safety Message/Plan**	Safety Officer
ICS 209	**Incident Status Summary**	Situation Unit Leader
ICS 210	**Resource Status Change**	Communications Unit Leader
ICS 211	**Incident Check-In List** *(optional 8½" x 14" and 11" x 17")*	Resources Unit/Check-In Recorder
ICS 213	**General Message** *(3-part form)*	Any Message Originator
ICS 214	**Activity Log** *(optional 2-sided form)*	All Sections and Units
ICS 215	**Operational Planning Worksheet** *(optional 8½" x 14" and 11" x 17")*	Operations Section Chief
ICS 215A	**Incident Action Plan Safety Analysis**	Safety Officer
ICS 218	**Support Vehicle/Equipment Inventory** *(optional 8½" x 14" and 11" x 17")*	Ground Support Unit
ICS 219-1 to ICS 219-8, ICS 219-10 *(Cards)*	**Resource Status Card** (T-Card) *(may be printed on cardstock)*	Resources Unit
ICS 220	**Air Operations Summary Worksheet**	Operations Section Chief or Air Branch Director
ICS 221	**Demobilization Check-Out**	Demobilization Unit Leader
ICS 225	**Incident Personnel Performance Rating**	Supervisor at the incident

ICS FORM ADAPTION, EXTENSION, AND APPENDIXES

The ICS Forms in this booklet are designed to serve all-hazards, cross-discipline needs for incident management across the Nation. These forms include the essential data elements for the ICS process they address, and create a foundation within ICS for complex incident management activities. However, the flexibility and scalability of NIMS should allow for needs outside this foundation, so the following are possible mechanisms to add to, extend, or adapt ICS Forms when needed.

Because the goal of NIMS is to have a consistent nationwide approach to incident management, jurisdictions and disciplines are encouraged to use the ICS Forms as they are presented here – unless these forms do not meet an organization's particular incident management needs for some unique reason. If changes are needed, the focus on essential information elements should remain, and as such the spirit and intent of particular fields or "information elements" on the ICS Forms should remain intact to maintain consistency if the forms are altered. Modifications should be clearly indicated as deviations from or additions to the ICS Forms. The following approaches may be used to meet any unique needs.

ICS Form Adaptation

When agencies and organizations require specialized forms or information for particular kinds of incidents, events, or disciplines, it may be beneficial to utilize the essential data elements from a particular ICS Form to create a more localized or field-specific form. When this occurs, organizations are encouraged to use the relevant essential data elements and ICS Form number, but to clarify that the altered form is a specific organizational adaptation of the form. For example, an altered form should clearly indicate in the title that it has been changed to meet a specific need, such as "ICS 215A, Hazard Risk Analysis Worksheet, Adapted for Story County Hazmat Program."

Extending ICS Form Fields

Particular fields on an ICS Form may need to include further breakouts or additional related elements. If such additions are needed, the form itself should be clearly labeled as an adapted form (see above), and the additional sub-field numbers should be clearly labeled as unique to the adapted form. Letters or other indicators may be used to label the new sub-fields (if the block does not already include sub-fields).

Examples of possible field additions are shown below for the ICS 209:

- Block 2: Incident Number.
  - Block 2A (adapted): Full agency accounting cost charge number for primary authority having jurisdiction.
- Block 29: Primary Materials or Hazards Involved (hazardous chemicals, fuel types, infectious agents, radiation, etc.).
  - Block 29A (adapted): Indicate specific wildland fire fuel model number.

Creating ICS Form Appendixes

Certain ICS Forms may require appendixes to include additional information elements needed by a particular jurisdiction or discipline. When an appendix is needed for a given form, it is expected that the jurisdiction or discipline will determine standardized fields for such an appendix and make the form available as needed.

Any ICS Form appendixes should be clearly labeled with the form name and an indicator that it is a discipline- or jurisdiction-specific appendix. Appendix field numbering should begin following the last identified block in the corresponding ICS Form.

INCIDENT BRIEFING (ICS 201)

1. Incident Name:	2. Incident Number:	3. Date/Time Initiated: Date: Time:

4. Map/Sketch (include sketch, showing the total area of operations, the incident site/area, impacted and threatened areas, overflight results, trajectories, impacted shorelines, or other graphics depicting situational status and resource assignment):

5. Situation Summary and Health and Safety Briefing (for briefings or transfer of command): Recognize potential incident Health and Safety Hazards and develop necessary measures (remove hazard, provide personal protective equipment, warn people of the hazard) to protect responders from those hazards.

6. Prepared by: Name: _____ Position/Title: _____ Signature: _____

 Date/Time: _____

INCIDENT BRIEFING (ICS 201)

1. Incident Name:	2. Incident Number:	3. Date/Time Initiated: Date: Time:

7. Current and Planned Objectives:

8. Current and Planned Actions, Strategies, and Tactics:

Time:	Actions:

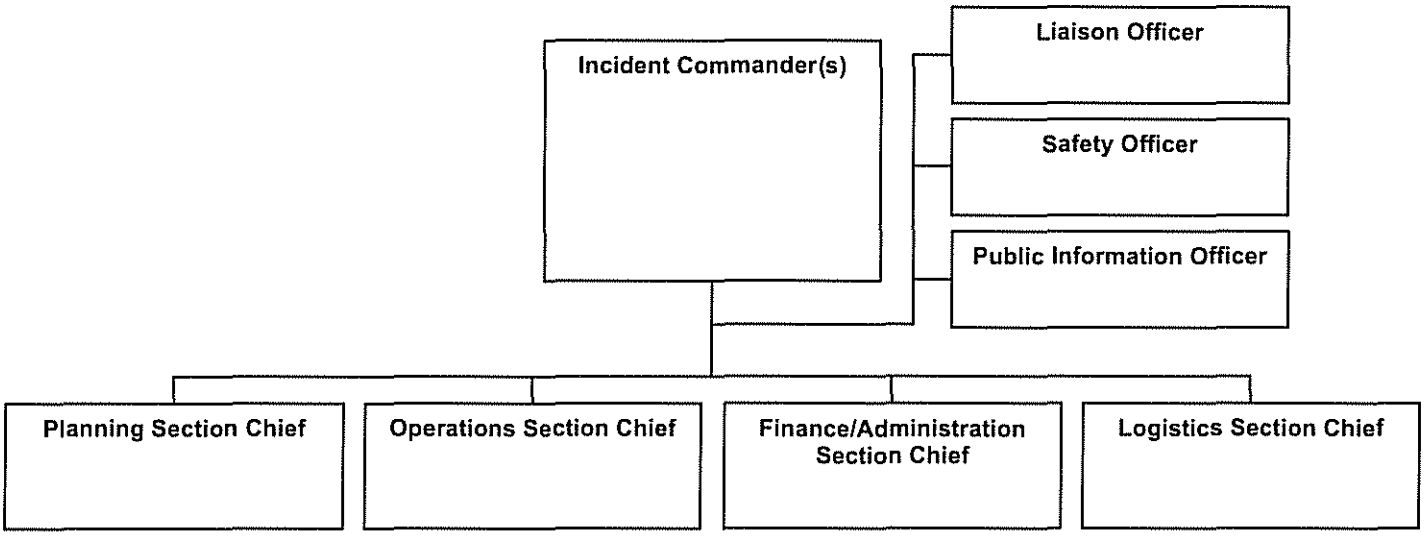
6. Prepared by: Name: _____ Position/Title: _____ Signature: _____

 Date/Time: _____

INCIDENT BRIEFING (ICS 201)

1. Incident Name:	2. Incident Number:	3. Date/Time Initiated: Date: Time:

9. Current Organization (fill in additional organization as appropriate):



6. Prepared by: Name: _____ Position/Title: _____ Signature: _____

Date/Time: _____

INCIDENT BRIEFING (ICS 201)

1. Incident Name:	2. Incident Number:	3. Date/Time Initiated: Date: Time:

10. Resource Summary:

Resource	Resource Identifier	Date/Time Ordered	ETA	Arrived	Notes (location/assignment/status)
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	

6. Prepared by: Name: _____ Position/Title: _____ Signature: _____

Date/Time: _____

ICS 201
Incident Briefing

Purpose. The Incident Briefing (ICS 201) provides the Incident Commander (and the Command and General Staffs) with basic information regarding the incident situation and the resources allocated to the incident. In addition to a briefing document, the ICS 201 also serves as an initial action worksheet. It serves as a permanent record of the initial response to the incident.

Preparation. The briefing form is prepared by the Incident Commander for presentation to the incoming Incident Commander along with a more detailed oral briefing.

Distribution. Ideally, the ICS 201 is duplicated and distributed before the initial briefing of the Command and General Staffs or other responders as appropriate. The "Map/Sketch" and "Current and Planned Actions, Strategies, and Tactics" sections (pages 1–2) of the briefing form are given to the Situation Unit, while the "Current Organization" and "Resource Summary" sections (pages 3–4) are given to the Resources Unit.

Notes:

- The ICS 201 can serve as part of the initial Incident Action Plan (IAP).
- If additional pages are needed for any form page, use a blank ICS 201 and repaginate as needed.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Incident Number**	Enter the number assigned to the incident.
3	**Date/Time Initiated** • Date, Time	Enter date initiated (month/day/year) and time initiated (using the 24-hour clock).
4	**Map/Sketch** (include sketch, showing the total area of operations, the incident site/area, impacted and threatened areas, overflight results, trajectories, impacted shorelines, or other graphics depicting situational status and resource assignment)	Show perimeter and other graphics depicting situational status, resource assignments, incident facilities, and other special information on a map/sketch or with attached maps. Utilize commonly accepted ICS map symbology. If specific geospatial reference points are needed about the incident's location or area outside the ICS organization at the incident, that information should be submitted on the Incident Status Summary (ICS 209). North should be at the top of page unless noted otherwise.
5	**Situation Summary and Health and Safety Briefing** (for briefings or transfer of command): Recognize potential incident Health and Safety Hazards and develop necessary measures (remove hazard, provide personal protective equipment, warn people of the hazard) to protect responders from those hazards.	Self-explanatory.
6	**Prepared by** • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position/title, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).
7	**Current and Planned Objectives**	Enter the objectives used on the incident and note any specific problem areas.

Block Number	Block Title	Instructions
8	**Current and Planned Actions, Strategies, and Tactics** • Time • Actions	Enter the current and planned actions, strategies, and tactics and time they may or did occur to attain the objectives. If additional pages are needed, use a blank sheet or another ICS 201 (Page 2), and adjust page numbers accordingly.
9	**Current Organization** (fill in additional organization as appropriate) • Incident Commander(s) • Liaison Officer • Safety Officer • Public Information Officer • Planning Section Chief • Operations Section Chief • Finance/Administration Section Chief • Logistics Section Chief	• Enter on the organization chart the names of the individuals assigned to each position. • Modify the chart as necessary, and add any lines/spaces needed for Command Staff Assistants, Agency Representatives, and the organization of each of the General Staff Sections. • If Unified Command is being used, split the Incident Commander box. • Indicate agency for each of the Incident Commanders listed if Unified Command is being used.
10	**Resource Summary**	Enter the following information about the resources allocated to the incident. If additional pages are needed, use a blank sheet or another ICS 201 (Page 4), and adjust page numbers accordingly.
	• Resource	Enter the number and appropriate category, kind, or type of resource ordered.
	• Resource Identifier	Enter the relevant agency designator and/or resource designator (if any).
	• Date/Time Ordered	Enter the date (month/day/year) and time (24-hour clock) the resource was ordered.
	• ETA	Enter the estimated time of arrival (ETA) to the incident (use 24-hour clock).
	• Arrived	Enter an "X" or a checkmark upon arrival to the incident.
	• Notes (location/ assignment/status)	Enter notes such as the assigned location of the resource and/or the actual assignment and status.

INCIDENT OBJECTIVES (ICS 202)

1. Incident Name:	2. Operational Period: Date From: Time From:	Date To: Time To:

3. Objective(s):

4. Operational Period Command Emphasis:

General Situational Awareness

5. Site Safety Plan Required? Yes ☐ No ☐

Approved Site Safety Plan(s) Located at:

6. Incident Action Plan (the items checked below are included in this Incident Action Plan):

☐ ICS 202	☐ ICS 206	Other Attachments:
☐ ICS 203	☐ ICS 207	☐ _____
☐ ICS 204	☐ ICS 208	☐ _____
☐ ICS 205	☐ Map/Chart	☐ _____
☐ ICS 205A	☐ Weather Forecast/Tides/Currents	☐ _____

7. Prepared by: Name: _____ Position/Title: _____ Signature: _____

8. Approved by Incident Commander: Name: _____ Signature: _____

ICS 202	IAP Page _____	Date/Time: _____

ICS 202
Incident Objectives

Purpose. The Incident Objectives (ICS 202) describes the basic incident strategy, incident objectives, command emphasis/priorities, and safety considerations for use during the next operational period.

Preparation. The ICS 202 is completed by the Planning Section following each Command and General Staff meeting conducted to prepare the Incident Action Plan (IAP). In case of a Unified Command, one Incident Commander (IC) may approve the ICS 202. If additional IC signatures are used, attach a blank page.

Distribution. The ICS 202 may be reproduced with the IAP and may be part of the IAP and given to all supervisory personnel at the Section, Branch, Division/Group, and Unit levels. All completed original forms must be given to the Documentation Unit.

Notes:

- The ICS 202 is part of the IAP and can be used as the opening or cover page.
- If additional pages are needed, use a blank ICS 202 and repaginate as needed.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident. If needed, an incident number can be added.
2	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	**Objective(s)**	Enter clear, concise statements of the objectives for managing the response. Ideally, these objectives will be listed in priority order. These objectives are for the incident response for this operational period as well as for the duration of the incident. Include alternative and/or specific tactical objectives as applicable. Objectives should follow the SMART model or a similar approach: Specific – Is the wording precise and unambiguous? Measurable – How will achievements be measured? Action-oriented – Is an action verb used to describe expected accomplishments? Realistic – Is the outcome achievable with given available resources? Time-sensitive – What is the timeframe?
4	**Operational Period Command Emphasis**	Enter command emphasis for the operational period, which may include tactical priorities or a general weather forecast for the operational period. It may be a sequence of events or order of events to address. This is not a narrative on the objectives, but a discussion about where to place emphasis if there are needs to prioritize based on the Incident Commander's or Unified Command's direction. Examples: Be aware of falling debris, secondary explosions, etc.
	General Situational Awareness	General situational awareness may include a weather forecast, incident conditions, and/or a general safety message. If a safety message is included here, it should be reviewed by the Safety Officer to ensure it is in alignment with the Safety Message/Plan (ICS 208).
5	**Site Safety Plan Required?** Yes ☐ No ☐	Safety Officer should check whether or not a site safety plan is required for this incident.
	Approved Site Safety Plan(s) Located At	Enter the location of the approved Site Safety Plan(s).

Block Number	Block Title	Instructions
6	**Incident Action Plan** (the items checked below are included in this Incident Action Plan): ☐ ICS 202 ☐ ICS 203 ☐ ICS 204 ☐ ICS 205 ☐ ICS 205A ☐ ICS 206 ☐ ICS 207 ☐ ICS 208 ☐ Map/Chart ☐ Weather Forecast/ Tides/Currents Other Attachments:	Check appropriate forms and list other relevant documents that are included in the IAP. ☐ ICS 202 – Incident Objectives ☐ ICS 203 – Organization Assignment List ☐ ICS 204 – Assignment List ☐ ICS 205 – Incident Radio Communications Plan ☐ ICS 205A – Communications List ☐ ICS 206 – Medical Plan ☐ ICS 207 – Incident Organization Chart ☐ ICS 208 – Safety Message/Plan
7	**Prepared by** • Name • Position/Title • Signature	Enter the name, ICS position, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).
8	**Approved by Incident Commander** • Name • Signature • Date/Time	In the case of a Unified Command, one IC may approve the ICS 202. If additional IC signatures are used, attach a blank page.

ORGANIZATION ASSIGNMENT LIST (ICS 203)

1. Incident Name:	2. Operational Period: Date From: Time From:	Date To: Time To:

3. Incident Commander(s) and Command Staff:	
IC/UCs	
Deputy	
Safety Officer	
Public Info. Officer	
Liaison Officer	

4. Agency/Organization Representatives:	
Agency/Organization	Name

5. Planning Section:	
Chief	
Deputy	
Resources Unit	
Situation Unit	
Documentation Unit	
Demobilization Unit	
Technical Specialists	

6. Logistics Section:	
Chief	
Deputy	
Support Branch	
Director	
Supply Unit	
Facilities Unit	
Ground Support Unit	
Service Branch	
Director	
Communications Unit	
Medical Unit	
Food Unit	

7. Operations Section:		
Chief		
Deputy		
Staging Area		
Branch		
Branch Director		
Deputy		
Division/Group		
Division/Group		
Division/Group		
Division/Group		
Division/Group		
Branch		
Branch Director		
Deputy		
Division/Group		
Division/Group		
Division/Group		
Division/Group		
Division/Group		
Branch		
Branch Director		
Deputy		
Division/Group		
Division/Group		
Division/Group		
Division/Group		
Division/Group		
Air Operations Branch		
Air Ops Branch Dir.		

8. Finance/Administration Section:	
Chief	
Deputy	
Time Unit	
Procurement Unit	
Comp/Claims Unit	
Cost Unit	

9. Prepared by: Name: _____ Position/Title: _____ Signature: _____

ICS 203	IAP Page _____	Date/Time: _____

ICS 203
Organization Assignment List

Purpose. The Organization Assignment List (ICS 203) provides ICS personnel with information on the units that are currently activated and the names of personnel staffing each position/unit. It is used to complete the Incident Organization Chart (ICS 207) which is posted on the Incident Command Post display. An actual organization will be incident or event-specific. **Not all positions need to be filled.** Some blocks may contain more than one name. The size of the organization is dependent on the magnitude of the incident, and can be expanded or contracted as necessary.

Preparation. The Resources Unit prepares and maintains this list under the direction of the Planning Section Chief. Complete only the blocks for the positions that are being used for the incident. If a trainee is assigned to a position, indicate this with a "T" in parentheses behind the name (e.g., "A. Smith (T)").

Distribution. The ICS 203 is duplicated and attached to the Incident Objectives (ICS 202) and given to all recipients as part of the Incident Action Plan (IAP). All completed original forms must be given to the Documentation Unit.

Notes:

- The ICS 203 serves as part of the IAP.
- If needed, more than one name can be put in each block by inserting a slash.
- If additional pages are needed, use a blank ICS 203 and repaginate as needed.
- ICS allows for organizational flexibility, so the Intelligence/Investigations Function can be embedded in several different places within the organizational structure.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	**Incident Commander(s) and Command Staff** • IC/UCs • Deputy • Safety Officer • Public Information Officer • Liaison Officer	Enter the names of the Incident Commander(s) and Command Staff. Label Assistants to Command Staff as such (for example, "Assistant Safety Officer"). For all individuals, use at least the first initial and last name. For Unified Command, also include agency names.
4	**Agency/Organization Representatives** • Agency/Organization • Name	Enter the agency/organization names and the names of their representatives. For all individuals, use at least the first initial and last name.
5	**Planning Section** • Chief • Deputy • Resources Unit • Situation Unit • Documentation Unit • Demobilization Unit • Technical Specialists	Enter the name of the Planning Section Chief, Deputy, and Unit Leaders after each position title. List Technical Specialists with an indication of specialty. If there is a shift change during the specified operational period, list both names, separated by a slash. For all individuals, use at least the first initial and last name.

Block Number	Block Title	Instructions
6	**Logistics Section** • Chief • Deputy **Support Branch** • Director • Supply Unit • Facilities Unit • Ground Support Unit **Service Branch** • Director • Communications Unit • Medical Unit • Food Unit	Enter the name of the Logistics Section Chief, Deputy, Branch Directors, and Unit Leaders after each position title. If there is a shift change during the specified operational period, list both names, separated by a slash. For all individuals, use at least the first initial and last name.
7	**Operations Section** • Chief • Deputy • Staging Area **Branch** • Branch Director • Deputy • Division/Group **Air Operations Branch** • Air Operations Branch Director	Enter the name of the Operations Section Chief, Deputy, Branch Director(s), Deputies, and personnel staffing each of the listed positions. For Divisions/Groups, enter the Division/Group identifier in the left column and the individual's name in the right column. Branches and Divisions/Groups may be named for functionality or by geography. For Divisions/Groups, indicate Division/Group Supervisor. Use an additional page if more than three Branches are activated. If there is a shift change during the specified operational period, list both names, separated by a slash. For all individuals, use at least the first initial and last name.
8	**Finance/Administration Section** • Chief • Deputy • Time Unit • Procurement Unit • Compensation/Claims Unit • Cost Unit	Enter the name of the Finance/Administration Section Chief, Deputy, and Unit Leaders after each position title. If there is a shift change during the specified operational period, list both names, separated by a slash. For all individuals, use at least the first initial and last name.
9	**Prepared by** • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

ASSIGNMENT LIST (ICS 204)

1. Incident Name:	2. Operational Period: Date From: Date To: Time From: Time To:	3. Branch: Division: Group: Staging Area:

4. Operations Personnel: Name Contact Number(s)

Operations Section Chief: _____

Branch Director: _____

Division/Group Supervisor: _____

5. Resources Assigned:		# of Persons	Contact (e.g., phone, pager, radio frequency, etc.)	Reporting Location, Special Equipment and Supplies, Remarks, Notes, Information
Resource Identifier	Leader			

6. Work Assignments:

7. Special Instructions:

8. Communications (radio and/or phone contact numbers needed for this assignment):

Name/Function	Primary Contact: indicate cell, pager, or radio (frequency/system/channel)
/	
/	
/	
/	

9. Prepared by: Name: _____ Position/Title: _____ Signature: _____

ICS 204 | IAP Page _____ | Date/Time: _____

ICS 204
Assignment List

Purpose. The Assignment List(s) (ICS 204) informs Division and Group supervisors of incident assignments. Once the Command and General Staffs agree to the assignments, the assignment information is given to the appropriate Divisions and Groups.

Preparation. The ICS 204 is normally prepared by the Resources Unit, using guidance from the Incident Objectives (ICS 202), Operational Planning Worksheet (ICS 215), and the Operations Section Chief. It must be approved by the Incident Commander, but may be reviewed and initialed by the Planning Section Chief and Operations Section Chief as well.

Distribution. The ICS 204 is duplicated and attached to the ICS 202 and given to all recipients as part of the Incident Action Plan (IAP). In some cases, assignments may be communicated via radio/telephone/fax. All completed original forms must be given to the Documentation Unit.

Notes:

- The ICS 204 details assignments at Division and Group levels and is part of the IAP.
- Multiple pages/copies can be used if needed.
- If additional pages are needed, use a blank ICS 204 and repaginate as needed.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	**Branch** **Division** **Group** **Staging Area**	This block is for use in a large IAP for reference only. Write the alphanumeric abbreviation for the Branch, Division, Group, and Staging Area (e.g., "Branch 1," "Division D," "Group 1A") in large letters for easy referencing.
4	**Operations Personnel** • Name, Contact Number(s) – Operations Section Chief – Branch Director – Division/Group Supervisor	Enter the name and contact numbers of the Operations Section Chief, applicable Branch Director(s), and Division/Group Supervisor(s).
5	**Resources Assigned**	Enter the following information about the resources assigned to the Division or Group for this period:
	• Resource Identifier	The identifier is a unique way to identify a resource (e.g., ENG-13, IA-SCC-413). If the resource has been ordered but no identification has been received, use TBD (to be determined).
	• Leader	Enter resource leader's name.
	• # of Persons	Enter total number of persons for the resource assigned, including the leader.
	• Contact (e.g., phone, pager, radio frequency, etc.)	Enter primary means of contacting the leader or contact person (e.g., radio, phone, pager, etc.). Be sure to include the area code when listing a phone number.
5 (continued)	• Reporting Location, Special Equipment and Supplies, Remarks, Notes, Information	Provide special notes or directions specific to this resource. If required, add notes to indicate: (1) specific location/time where the resource should report or be dropped off/picked up; (2) special equipment and supplies that will be used or needed; (3) whether or not the resource received briefings; (4) transportation needs; or (5) other information.

Block Number	Block Title	Instructions
6	**Work Assignments**	Provide a statement of the tactical objectives to be achieved within the operational period by personnel assigned to this Division or Group.
7	**Special Instructions**	Enter a statement noting any safety problems, specific precautions to be exercised, dropoff or pickup points, or other important information.
8	**Communications** (radio and/or phone contact numbers needed for this assignment) • Name/Function • Primary Contact: indicate cell, pager, or radio (frequency/system/channel)	Enter specific communications information (including emergency numbers) for this Branch/Division/Group. If radios are being used, enter function (command, tactical, support, etc.), frequency, system, and channel from the Incident Radio Communications Plan (ICS 205). Phone and pager numbers should include the area code and any satellite phone specifics. In light of potential IAP distribution, use sensitivity when including cell phone number. Add a secondary contact (phone number or radio) if needed.
9	**Prepared by** • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

INCIDENT RADIO COMMUNICATIONS PLAN (ICS 205)

1. Incident Name:	2. Date/Time Prepared: Date: Time:	3. Operational Period: Date From: Date To: Time From: Time To:

4. Basic Radio Channel Use:

Zone Grp.	Ch #	Function	Channel Name/Trunked Radio System Talkgroup	Assignment	RX Freq N or W	RX Tone/NAC	TX Freq N or W	TX Tone/NAC	Mode (A, D, or M)	Remarks

5. Special Instructions:

6. Prepared by (Communications Unit Leader): Name: _____ Signature: _____

ICS 205	IAP Page _____	Date/Time: _____

ICS 205
Incident Radio Communications Plan

Purpose. The Incident Radio Communications Plan (ICS 205) provides information on all radio frequency or trunked radio system talkgroup assignments for each operational period. The plan is a summary of information obtained about available radio frequencies or talkgroups and the assignments of those resources by the Communications Unit Leader for use by incident responders. Information from the Incident Radio Communications Plan on frequency or talkgroup assignments is normally placed on the Assignment List (ICS 204).

Preparation. The ICS 205 is prepared by the Communications Unit Leader and given to the Planning Section Chief for inclusion in the Incident Action Plan.

Distribution. The ICS 205 is duplicated and attached to the Incident Objectives (ICS 202) and given to all recipients as part of the Incident Action Plan (IAP). All completed original forms must be given to the Documentation Unit. Information from the ICS 205 is placed on Assignment Lists.

Notes:

- The ICS 205 is used to provide, in one location, information on all radio frequency assignments down to the Division/Group level for each operational period.
- The ICS 205 serves as part of the IAP.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Date/Time Prepared**	Enter date prepared (month/day/year) and time prepared (using the 24-hour clock).
3	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
4	**Basic Radio Channel Use**	Enter the following information about radio channel use:
	Zone Group	
	Channel Number	Use at the Communications Unit Leader's discretion. Channel Number (Ch #) may equate to the channel number for incident radios that are programmed or cloned for a specific Communications Plan, or it may be used just as a reference line number on the ICS 205 document.
	Function	Enter the Net function each channel or talkgroup will be used for (Command, Tactical, Ground-to-Air, Air-to-Air, Support, Dispatch).
	Channel Name/Trunked Radio System Talkgroup	Enter the nomenclature or commonly used name for the channel or talk group such as the National Interoperability Channels which follow DHS frequency Field Operations Guide (FOG).
	Assignment	Enter the name of the ICS Branch/Division/Group/Section to which this channel/talkgroup will be assigned.
	RX (Receive) Frequency (N or W)	Enter the Receive Frequency (RX Freq) as the mobile or portable subscriber would be programmed using xxx.xxxx out to four decimal places, followed by an "N" designating narrowband or a "W" designating wideband emissions. The name of the specific trunked radio system with which the talkgroup is associated may be entered across all fields on the ICS 205 normally used for conventional channel programming information.
	RX Tone/NAC	Enter the Receive Continuous Tone Coded Squelch System (CTCSS) subaudible tone (RX Tone) or Network Access Code (RX NAC) for the receive frequency as the mobile or portable subscriber would be programmed.

Block Number	Block Title	Instructions
4 (continued)	TX (Transmit) Frequency (N or W)	Enter the Transmit Frequency (TX Freq) as the mobile or portable subscriber would be programmed using xxx.xxxx out to four decimal places, followed by an "N" designating narrowband or a "W" designating wideband emissions.
	TX Tone/NAC	Enter the Transmit Continuous Tone Coded Squelch System (CTCSS) subaudible tone (TX Tone) or Network Access Code (TX NAC) for the transmit frequency as the mobile or portable subscriber would be programmed.
	Mode (A, D, or M)	Enter "A" for analog operation, "D" for digital operation, or "M" for mixed mode operation.
	Remarks	Enter miscellaneous information concerning repeater locations, information concerning patched channels or talkgroups using links or gateways, etc.
5	**Special Instructions**	Enter any special instructions (e.g., using cross-band repeaters, secure-voice, encoders, private line (PL) tones, etc.) or other emergency communications needs). If needed, also include any special instructions for handling an incident within an incident.
6	**Prepared by** (Communications Unit Leader) • Name • Signature • Date/Time	Enter the name and signature of the person preparing the form, typically the Communications Unit Leader. Enter date (month/day/year) and time prepared (24-hour clock).

COMMUNICATIONS LIST (ICS 205A)

1. Incident Name:	2. Operational Period: Date From: Date To: Time From: Time To:

3. Basic Local Communications Information:

Incident Assigned Position	Name (Alphabetized)	Method(s) of Contact (phone, pager, cell, etc.)

4. Prepared by: Name: _____ Position/Title: _____ Signature: _____

ICS 205A | **IAP Page** _____ | Date/Time: _____

ICS 205A
Communications List

Purpose. The Communications List (ICS 205A) records methods of contact for incident personnel. While the Incident Radio Communications Plan (ICS 205) is used to provide information on all radio frequencies down to the Division/Group level, the ICS 205A indicates all methods of contact for personnel assigned to the incident (radio frequencies, phone numbers, pager numbers, etc.), and functions as an incident directory.

Preparation. The ICS 205A can be filled out during check-in and is maintained and distributed by Communications Unit personnel. This form should be updated each operational period.

Distribution. The ICS 205A is distributed within the ICS organization by the Communications Unit, and posted as necessary. All completed original forms must be given to the Documentation Unit. If this form contains sensitive information such as cell phone numbers, it should be clearly marked in the header that it contains sensitive information and is not for public release.

Notes:

- The ICS 205A is an optional part of the Incident Action Plan (IAP).
- This optional form is used in conjunction with the ICS 205.
- If additional pages are needed, use a blank ICS 205A and repaginate as needed.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	**Basic Local Communications Information**	Enter the communications methods assigned and used for personnel by their assigned ICS position.
	• Incident Assigned Position	Enter the ICS organizational assignment.
	• Name	Enter the name of the assigned person.
	• Method(s) of Contact (phone, pager, cell, etc.)	For each assignment, enter the radio frequency and contact number(s) to include area code, etc. If applicable, include the vehicle license or ID number assigned to the vehicle for the incident (e.g., HAZMAT 1, etc.).
4	**Prepared by** • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

MEDICAL PLAN (ICS 206)

1. Incident Name:	2. Operational Period: Date From: Time From:	Date To: Time To:

3. Medical Aid Stations:

Name	Location	Contact Number(s)/Frequency	Paramedics on Site?
			☐ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No

4. Transportation (indicate air or ground):

Ambulance Service	Location	Contact Number(s)/Frequency	Level of Service
			☐ ALS ☐ BLS
			☐ ALS ☐ BLS
			☐ ALS ☐ BLS
			☐ ALS ☐ BLS

5. Hospitals:

Hospital Name	Address, Latitude & Longitude if Helipad	Contact Number(s)/ Frequency	Travel Time		Trauma Center	Burn Center	Helipad
			Air	Ground			
					☐ Yes Level:_____	☐ Yes ☐ No	☐ Yes ☐ No
					☐ Yes Level:_____	☐ Yes ☐ No	☐ Yes ☐ No
					☐ Yes Level:_____	☐ Yes ☐ No	☐ Yes ☐ No
					☐ Yes Level:_____	☐ Yes ☐ No	☐ Yes ☐ No
					☐ Yes Level:_____	☐ Yes ☐ No	☐ Yes ☐ No

6. Special Medical Emergency Procedures:

☐ Check box if aviation assets are utilized for rescue. If assets are used, coordinate with Air Operations.

7. Prepared by (Medical Unit Leader): Name: _____ Signature: _____

8. Approved by (Safety Officer): Name: _____ Signature: _____

ICS 206	IAP Page _____	Date/Time: _____

ICS 206
Medical Plan

Purpose. The Medical Plan (ICS 206) provides information on incident medical aid stations, transportation services, hospitals, and medical emergency procedures.

Preparation. The ICS 206 is prepared by the Medical Unit Leader and reviewed by the Safety Officer to ensure ICS coordination. If aviation assets are utilized for rescue, coordinate with Air Operations.

Distribution. The ICS 206 is duplicated and attached to the Incident Objectives (ICS 202) and given to all recipients as part of the Incident Action Plan (IAP). Information from the plan pertaining to incident medical aid stations and medical emergency procedures may be noted on the Assignment List (ICS 204). All completed original forms must be given to the Documentation Unit.

Notes:

- The ICS 206 serves as part of the IAP.
- This form can include multiple pages.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	**Medical Aid Stations**	Enter the following information on the incident medical aid station(s):
	• Name	Enter name of the medical aid station.
	• Location	Enter the location of the medical aid station (e.g., Staging Area, Camp Ground).
	• Contact Number(s)/Frequency	Enter the contact number(s) and frequency for the medical aid station(s).
	• Paramedics on Site? ☐ Yes ☐ No	Indicate (yes or no) if paramedics are at the site indicated.
4	**Transportation** (indicate air or ground)	Enter the following information for ambulance services available to the incident:
	• Ambulance Service	Enter name of ambulance service.
	• Location	Enter the location of the ambulance service.
	• Contact Number(s)/Frequency	Enter the contact number(s) and frequency for the ambulance service.
	• Level of Service ☐ ALS ☐ BLS	Indicate the level of service available for each ambulance, either ALS (Advanced Life Support) or BLS (Basic Life Support).

Block Number	Block Title	Instructions
5	**Hospitals**	Enter the following information for hospital(s) that could serve this incident:
	• Hospital Name	Enter hospital name and identify any predesignated medivac aircraft by name a frequency.
	• Address, Latitude & Longitude if Helipad	Enter the physical address of the hospital and the latitude and longitude if the hospital has a helipad.
	• Contact Number(s)/ Frequency	Enter the contact number(s) and/or communications frequency(s) for the hospital.

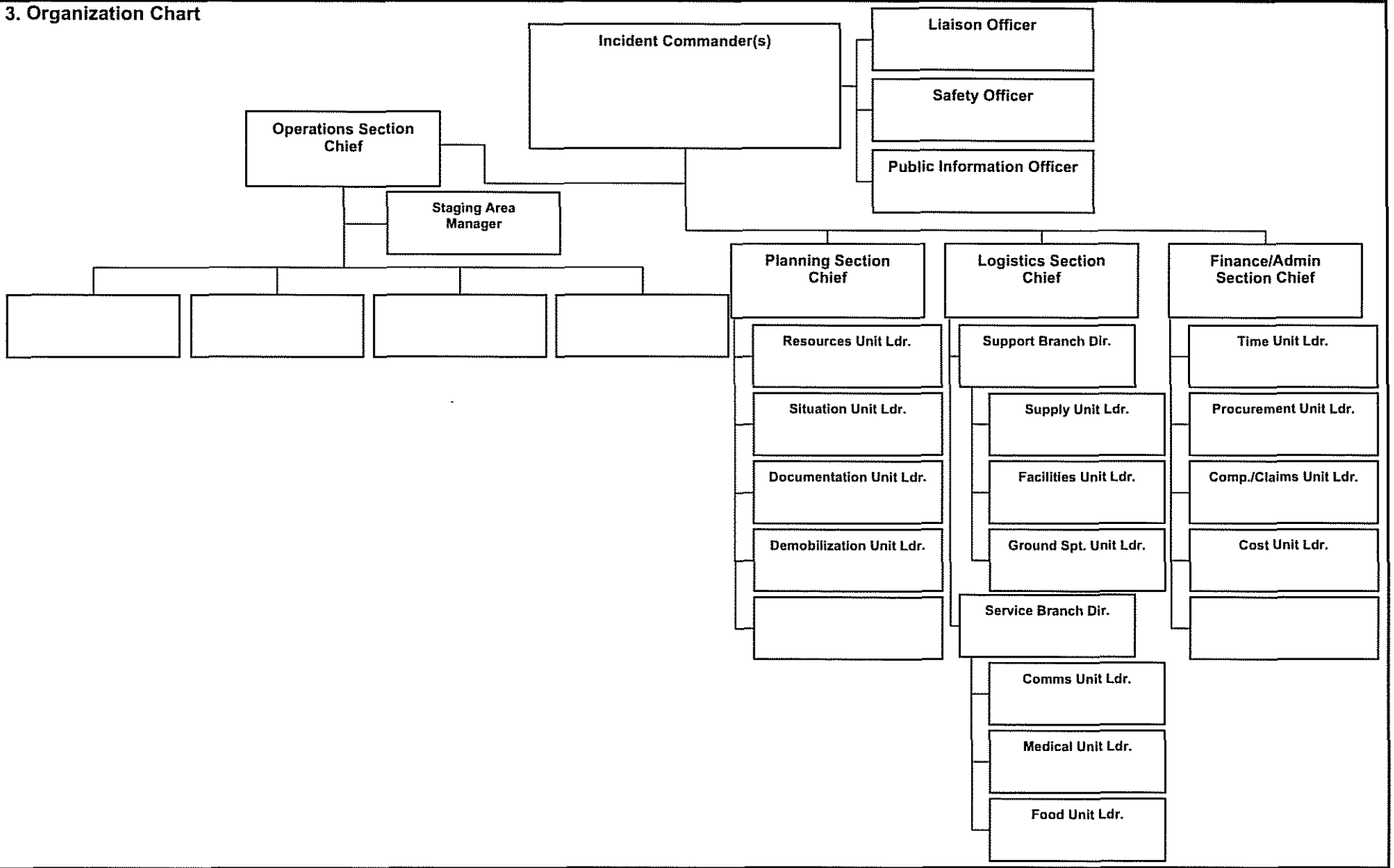
	• Travel Time
	  • Air
	  • Ground
		Enter the travel time by air and ground from the incident to the hospital.

	• Trauma Center ☐ Yes Level:_____	Indicate yes and the trauma level if the hospital has a trauma center.
	• Burn Center ☐ Yes ☐ No	Indicate (yes or no) if the hospital has a burn center.
	• Helipad ☐ Yes ☐ No	Indicate (yes or no) if the hospital has a helipad. Latitude and Longitude data format need to compliment Medical Evacuation Helicopters and Medical Air Resources
6	**Special Medical Emergency Procedures**	Note any special emergency instructions for use by incident personnel, including (1) who should be contacted, (2) how should they be contacted; and (3) who manages an incident within an incident due to a rescue, accident, etc. Include procedures for how to report medical emergencies.
	☐ Check box if aviation assets are utilized for rescue. If assets are used, coordinate with Air Operations.	Self explanatory. Incident assigned aviation assets should be included in ICS 220.
7	**Prepared by** (Medical Unit Leader) • Name • Signature	Enter the name and signature of the person preparing the form, typically the Medical Unit Leader. Enter date (month/day/year) and time prepared (24-hour clock).
8	**Approved by** (Safety Officer) • Name • Signature • Date/Time	Enter the name of the person who approved the plan, typically the Safety Officer. Enter date (month/day/year) and time reviewed (24-hour clock).

INCIDENT ORGANIZATION CHART (ICS 207)

1. Incident Name:	2. Operational Period: Date From: Date To: Time From: Time To:

3. Organization Chart



ICS 207	IAP Page ___	4. Prepared by: Name:_____ Position/Title: _____ Signature: _____ Date/Time: _____

ICS 207
Incident Organization Chart

Purpose. The Incident Organization Chart (ICS 207) provides a **visual wall chart** depicting the ICS organization position assignments for the incident. The ICS 207 is used to indicate what ICS organizational elements are currently activated and the names of personnel staffing each element. An actual organization will be event-specific. The size of the organization is dependent on the specifics and magnitude of the incident and is scalable and flexible. Personnel responsible for managing organizational positions are listed in each box as appropriate.

Preparation. The ICS 207 is prepared by the Resources Unit Leader and reviewed by the Incident Commander. Complete only the blocks where positions have been activated, and add additional blocks as needed, especially for Agency Representatives and all Operations Section organizational elements. For detailed information about positions, consult the NIMS ICS Field Operations Guide. The ICS 207 is intended to be used as a wall-size chart and printed on a plotter for better visibility. A chart is completed for each operational period, and updated when organizational changes occur.

Distribution. The ICS 207 is intended to be **wall mounted** at Incident Command Posts and other incident locations as needed, and is not intended to be part of the Incident Action Plan (IAP). All completed original forms must be given to the Documentation Unit.

Notes:

- The ICS 207 is intended to be **wall mounted** (printed on a plotter). Document size can be modified based on individual needs.
- Also available as 8½ x 14 (legal size) chart.
- ICS allows for organizational flexibility, so the Intelligence/Investigative Function can be embedded in several different places within the organizational structure.
- Use additional pages if more than three branches are activated. Additional pages can be added based on individual need (such as to distinguish more Division/Groups and Branches as they are activated).

Block Number	Block Title	Instructions
1	**Incident Name**	Print the name assigned to the incident.
2	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	**Organization Chart**	• Complete the incident organization chart. • For all individuals, use at least the first initial and last name. • List agency where it is appropriate, such as for Unified Commanders. • If there is a shift change during the specified operational period, list both names, separated by a slash.
4	**Prepared by** • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

SAFETY MESSAGE/PLAN (ICS 208)

1. Incident Name:	2. Operational Period: Date From: Time From:	Date To: Time To:

3. Safety Message/Expanded Safety Message, Safety Plan, Site Safety Plan:

4. Site Safety Plan Required? Yes ☐ No ☐
Approved Site Safety Plan(s) Located At:

5. Prepared by: Name: _____ Position/Title: _____ Signature: _____

ICS 208	IAP Page _____	Date/Time: _____

ICS 208
Safety Message/Plan

Purpose. The Safety Message/Plan (ICS 208) expands on the Safety Message and Site Safety Plan.

Preparation. The ICS 208 is an optional form that may be included and completed by the Safety Officer for the Incident Action Plan (IAP).

Distribution. The ICS 208, if developed, will be reproduced with the IAP and given to all recipients as part of the IAP. All completed original forms must be given to the Documentation Unit.

Notes:
- The ICS 208 may serve (optionally) as part of the IAP.
- Use additional copies for continuation sheets as needed, and indicate pagination as used.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	**Safety Message/Expanded Safety Message, Safety Plan, Site Safety Plan**	Enter clear, concise statements for safety message(s), priorities, and key command emphasis/decisions/directions. Enter information such as known safety hazards and specific precautions to be observed during this operational period. If needed, additional safety message(s) should be referenced and attached.
4	**Site Safety Plan Required?** Yes ☐ No ☐	Check whether or not a site safety plan is required for this incident.
	Approved Site Safety Plan(s) Located At	Enter where the approved Site Safety Plan(s) is located.
5	**Prepared by** • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

INCIDENT STATUS SUMMARY (ICS 209)

*1. Incident Name:			2. Incident Number:	
*3. Report Version (check one box on left): ☐ Initial Rpt # (if used): ☐ Update ☐ Final	*4. Incident Commander(s) & Agency or Organization:		5. Incident Management Organization:	*6. Incident Start Date/Time: Date: _____ Time: _____ Time Zone: _____
7. Current Incident Size or Area Involved (use unit label – e.g., "sq mi," "city block"):	8. Percent (%) Contained _____ Completed _____	*9. Incident Definition:	10. Incident Complexity Level:	*11. For Time Period: From Date/Time: _____ To Date/Time: _____

Approval & Routing Information

*12. Prepared By: Print Name: _____ ICS Position: _____ Date/Time Prepared: _____	*13. Date/Time Submitted: Time Zone:
*14. Approved By: Print Name: _____ ICS Position: _____ Signature: _____	*15. Primary Location, Organization, or Agency Sent To:

Incident Location Information

*16. State:	*17. County/Parish/Borough:	*18. City:
19. Unit or Other:	*20. Incident Jurisdiction:	21. Incident Location Ownership (if different than jurisdiction):
22. Longitude (indicate format): Latitude (indicate format):	23. US National Grid Reference:	24. Legal Description (township, section, range):
*25. Short Location or Area Description (list all affected areas or a reference point):		26. UTM Coordinates:
27. Note any electronic geospatial data included or attached (indicate data format, content, and collection time information and labels):		

Incident Summary

*28. Significant Events for the Time Period Reported (summarize significant progress made, evacuations, incident growth, etc.):				
29. Primary Materials or Hazards Involved (hazardous chemicals, fuel types, infectious agents, radiation, etc.):				
30. Damage Assessment Information (summarize damage and/or restriction of use or availability to residential or commercial property, natural resources, critical infrastructure and key resources, etc.):	A. Structural Summary	B. # Threatened (72 hrs)	C. # Damaged	D. # Destroyed
	E. Single Residences			
	F. Nonresidential Commercial Property			
	Other Minor Structures			
	Other			

* *Required when applicable.*

INCIDENT STATUS SUMMARY (ICS 209)

*1. Incident Name:	2. Incident Number:

Additional Incident Decision Support Information

*31. Public Status Summary:	A. # This Reporting Period	B. Total # to Date
C. Indicate Number of Civilians (Public) Below:		
D. Fatalities		
E. With Injuries/Illness		
F. Trapped/In Need of Rescue		
G. Missing *(note if estimated)*		
H. Evacuated *(note if estimated)*		
I. Sheltering in Place *(note if estimated)*		
J. In Temporary Shelters *(note if est.)*		
K. Have Received Mass Immunizations		
L. Require Immunizations *(note if est.)*		
M. In Quarantine		
N. Total # Civilians (Public) Affected:		

*32. Responder Status Summary:	A. # This Reporting Period	B. Total # to Date
C. Indicate Number of Responders Below:		
D. Fatalities		
E. With Injuries/Illness		
F. Trapped/In Need of Rescue		
G. Missing		
H. Sheltering in Place		
I. Have Received Immunizations		
J. Require Immunizations		
K. In Quarantine		
N. Total # Responders Affected:		

33. Life, Safety, and Health Status/Threat Remarks:

35. Weather Concerns (synopsis of current and predicted weather; discuss related factors that may cause concern):

*34. Life, Safety, and Health Threat Management:	A. Check if Active
A. No Likely Threat	☐
B. Potential Future Threat	☐
C. Mass Notifications in Progress	☐
D. Mass Notifications Completed	☐
E. No Evacuation(s) Imminent	☐
F. Planning for Evacuation	☐
G. Planning for Shelter-in-Place	☐
H. Evacuation(s) in Progress	☐
I. Shelter-in-Place in Progress	☐
J. Repopulation in Progress	☐
K. Mass Immunization in Progress	☐
L. Mass Immunization Complete	☐
M. Quarantine in Progress	☐
N. Area Restriction in Effect	☐
	☐
	☐
	☐
	☐

36. Projected Incident Activity, Potential, Movement, Escalation, or Spread and influencing factors during the next operational period and in 12-, 24-, 48-, and 72-hour timeframes:

12 hours:

24 hours:

48 hours:

72 hours:

Anticipated after 72 hours:

37. Strategic Objectives (define planned end-state for incident):

** Required when applicable.*

INCIDENT STATUS SUMMARY (ICS 209)

*1. Incident Name:	2. Incident Number:

Additional Incident Decision Support Information *(continued)*

38. Current Incident Threat Summary and Risk Information in 12-, 24-, 48-, and 72-hour timeframes and beyond. Summarize primary incident threats to life, property, communities and community stability, residences, health care facilities, other critical infrastructure and key resources, commercial facilities, natural and environmental resources, cultural resources, and continuity of operations and/or business. Identify corresponding incident-related potential economic or cascading impacts.

12 hours:

24 hours:

48 hours:

72 hours:

Anticipated after 72 hours:

39. Critical Resource Needs in 12-, 24-, 48-, and 72-hour timeframes and beyond to meet critical incident objectives. List resource category, kind, and/or type, and amount needed, in priority order:

12 hours:

24 hours:

48 hours:

72 hours:

Anticipated after 72 hours:

40. Strategic Discussion: Explain the relation of overall strategy, constraints, and current available information to:

1) critical resource needs identified above,
2) the Incident Action Plan and management objectives and targets,
3) anticipated results.

Explain major problems and concerns such as operational challenges, incident management problems, and social, political, economic, or environmental concerns or impacts.

41. Planned Actions for Next Operational Period:

42. Projected Final Incident Size/Area (use unit label – e.g., "sq mi"):

43. Anticipated Incident Management Completion Date:

44. Projected Significant Resource Demobilization Start Date:

45. Estimated Incident Costs to Date:

46. Projected Final Incident Cost Estimate:

47. Remarks (or continuation of any blocks above – list block number in notation):

** Required when applicable.*

INCIDENT STATUS SUMMARY (ICS 209)

1. Incident Name:	2. Incident Number:

Incident Resource Commitment Summary

48. Agency or Organization:	49. **Resources** (summarize resources by category, kind, and/or type; show # of resources on top ½ of box, show # of personnel associated with resource on bottom ½ of box):	50. Additional Personnel not assigned to a resource:	51. **Total Personnel** (includes those associated with resources – e.g., aircraft or engines – *and* individual overhead):
52. Total Resources			

53. Additional Cooperating and Assisting Organizations Not Listed Above:

ICS 209, Page ___ of ___	** Required when applicable.*

ICS 209
Incident Status Summary

Purpose. The ICS 209 is used for reporting information on significant incidents. It is not intended for every incident, as most incidents are of short duration and do not require scarce resources, significant mutual aid, or additional support and attention. The ICS 209 contains basic information elements needed to support decisionmaking at all levels above the incident to support the incident. Decisionmakers may include the agency having jurisdiction, but also all multiagency coordination system (MACS) elements and parties, such as cooperating and assisting agencies/organizations, dispatch centers, emergency operations centers, administrators, elected officials, and local, tribal, county, State, and Federal agencies. Once ICS 209 information has been submitted from the incident, decisionmakers and others at all incident support and coordination points may transmit and share the information (based on its sensitivity and appropriateness) for access and use at local, regional, State, and national levels as it is needed to facilitate support.

Accurate and timely completion of the ICS 209 is necessary to identify appropriate resource needs, determine allocation of limited resources when multiple incidents occur, and secure additional capability when there are limited resources due to constraints of time, distance, or other factors. The information included on the ICS 209 influences the priority of the incident, and thus its share of available resources and incident support.

The ICS 209 is designed to provide a "snapshot in time" to effectively move incident decision support information where it is needed. It should contain the most accurate and up-to-date information available at the time it is prepared. However, readers of the ICS 209 may have access to more up-to-date or real-time information in reference to certain information elements on the ICS 209. Coordination among communications and information management elements within ICS and among MACS should delineate authoritative sources for more up-to-date and/or real-time information when ICS 209 information becomes outdated in a quickly evolving incident.

Reporting Requirements. The ICS 209 is intended to be used when an incident reaches a certain threshold where it becomes significant enough to merit special attention, require additional resource support needs, or cause media attention, increased public safety threat, etc. Agencies or organizations may set reporting requirements and, therefore, ICS 209s should be completed according to each jurisdiction or discipline's policies, mobilization guide, or preparedness plans. It is recommended that consistent ICS 209 reporting parameters be adopted and used by jurisdictions or disciplines for consistency over time, documentation, efficiency, trend monitoring, incident tracking, etc.

For example, an agency or MAC (Multiagency Coordination) Group may require the submission of an initial ICS 209 when a new incident has reached a certain predesignated level of significance, such as when a given number of resources are committed to the incident, when a new incident is not completed within a certain timeframe, or when impacts/threats to life and safety reach a given level.

Typically, ICS 209 forms are completed either once daily or for each operational period – in addition to the initial submission. Jurisdictional or organizational guidance may indicate frequency of ICS 209 submission for particular definitions of incidents or for all incidents. This specific guidance may help determine submission timelines when operational periods are extremely short (e.g., 2 hours) and it is not necessary to submit new ICS 209 forms for all operational periods.

Any plans or guidelines should also indicate parameters for when it is appropriate to stop submitting ICS 209s for an incident, based upon incident activity and support levels.

Preparation. When an Incident Management Organization (such as an Incident Management Team) is in place, the Situation Unit Leader or Planning Section Chief prepares the ICS 209 at the incident. On other incidents, the ICS 209 may be completed by a dispatcher in the local communications center, or by another staff person or manager. This form should be completed at the incident or at the closest level to the incident.

The ICS 209 should be completed with the best possible, currently available, and verifiable information at the time it is completed and signed.

This form is designed to serve incidents impacting specific geographic areas that can easily be defined. It also has the flexibility for use on ubiquitous events, or those events that cover extremely large areas and that may involve many jurisdictions and ICS organizations. For these incidents, it will be useful to clarify on the form exactly which portion of the larger incident the ICS 209 is meant to address. For example, a particular ICS 209 submitted during a statewide outbreak of mumps may be relevant only to mumps-related activities in Story County, Iowa. This can be indicated in both the incident name, Block 1, and in the Incident Location Information section in Blocks 16–26.

While most of the "Incident Location Information" in Blocks 16–26 is optional, the more information that can be submitted, the better. Submission of multiple location indicators increases accuracy, improves interoperability, and increases information sharing between disparate systems. Preparers should be certain to follow accepted protocols or standards when entering location information, and clearly label all location information. As with other ICS 209 data, geospatial information may be widely shared and utilized, so accuracy is essential.

If electronic data is submitted with the ICS 209, do not attach or send extremely large data files. Incident geospatial data that is distributed with the ICS 209 should be in simple incident geospatial basics, such as the incident perimeter, point of origin, etc. Data file sizes should be small enough to be easily transmitted through dial-up connections or other limited communications capabilities when ICS 209 information is transmitted electronically. Any attached data should be clearly labeled as to format content and collection time, and should follow existing naming conventions and standards.

Distribution. ICS 209 information is meant to be completed at the level as close to the incident as possible, preferably at the incident. Once the ICS 209 has been submitted outside the incident to a dispatch center or MACS element, it may subsequently be transmitted to various incident supports and coordination entities based on the support needs and the decisions made within the MACS in which the incident occurs.

Coordination with public information system elements and investigative/intelligence information organizations at the incident and within MACS is essential to protect information security and to ensure optimal information sharing and coordination. There may be times in which particular ICS 209s contain sensitive information that should not be released to the public (such as information regarding active investigations, fatalities, etc.). When this occurs, the ICS 209 (or relevant sections of it) should be labeled appropriately, and care should be taken in distributing the information within MACS.

All completed and signed original ICS 209 forms MUST be given to the incident's Documentation Unit and/or maintained as part of the official incident record.

Notes:

- To promote flexibility, only a limited number of ICS 209 blocks are typically required, and most of those are required only when applicable.
- Most fields are optional, to allow responders to use the form as best fits their needs and protocols for information collection.
- For the purposes of the ICS 209, responders are those personnel who are assigned to an incident or who are a part of the response community as defined by NIMS. This may include critical infrastructure owners and operators, nongovernmental and nonprofit organizational personnel, and contract employees (such as caterers), depending on local/jurisdictional/discipline practices.
- For additional flexibility only pages 1–3 are numbered, for two reasons:
  - Possible submission of additional pages for the Remarks Section (Block 47), and
  - Possible submission of additional copies of the fourth/last page (the "Incident Resource Commitment Summary") to provide a more detailed resource summary.

Block Number	Block Title	Instructions
*1	**Incident Name**	**REQUIRED BLOCK.** • Enter the full name assigned to the incident. • Check spelling of the full incident name. • For an incident that is a Complex, use the word "Complex" at the end of the incident name. • If the name changes, explain comments in Remarks, Block 47. • Do not use the same incident name for different incidents in the same calendar year.

Block Number	Block Title	Instructions
2	**Incident Number**	• Enter the appropriate number based on current guidance. The incident number may vary by jurisdiction and discipline. • Examples include: o A computer-aided dispatch (CAD) number. o An accounting number. o A county number. o A disaster declaration number. o A combination of the State, unit/agency ID, and a dispatch system number. o A mission number. o Any other unique number assigned to the incident and derived by means other than those above. • Make sure the number entered is correct. • Do not use the same incident number for two different incidents in the same calendar year. • Incident numbers associated with host jurisdictions or agencies and incident numbers assigned by agencies represented in Unified Command should be listed, or indicated in Remarks, Block 47.
*3	**Report Version** (check one box on left)	**REQUIRED BLOCK.** • This indicates the current version of the ICS 209 form being submitted. • If only one ICS 209 will be submitted, check BOTH "Initial" and "Final" (or check only "Final").
	☐ Initial	Check "Initial" if this is the first ICS 209 for this incident.
	☐ Update	Check "Update" if this is a subsequent report for the same incident. These can be submitted at various time intervals (see "Reporting Requirements" above).
	☐ Final	• Check "Final" if this is the last ICS 209 to be submitted for this incident (usually when the incident requires only minor support that can be supplied by the organization having jurisdiction). • Incidents may also be marked as "Final" if they become part of a new Complex (when this occurs, it can be indicated in Remarks, Block 47).
	Report # (if used)	Use this optional field if your agency or organization requires the tracking of ICS 209 report numbers. Agencies may also track the ICS 209 by the date/time submitted.
*4	**Incident Commander(s) & Agency or Organization**	**REQUIRED BLOCK.** • Enter both the first and last name of the Incident Commander. • If the incident is under a Unified Command, list all Incident Commanders by first initial and last name separated by a comma, including their organization. For example: L. Burnett – Minneapolis FD, R. Domanski – Minneapolis PD, C. Taylor – St. Paul PD, Y. Martin – St. Paul FD, S. McIntyre – U.S. Army Corps, J. Hartl – NTSB
5	**Incident Management Organization**	Indicate the incident management organization for the incident, which may be a Type 1, 2, or 3 Incident Management Team (IMT), a Unified Command, a Unified Command with an IMT, etc. This block should not be completed unless a recognized incident management organization is assigned to the incident.

Block Number	Block Title	Instructions
*6	**Incident Start Date/Time**	**REQUIRED.** This is always the start date and time of the incident (not the report date and time or operational period).
	Date	Enter the start date (month/day/year).
	Time	Enter the start time (using the 24-hour clock).
	Time Zone	Enter the time zone of the incident (e.g., EDT, PST).
7	**Current Incident Size or Area Involved** (use unit label – e.g., "sq mi," "city block")	• Enter the appropriate incident descriptive size or area involved (acres, number of buildings, square miles, hectares, square kilometers, etc.). • Enter the total area involved for incident Complexes in this block, and list each sub-incident and size in Remarks (Block 47). • Indicate that the size is an estimate, if a more specific figure is not available. • Incident size may be a population figure rather than a geographic figure, depending on the incident definition and objectives. • If the incident involves more than one jurisdiction or mixed ownership, agencies/organizations may require listing a size breakdown by organization, or including this information in Remarks (Block 47). • The incident may be one part of a much larger event (refer to introductory instructions under "Preparation). Incident size/area depends on the area actively managed within the incident objectives and incident operations, and may also be defined by a delegation of authority or letter of expectation outlining management bounds.
8	**Percent (%) Contained or Completed** (circle one)	• Enter the percent that this incident is completed or contained (e.g., 50%), with a % label. • For example, a spill may be 65% contained, or flood response objectives may be 50% met.
*9	**Incident Definition**	**REQUIRED BLOCK.** Enter a general definition of the incident in this block. This may be a general incident category or kind description, such as "tornado," "wildfire," "bridge collapse," "civil unrest," "parade," "vehicle fire," "mass casualty," etc.
10	**Incident Complexity Level**	Identify the incident complexity level as determined by Unified/Incident Commanders, if available or used.
*11	**For Time Period**	**REQUIRED BLOCK.** • Enter the time interval for which the form applies. This period should include all of the time since the last ICS 209 was submitted, or if it is the initial ICS 209, it should cover the time lapsed since the incident started. • The time period may include one or more operational periods, based on agency/organizational reporting requirements.
	From Date/Time	• Enter the start date (month/day/year). • Enter the start time (using the 24-hour clock).
	To Date/Time	• Enter the end date (month/day/year). • Enter the end time (using the 24-hour clock).

Block Number	Block Title	Instructions
APPROVAL & ROUTING INFORMATION		
*12	**Prepared By**	**REQUIRED BLOCK.** When an incident management organization is in place, this would be the Situation Unit Leader or Planning Section Chief at the incident. On other incidents, it could be a dispatcher in the local emergency communications center, or another staff person or manager.
	Print Name	Print the name of the person preparing the form.
	ICS Position	The ICS title of the person preparing the form (e.g., "Situation Unit Leader").
	Date/Time Prepared	Enter the date (month/day/year) and time (using the 24-hour clock) the form was prepared. Enter the time zone if appropriate.
*13	**Date/Time Submitted**	**REQUIRED.** Enter the submission date (month/day/year) and time (using the 24-hour clock).
	Time Zone	Enter the time zone from which the ICS 209 was submitted (e.g., EDT, PST).
*14	**Approved By**	**REQUIRED.** When an incident management organization is in place, this would be the Planning Section Chief or Incident Commander at the incident. On other incidents, it could be the jurisdiction's dispatch center manager, organizational administrator, or other manager.
	Print Name	Print the name of the person approving the form.
	ICS Position	The position of the person signing the ICS 209 should be entered (e.g., "Incident Commander").
	Signature	Signature of the person approving the ICS 209, typically the Incident Commander. The original signed ICS 209 should be maintained with other incident documents.
*15	**Primary Location, Organization, or Agency Sent To**	**REQUIRED BLOCK.** Enter the appropriate primary location or office the ICS 209 was sent to apart from the incident. This most likely is the entity or office that ordered the incident management organization that is managing the incident. This may be a dispatch center or a MACS element such as an emergency operations center. If a dispatch center or other emergency center prepared the ICS 209 for the incident, indicate where it was submitted initially.
INCIDENT LOCATION INFORMATION		
• Much of the "Incident Location Information" in Blocks 16–26 is optional, but completing as many fields as possible increases accuracy, and improves interoperability and information sharing between disparate systems. • As with all ICS 209 information, accuracy is essential because the information may be widely distributed and used in a variety of systems. Location and/or geospatial data may be used for maps, reports, and analysis by multiple parties outside the incident. • Be certain to follow accepted protocols, conventions, or standards where appropriate when submitting location information, and clearly label all location information. • Incident location information is usually based on the point of origin of the incident, and the majority of the area where the incident jurisdiction is.		
*16	**State**	**REQUIRED BLOCK WHEN APPLICABLE.** • Enter the State where the incident originated. • If other States or jurisdictions are involved, enter them in Block 25 or Block 44.
*17	**County / Parish / Borough**	**REQUIRED BLOCK WHEN APPLICABLE.** • Enter the county, parish, or borough where the incident originated. • If other counties or jurisdictions are involved, enter them in Block 25 or Block 47.

Block Number	Block Title	Instructions
*18	**City**	**REQUIRED BLOCK WHEN APPLICABLE.** • Enter the city where the incident originated. • If other cities or jurisdictions are involved, enter them in Block 25 or Block 47.
19	**Unit or Other**	Enter the unit, sub-unit, unit identification (ID) number or code (if used), or other information about where the incident originated. This may be a local identifier that indicates primary incident jurisdiction or responsibility (e.g., police, fire, public works, etc.) or another type of organization. Enter specifics in Block 25.
*20	**Incident Jurisdiction**	**REQUIRED BLOCK WHEN APPLICABLE.** Enter the jurisdiction where the incident originated (the entry may be general, such as Federal, city, or State, or may specifically identify agency names such as Warren County, U.S. Coast Guard, Panama City, NYPD).
21	**Incident Location Ownership** (if different than jurisdiction)	• When relevant, indicate the ownership of the area where the incident originated, especially if it is different than the agency having jurisdiction. • This may include situations where jurisdictions contract for emergency services, or where it is relevant to include ownership by private entities, such as a large industrial site.
22	**22. Longitude** (indicate format): **Latitude** (indicate format):	• Enter the longitude and latitude where the incident originated, if available and normally used by the authority having jurisdiction for the incident. • Clearly label the data, as longitude and latitude can be derived from various sources. For example, if degrees, minutes, and seconds are used, label as "33 degrees, 45 minutes, 01 seconds."
23	**US National Grid Reference**	• Enter the US National Grid (USNG) reference where the incident originated, if available and commonly used by the agencies/jurisdictions with primary responsibility for the incident. • Clearly label the data.
24	**Legal Description** (township, section, range)	• Enter the legal description where the incident originated, if available and commonly used by the agencies/jurisdictions with primary responsibility for the incident. • Clearly label the data (e.g., N 1/2 SE 1/4, SW 1/4, S24, T32N, R18E).
*25	**Short Location or Area Description** (list all affected areas or a reference point)	**REQUIRED BLOCK.** • List all affected areas as described in instructions for Blocks 16–24 above, OR summarize a general location, OR list a reference point for the incident (e.g., "the southern third of Florida," "in ocean 20 miles west of Catalina Island, CA," or "within a 5 mile radius of Walden, CO"). • This information is important for readers unfamiliar with the area (or with other location identification systems) to be able to quickly identify the general location of the incident on a map. • Other location information may also be listed here if needed or relevant for incident support (e.g., base meridian).
26	**UTM Coordinates**	Indicate Universal Transverse Mercator reference coordinates if used by the discipline or jurisdiction.

Block Number	Block Title	Instructions
27	**Note any electronic geospatial data included or attached** (indicate data format, content, and collection time information and labels)	• Indicate whether and how geospatial data is included or attached. • Utilize common and open geospatial data standards. • WARNING: Do not attach or send extremely large data files with the ICS 209. Incident geospatial data that is distributed with the ICS 209 should be simple incident geospatial basics, such as the incident perimeter, origin, etc. Data file sizes should be small enough to be easily transmitted through dial-up connections or other limited communications capabilities when ICS 209 information is transmitted electronically. • NOTE: Clearly indicate data content. For example, data may be about an incident perimeter (such as a shape file), the incident origin (a point), a point and radius (such as an evacuation zone), or a line or lines (such as a pipeline). • NOTE: Indicate the data format (e.g., .shp, .kml, .kmz, or .gml file) and any relevant information about projection, etc. • NOTE: Include a hyperlink or other access information if incident map data is posted online or on an FTP (file transfer protocol) site to facilitate downloading and minimize information requests. • NOTE: Include a point of contact for getting geospatial incident information, if included in the ICS 209 or available and supporting the incident.
INCIDENT SUMMARY		
*28	**Significant Events for the Time Period Reported** (summarize significant progress made, evacuations, incident growth, etc.)	**REQUIRED BLOCK.** • Describe significant events that occurred during the period being reported in Block 6. Examples include: o Road closures. o Evacuations. o Progress made and accomplishments. o Incident command transitions. o Repopulation of formerly evacuated areas and specifics. o Containment. • Refer to other blocks in the ICS 209 when relevant for additional information (e.g., "Details on evacuations may be found in Block 33"), or in Remarks, Block 47. • Be specific and detailed in reference to events. For example, references to road closures should include road number and duration of closure (or include further detail in Block 33). Use specific metrics if needed, such as the number of people or animals evacuated, or the amount of a material spilled and/or recovered. • This block may be used for a single-paragraph synopsis of overall incident status.
29	**Primary Materials or Hazards Involved** (hazardous chemicals, fuel types, infectious agents, radiation, etc.)	• When relevant, enter the appropriate primary materials, fuels, or other hazards involved in the incident that are leaking, burning, infecting, or otherwise influencing the incident. • Examples include hazardous chemicals, wildland fuel models, biohazards, explosive materials, oil, gas, structural collapse, avalanche activity, criminal activity, etc.
	Other	Enter any miscellaneous issues which impacted Critical Infrastructure and Key Resources.

Block Number	Block Title	Instructions
30	**Damage Assessment Information** (summarize damage and/or restriction of use or availability to residential or commercial property, natural resources, critical infrastructure and key resources, etc.)	• Include a short summary of damage or use/access restrictions/ limitations caused by the incident for the reporting period, and cumulatively. • Include if needed any information on the facility status, such as operational status, if it is evacuated, etc. when needed. • Include any critical infrastructure or key resources damaged/destroyed/ impacted by the incident, the kind of infrastructure, and the extent of damage and/or impact and any known cascading impacts. • Refer to more specific or detailed damage assessment forms and packages when they are used and/or relevant.
	A. Structural Summary	Complete this table as needed based on the definitions for 30B–F below. Note in table or in text block if numbers entered are estimates or are confirmed. Summaries may also include impact to Shoreline and Wildlife, etc.
	B. # Threatened (72 hrs)	Enter the number of structures potentially threatened by the incident within the next 72 hours, based on currently available information.
	C. # Damaged	Enter the number of structures damaged by the incident.
	D. # Destroyed	Enter the number of structures destroyed beyond repair by the incident.
	E. Single Residences	Enter the number of single dwellings/homes/units impacted in Columns 30B–D. Note any specifics in the text block if needed, such as type of residence (apartments, condominiums, single-family homes, etc.).
	F. Nonresidential Commercial Properties	Enter the number of buildings or units impacted in Columns 30B–D. This includes any primary structure used for nonresidential purposes, excluding Other Minor Structures (Block 30G). Note any specifics regarding building or unit types in the text block.
	Other Minor Structures	Enter any miscellaneous structures impacted in Columns 30B–D not covered in 30E–F above, including any minor structures such as booths, sheds, or outbuildings.
	Other	Enter any miscellaneous issues which impacted Critical Infrastructure and Key Resources.

Block Number	Block Title	Instructions
ADDITIONAL INCIDENT DECISION SUPPORT INFORMATION (PAGE 2)		
*31	**Public Status Summary**	• This section is for summary information regarding incident-related injuries, illness, and fatalities for civilians (or members of the public); see 31C–N below. • Explain or describe the nature of any reported injuries, illness, or other activities in Life, Safety, and Health Status/Threat Remarks (Block 33). • Illnesses include those that may be caused through a biological event such as an epidemic or an exposure to toxic or radiological substances. • NOTE: *Do not estimate any fatality information.* • NOTE: Please use caution when reporting information in this section that may be on the periphery of the incident or change frequently. This information should be reported as accurately as possible as a snapshot in time, as much of the information is subject to frequent change. • NOTE: Do not complete this block if the incident covered by the ICS 209 is *not directly responsible* for these actions (such as evacuations, sheltering, immunizations, etc.) *even if they are related to the incident.* o Only the authority having jurisdiction should submit reports for these actions, to mitigate multiple/conflicting reports. o For example, if managing evacuation shelters is part of the incident operation itself, do include these numbers in Block 31J with any notes in Block 33. • NOTE: When providing an estimated value, denote in parenthesis: "est." **Handling Sensitive Information** • Release of information in this section should be carefully coordinated within the incident management organization to ensure synchronization with public information and investigative/intelligence actions. • Thoroughly review the "Distribution" section in the introductory ICS 209 instructions for details on handling sensitive information. Use caution when providing information in any situation involving fatalities, and verify that appropriate notifications have been made prior to release of this information. Electronic transmission of any ICS 209 may make information available to many people and networks at once. • Information regarding fatalities should be cleared with the Incident Commander and/or an organizational administrator prior to submission of the ICS 209.
	A. # This Reporting Period	Enter the total number of individuals impacted in each category for this reporting period (since the previous ICS 209 was submitted).
	B. Total # to Date	• Enter the total number of individuals impacted in each category for the entire duration of the incident. • This is a cumulative total number that should be adjusted each reporting period.
	C. Indicate Number of Civilians (Public) Below	• For lines 31D–M below, enter the number of civilians affected for each category. • Indicate if numbers are estimates, for those blocks where this is an option. • Civilians are those members of the public who are affected by the incident, but who are not included as part of the response effort through Unified Command partnerships and those organizations and agencies assisting and cooperating with response efforts.
	D. Fatalities	• Enter the number of *confirmed* civilian/public fatalities. • See information in introductory instructions ("Distribution") and in Block 31 instructions regarding sensitive handling of fatality information.
	E. With Injuries/Illness	Enter the number of civilian/public injuries or illnesses directly related to the incident. Injury or illness is defined by the incident or jurisdiction(s).

Block Number	Block Title	Instructions
*31 (continued)	F. Trapped/In Need of Rescue	Enter the number of civilians who are trapped or in need of rescue due to the incident.
	G. Missing (note if estimated)	Enter the number of civilians who are missing due to the incident. Indicate if an estimate is used.
	H. Evacuated (note if estimated)	Enter the number of civilians who are evacuated due to the incident. These are likely to be best estimates, but indicate if they are estimated.
	I. Sheltering-in-Place (note if estimated)	Enter the number of civilians who are sheltering in place due to the incident. Indicate if estimates are used.
	J. In Temporary Shelters (note if estimated)	Enter the number of civilians who are in temporary shelters as a direct result of the incident, noting if the number is an estimate.
	K. Have Received Mass Immunizations	Enter the number of civilians who have received mass immunizations due to the incident and/or as part of incident operations. Do not estimate.
	L. Require Mass Immunizations (note if estimated)	Enter the number of civilians who require mass immunizations due to the incident and/or as part of incident operations. Indicate if it is an estimate.
	M. In Quarantine	Enter the number of civilians who are in quarantine due to the incident and/or as part of incident operations. Do not estimate.
	N. Total # Civilians (Public) Affected	Enter sum totals for Columns 31A and 31B for Rows 31D–M.
*32	**Responder Status Summary**	• This section is for summary information regarding incident-related injuries, illness, and fatalities for responders; see 32C–N. • Illnesses include those that may be related to a biological event such as an epidemic or an exposure to toxic or radiological substances directly in relation to the incident. • Explain or describe the nature of any reported injuries, illness, or other activities in Block 33. • NOTE: *Do not estimate any fatality information or responder status information.* • NOTE: Please use caution when reporting information in this section that may be on the periphery of the incident or change frequently. This information should be reported as accurately as possible as a snapshot in time, as much of the information is subject to frequent change. • NOTE: Do not complete this block if the incident covered by the ICS 209 is *not directly responsible* for these actions (such as evacuations, sheltering, immunizations, etc.) even if they are related to the incident. Only the authority having jurisdiction should submit reports for these actions, to mitigate multiple/conflicting reports. **Handling Sensitive Information** • Release of information in this section should be carefully coordinated within the incident management organization to ensure synchronization with public information and investigative/intelligence actions. • Thoroughly review the "Distribution" section in the introductory ICS 209 instructions for details on handling sensitive information. Use caution when providing information in any situation involving fatalities, and verify that appropriate notifications have been made prior to release of this information. Electronic transmission of any ICS 209 may make information available to many people and networks at once. • Information regarding fatalities should be cleared with the Incident Commander and/or an organizational administrator prior to submission of the ICS 209.

Block Number	Block Title	Instructions
*32 (continued)	A. # This Reporting Period	Enter the total number of responders impacted in each category for this reporting period (since the previous ICS 209 was submitted).
	B. Total # to **Date**	• Enter the total number of individuals impacted in each category for the *entire duration* of the incident. • This is a *cumulative* total number that should be adjusted each reporting period.
	C. Indicate Number of Responders Below	• For lines 32D–M below, enter the number of responders relevant for each category. • Responders are those personnel included as part of **Unified** Command partnerships and those organizations and agencies assisting and cooperating with response efforts.
	D. Fatalities	• Enter the number of *confirmed* responder fatalities. • See information in introductory instructions ("Distribution") and for Block 32 regarding sensitive handling of fatality information.
	E. With Injuries/Illness	• Enter the number of incident responders with serious injuries or illnesses due to the incident. • *For responders, serious injuries or illness are typically those in which the person is unable to continue to perform in his or her incident assignment,* but the authority having jurisdiction may have additional guidelines on reporting requirements in this area.
	F. Trapped/In Need Of Rescue	Enter the number of incident responders who are in trapped or in need of rescue due to the incident.
	G. Missing	Enter the number of incident responders who are missing due to incident conditions.
	H.	(BLANK; use however is appropriate.)
	I. Sheltering in Place	Enter the number of responders who are sheltering in place due to the incident. Once responders become the victims, this needs to be noted in Block 33 or Block 47 and handled accordingly.
	J.	(BLANK; use however is appropriate.)
	L. Require Immunizations	Enter the number of responders who require immunizations due to the incident and/or as part of incident operations.
	M. In Quarantine	Enter the number of responders who are in quarantine as a direct result of the incident and/or related to incident operations.
	N. Total # Responders Affected	Enter sum totals for Columns 32A and 32B for Rows 32D–M.
33	**Life, Safety, and Health Status/Threat Remarks**	• Enter any details needed for Blocks 31, 32, and 34. Enter any specific comments regarding illness, injuries, fatalities, and threat management for this incident, such as whether estimates were used for numbers given in Block 31. • This information should be reported as accurately as possible as a snapshot in time, as much of the information is subject to frequent change. • Evacuation information can be very sensitive to local residents and officials. Be accurate in the assessment. • Clearly note primary responsibility and contacts for any activities or information in Blocks 31, 32, and 34 that may be caused by the incident, but that are being managed and/or reported by other parties. • Provide additional explanation or information as relevant in **Blocks** 28, 36, 38, 40, 41, or in Remarks (Block 47).

Block Number	Block Title	Instructions
*34	**Life, Safety, and Health Threat Management**	Note any details in Life, Safety, and Health Status/Threat Remarks (Block 33), and provide additional explanation or information as relevant in Blocks 28, 36, 38, 40, 41, or in Remarks (Block 47). Additional pages may be necessary for notes.
	A. Check if Active	Check any applicable blocks in 34C–P based on currently available information regarding incident activity and potential.
	B. Notes	Note any specific details, or include in Block 33.
	C. No Likely Threat	Check if there is no likely threat to life, health, and safety.
	D. Potential Future Threat	Check if there is a potential future threat to life, health, and safety.
	E. Mass Notifications In Progress	• Check if there are any mass notifications in progress regarding emergency situations, evacuations, shelter in place, or other public safety advisories related to this incident. • These may include use of threat and alert systems such as the Emergency Alert System or a "reverse 911" system. • Please indicate the areas where mass notifications have been completed (e.g., "mass notifications to ZIP codes 50201, 50014, 50010, 50011," or "notified all residents within a 5-mile radius of Gatlinburg").
	F. Mass Notifications Completed	Check if actions referred to in Block 34E above have been completed.
	G. No Evacuation(s) Imminent	Check if evacuations are not anticipated in the near future based on current information.
	H. Planning for Evacuation	Check if evacuation planning is underway in relation to this incident.
	I. Planning for Shelter-in-Place	Check if planning is underway for shelter-in-place activities related to this incident.
	J. Evacuation(s) in Progress	Check if there are active evacuations in progress in relation to this incident.
	K. Shelter-In-Place in Progress	Check if there are active shelter-in-place actions in progress in relation to this incident.
	L. Repopulation in Progress	Check if there is an active repopulation in progress related to this incident.
	M. Mass Immunization in Progress	Check if there is an active mass immunization in progress related to this incident.
	N. Mass Immunization Complete	Check if a mass immunization effort has been completed in relation to this incident.
	O. Quarantine in Progress	Check if there is an active quarantine in progress related to this incident.
	P. Area Restriction in Effect	Check if there are any restrictions in effect, such as road or area closures, especially those noted in Block 28.

Block Number	Block Title	Instructions
35	**Weather Concerns** (synopsis of current and predicted weather; discuss related factors that may cause concern)	• Complete a short synopsis/discussion on significant weather factors that could cause concerns for the incident when relevant. • Include current and/or predicted weather factors, and the timeframe for predictions. • Include relevant factors such as: o Wind speed (label units, such as mph). o Wind direction (clarify and label where wind is coming from and going to in plain language – e.g., "from NNW," "from E," or "from SW"). o Temperature (label units, such as F). o Relative humidity (label %). o Watches. o Warnings. o Tides. o Currents. • Any other weather information relative to the incident, such as flooding, hurricanes, etc.
36	**Projected Incident Activity, Potential, Movement, Escalation, or Spread** and influencing factors during the next operational period and in 12-, 24-, 48-, and 72-hour timeframes **12 hours** **24 hours** **48 hours** **72 hours** **Anticipated after 72 hours**	• Provide an estimate (when it is possible to do so) of the direction/scope in which the incident is expected to spread, migrate, or expand during the next indicated operational period, or other factors that may cause activity changes. • Discuss incident potential relative to values at risk, or values to be protected (such as human life), and the potential changes to those as the incident changes. • Include an estimate of the acreage or area that will likely be affected. • If known, provide the above information in 12-, 24-, 48- and 72-hour timeframes, and any activity anticipated after 72 hours.
37	**Strategic Objectives** (define planned end-state for incident)	Briefly discuss the desired outcome for the incident based on currently available information. Note any high-level objectives and any possible strategic benefits as well (especially for planned events).

Block Number	Block Title	Instructions
ADDITIONAL INCIDENT DECISION SUPPORT INFORMATION (continued) **(PAGE 3)**		
38	**Current Incident Threat Summary and Risk Information in 12-, 24-, 48-, and 72-hour timeframes and beyond.** Summarize primary incident threats to life, property, communities and community stability, residences, health care facilities, other critical infrastructure and key resources, commercial facilities, natural and environmental resources, cultural resources, and continuity of operations and/or business. Identify corresponding incident-related potential economic or cascading impacts. **12 hours** **24 hours** **48 hours** **72 hours** **Anticipated after 72 hours**	Summarize major or significant threats due to incident activity based on currently available information. Include a breakdown of threats in terms of 12-, 24-, 48-, and 72-hour timeframes.

Block Number	Block Title	Instructions
39	**Critical Resource Needs** in 12-, 24-, 48-, and 72-hour timeframes and beyond to meet critical incident objectives. List resource category, kind, and/or type, and amount needed, in priority order: **12 hours** **24 hours** **48 hours** **72 hours** **Anticipated after 72 hours**	• List the specific critical resources and numbers needed, in order of priority. *Be specific as to the need.* • Use plain language and common terminology for resources, and indicate resource category, kind, and type (if available or known) to facilitate incident support. • If critical resources are listed in this block, there should be corresponding orders placed for them through appropriate resource ordering channels. • Provide critical resource needs in 12-, 24-, 48- and 72-hour increments. List the most critical resources needed for each timeframe, if needs have been identified for each timeframe. Listing critical resources by the time they are needed gives incident support personnel a "heads up" for short-range planning, and assists the ordering process to ensure these resources will be in place when they are needed. • More than one resource need may be listed for each timeframe. For example, a list could include: o 24 hrs: 3 Type 2 firefighting helicopters, 2 Type I Disaster Medical Assistance Teams o 48 hrs: Mobile Communications Unit (Law/Fire) o After 72 hrs: 1 Type 2 Incident Management Team • Documentation in the ICS 209 can help the incident obtain critical regional or national resources through outside support mechanisms including multiagency coordination systems and mutual aid. o Information provided in other blocks on the ICS 209 can help to support the need for resources, including Blocks 28, 29, 31–38, and 40–42. o Additional comments in the Remarks section (Block 47) can also help explain what the incident is requesting and why it is critical (for example, "Type 2 Incident Management Team is needed in three days to transition command when the current Type 2 Team times out"). • Do not use this block for noncritical resources.
40	**Strategic Discussion: Explain the relation of overall strategy, constraints, and current available information to:** 1) critical resource needs identified above, 2) the Incident Action Plan and management objectives and targets, 3) anticipated results. **Explain major problems and concerns such as operational challenges, incident management problems, and social, political, economic, or environmental concerns or impacts.**	• Wording should be consistent with Block 39 to justify critical resource needs, which should relate to planned actions in the Incident Action Plan. • Give a short assessment of the likelihood of meeting the incident management targets, given the current management strategy and currently known constraints. • Identify when the chosen management strategy will succeed given the current constraints. Adjust the anticipated incident management completion target in Block 43 as needed based on this discussion. • Explain major problems and concerns as indicated.

Block Number	Block Title	Instructions
41	**Planned Actions for Next Operational Period**	• Provide a short summary of actions planned for the next operational period. • Examples: o "The current Incident Management Team will transition out to a replacement IMT." o "Continue to review operational/ engineering plan to facilitate removal of the partially collapsed west bridge supports." o "Continue refining mapping of the recovery operations and damaged assets using GPS." o "Initiate removal of unauthorized food vendors."
42	**Projected Final Incident Size/Area** (use unit label – e.g., "sq mi")	• Enter an estimate of the total area likely to be involved or affected over the course of the incident. • Label the estimate of the total area or population involved, affected, or impacted with the relevant units such as acres, hectares, square miles, etc. • Note that total area involved may not be limited to geographic area (see previous discussions regarding incident definition, scope, operations, and objectives). Projected final size may involve a population rather than a geographic area.
43	**Anticipated Incident Management Completion Date**	• Enter the date (month/day/year) at which time it is expected that incident objectives will be met. This is often explained similar to incident containment or control, or the time at which the incident is expected to be closed or when significant incident support will be discontinued. • Avoid leaving this block blank if possible, as this is important information for managers.
44	**Projected Significant Resource Demobilization Start Date**	Enter the date (month/day/year) when initiation of significant resource demobilization is anticipated.
45	**Estimated Incident Costs to Date**	• Enter the estimated total incident costs to date for the entire incident based on currently available information. • Incident costs include estimates of all costs for the response, including all management and support activities per discipline, agency, or organizational guidance and policy. • This does not include damage assessment figures, as they are impacts from the incident and not response costs. • If costs decrease, explain in Remarks (Block 47). • If additional space is required, please add as an attachment.
46	**Projected Final Incident Cost Estimate**	• Enter an estimate of the total costs for the incident once all costs have been processed based on current spending and projected incident potential, per discipline, agency, or organizational guidance and policy. This is often an estimate of daily costs combined with incident potential information. • This does not include damage assessment figures, as they are impacts from the incident and not response costs. • If additional space is required, please add as an attachment.

Block Number	Block Title	Instructions
47	**Remarks** (or continuation of any blocks above – list block number in notation)	• Use this block to expand on information that has been entered in previous blocks, or to include other pertinent information that has not been previously addressed. • List the block number for any information continued from a previous block. • Additional information may include more detailed weather information, specifics on injuries or fatalities, threats to critical infrastructure or other resources, more detailed evacuation site locations and number of evacuated, information or details regarding incident cause, etc. • For Complexes that include multiple incidents, list all sub-incidents included in the Complex. • List jurisdictional or ownership breakdowns if needed when an incident is in more than one jurisdiction and/or ownership area. Breakdown may be: o By size (e.g., 35 acres in City of Gatlinburg, 250 acres in Great Smoky Mountains), and/or o By geography (e.g., incident area on the west side of the river is in jurisdiction of City of Minneapolis; area on east side of river is City of St. Paul jurisdiction; river is joint jurisdiction with USACE). • Explain any reasons for incident size reductions or adjustments (e.g., reduction in acreage due to more accurate mapping). • This section can also be used to list any additional information about the incident that may be needed by incident support mechanisms outside the incident itself. This may be basic information needed through multiagency coordination systems or public information systems (e.g., a public information phone number for the incident, or the incident Web site address). • Attach additional pages if it is necessary to include additional comments in the Remarks section.

INCIDENT RESOURCE COMMITMENT SUMMARY (PAGE 4)

- This last/fourth page of the ICS 209 can be copied and used if needed to accommodate additional resources, agencies, or organizations. Write the actual page number on the pages as they are used.
- Include only resources that have been assigned to the incident and that have arrived and/or been checked in to the incident. Do not include resources that have been ordered but have *not* yet arrived.

For summarizing:

- When there are large numbers of responders, it may be helpful to group agencies or organizations together. Use the approach that works best for the multiagency coordination system applicable to the incident. For example,
  - Group State, local, county, city, or Federal responders together under such headings, or
  - Group resources from one jurisdiction together and list only individual jurisdictions (e.g., list the public works, police, and fire department resources for a city under that city's name).
- On a large incident, it may also be helpful to group similar categories, kinds, or types of resources together for this summary.

Block Number	Block Title	Instructions
48	**Agency or Organization**	• List the agencies or organizations contributing resources to the incident as responders, through mutual aid agreements, etc. • List agencies or organizations using clear language so readers who may not be from the discipline or host jurisdiction can understand the information. • Agencies or organizations may be listed individually or in groups. • When resources are grouped together, individual agencies or organizations may be listed below in Block 53. • Indicate in the rows under Block 49 how many resources are assigned to the incident under each resource identified. o These can listed with the number of resources on the top of the box, and the number of personnel associated with the resources on the bottom half of the box. o For example: ▪ *Resource:* Type 2 Helicopters… 3/8 (indicates 3 aircraft, 8 personnel). ▪ *Resource:* Type 1 Decontamination Unit… 1/3 (indicates 1 unit, 3 personnel). • Indicate in the rows under Block 51 the total number of personnel assigned for each agency listed under Block 48, including both individual overhead and those associated with other resources such as fire engines, decontamination units, etc.
49	**Resources** (summarize resources by category, kind, and/or type; show # of resources on top ½ of box, show # of personnel associated with resource on bottom ½ of box)	• List resources using clear language when possible – so ICS 209 readers who may not be from the discipline or host jurisdiction can understand the information. o Examples: Type 1 Fire Engines, Type 4 Helicopters • Enter total numbers in columns for each resource by agency, organization, or grouping in the proper blocks. o These can listed with the number of resources on the top of the box, and the number of personnel associated with the resources on the bottom half of the box. o For example: ▪ *Resource:* Type 2 Helicopters… 3/8 (indicates 3 aircraft, 8 personnel). ▪ *Resource:* Type 1 Decontamination Unit… 1/3 (indicates 1 unit, 3 personnel). • NOTE: One option is to group similar resources together when it is sensible to do so for the summary. o For example, do not list every type of fire engine – rather, it may be advisable to list two generalized types of engines, such as "structure fire engines" and "wildland fire engines" in separate columns with totals for each. • NOTE: It is not advisable to list individual overhead personnel individually in the resource section, especially as this form is intended as a summary. These personnel should be included in the Total Personnel sums in Block 51.
50	**Additional Personnel** not assigned to a resource	List the number of *additional* individuals (or overhead) that are not assigned to a specific resource by agency or organization.
51	**Total Personnel** (includes those associated with resources – e.g., aircraft or engines – *and* individual overhead)	• Enter the total personnel for each agency, organization, or grouping in the Total Personnel column. • WARNING: Do not simply add the numbers across! • The number of Total Personnel for each row should include both: o The total number of personnel assigned to each of the resources listed in Block 49, and o The total number of additional individual overhead personnel from each agency, organization, or group listed in Block 50.

Block Number	Block Title	Instructions
52	**Total Resources**	Include the sum total of resources for each column, including the total for the column under Blocks 49, 50, and 51. This should include the total number of *resources* in Block 49, as personnel totals will be counted under Block 51.
53	**Additional Cooperating and Assisting Organizations Not Listed Above**	• List all agencies and organizations that are not directly involved in the incident, but are providing support. • Examples may include ambulance services, Red Cross, DHS, utility companies, etc. • Do not repeat any resources counted in Blocks 48–52, unless explanations are needed for groupings created under Block 48 (Agency or Organization).

RESOURCE STATUS CHANGE (ICS 210)

1. Incident Name:	2. Operational Period: Date From: Time From:	Date To: Time To:

3. Resource Number	4. New Status (Available, Assigned, O/S)	5. From (Assignment and Status):	6. To (Assignment and Status):	7. Time and Date of Change:	

8. Comments:

9. Prepared by: Name: _____ Position/Title: _____ Signature: _____

ICS 210 Date/Time: _____

ICS 210
Resource Status Change

Purpose. The Resource Status Change (ICS 210) is used by the Incident Communications Center Manager to record status change information received on resources assigned to the incident. This information could be transmitted with a General Message (ICS 213). The form could also be used by Operations as a worksheet to track entry, etc.

Preparation. The ICS 210 is completed by radio/telephone operators who receive status change information from individual resources, Task Forces, Strike Teams, and Division/Group Supervisors. Status information could also be reported by Staging Area and Helibase Managers and fixed-wing facilities.

Distribution. The ICS 210 is maintained by the Communications Unit and copied to Resources Unit and filed by Documentation Unit.

Notes:

- The ICS 210 is essentially a message form that can be used to update Resource Status Cards or T-Cards (ICS 219) for incident-level resource management.
- If additional pages are needed, use a blank ICS 210 and repaginate as needed.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	**Resource Number**	Enter the resource identification (ID) number (this may be a letter and number combination) assigned by either the sending unit or the incident.
4	**New Status** (Available, Assigned, Out of Service)	Indicate the current status of the resource: • Available – Indicates resource is available for incident use immediately. • Assigned – Indicates resource is checked in and assigned a work task on the incident. • Out of Service – Indicates resource is assigned to the incident but unable to respond for mechanical, rest, or personnel reasons. If space permits, indicate the estimated time of return (ETR). It may be useful to indicate the reason a resource is out of service (e.g., "O/S – Mech" (for mechanical issues), "O/S – Rest" (for off shift), or "O/S – Pers" (for personnel issues).
5	**From** (Assignment and Status)	Indicate the current location of the resource (where it came from) and the status. When more than one Division, Staging Area, or Camp is used, identify the specific location (e.g., Division A, Staging Area, Incident Command Post, Western Camp).
6	**To** (Assignment and Status)	Indicate the assigned incident location of the resource and status. When more than one Division, Staging Area, or Camp is used, identify the specific location.
7	**Time and Date of Change**	Enter the time and location of the status change (24-hour clock). Enter the date as well if relevant (e.g., out of service).
8	**Comments**	Enter any special information provided by the resource or dispatch center. This may include details about why a resource is out of service, or individual identifying designators (IDs) of Strike Teams and Task Forces.
9	**Prepared by** • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position/title, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

INCIDENT CHECK-IN LIST (ICS 211)

1. Incident Name:	2. Incident Number:	3. Check-In Location (complete all that apply): ☐ Base ☐ Staging Area ☐ ICP ☐ Helibase ☐ Other	4. Start Date/Time: Date: Time:

Check-In Information (use reverse of form for remarks or comments)

5. List single resource personnel (overhead) by agency and name, OR list resources by the following format:							6. Order Request #	7. Date/Time Check-In	8. Leader's Name	9. Total Number of Personnel	10. Incident Contact Information	11. Home Unit or Agency	12. Departure Point, Date and Time	13. Method of Travel	14. Incident Assignment	15. Other Qualifications	16. Data Provided to Resources Unit
State	Agency	Category	Kind	Type	Resource Name or Identifier	ST or TF											

ICS 211	17. Prepared by: Name: _____ Position/Title: _____ Signature: _____ Date/Time: _____

PHMSA 0000039869

ICS 211
Incident Check-In List

Purpose. Personnel and equipment arriving at the incident can check in at various incident locations. Check-in consists of reporting specific information, which is recorded on the Check-In List (ICS 211). The ICS 211 serves several purposes, as it: (1) records arrival times at the incident of all overhead personnel and equipment, (2) records the initial location of personnel and equipment to facilitate subsequent assignments, and (3) supports demobilization by recording the home base, method of travel, etc., for resources checked in.

Preparation. The ICS 211 is initiated at a number of incident locations including: Staging Areas, Base, and Incident Command Post (ICP). Preparation may be completed by: (1) overhead at these locations, who record the information and give it to the Resources Unit as soon as possible, (2) the Incident Communications Center Manager located in the Communications Center, who records the information and gives it to the Resources Unit as soon as possible, (3) a recorder from the Resources Unit during check-in to the ICP. As an option, the ICS 211 can be printed on colored paper to match the designated Resource Status Card (ICS 219) colors. The purpose of this is to aid the process of completing a large volume of ICS 219s. The ICS 219 colors are:

- 219-1: Header Card – Gray (used only as label cards for T-Card racks)
- 219-2: Crew/Team Card – Green
- 219-3: Engine Card – Rose
- 219-4: Helicopter Card – Blue
- 219-5: Personnel Card – White
- 219-6: Fixed-Wing Card – Orange
- 219-7: Equipment Card – Yellow
- 219-8: Miscellaneous Equipment/Task Force Card – Tan
- 219-10: Generic Card – Light Purple

Distribution. ICS 211s, which are completed by personnel at the various check-in locations, are provided to the Resources Unit, Demobilization Unit, and Finance/Administration Section. The Resources Unit maintains a master list of all equipment and personnel that have reported to the incident.

Notes:

- Also available as 8½ x 14 (legal size) or 11 x 17 chart.
- Use reverse side of form for remarks or comments.
- If additional pages are needed for any form page, use a blank ICS 211 and repaginate as needed.
- Contact information for sender and receiver can be added for communications purposes to confirm resource orders. Refer to 213RR example (Appendix B)

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Incident Number**	Enter the number assigned to the incident.
3	**Check-In Location** ☐ Base ☐ Staging Area ☐ ICP ☐ Helibase ☐ Other	Check appropriate box and enter the check-in location for the incident. Indicate specific information regarding the locations under each checkbox. ICP is for Incident Command Post. Other may include…
4	**Start Date/Time** • Date • Time	Enter the date (month/day/year) and time (using the 24-hour clock) that the form was started.

Block Number	Block Title	Instructions
	Check-In Information	Self explanatory.
5	**List single resource personnel (overhead) by agency and name, OR list resources by the following format**	Enter the following information for resources: OPTIONAL: Indicate if resource is a single resource versus part of Strike Team or Task Force. Fields can be left blank if not necessary.
	• State	Use this section to list the home State for the resource.
	• Agency	Use this section to list agency name (or designator), and individual names for all single resource personnel (e.g., ORC, ARL, NYPD).
	• Category	Use this section to list the resource category based on NIMS, discipline, or jurisdiction guidance.
	• Kind	Use this section to list the resource kind based on NIMS, discipline, or jurisdiction guidance.
	• Type	Use this section to list the resource type based on NIMS, discipline, or jurisdiction guidance.
	• Resource Name or Identifier	Use this section to enter the resource name or unique identifier. If it is a Strike Team or a Task Force, list the unique Strike Team or Task Force identifier (if used) on a single line with the component resources of the Strike Team or Task Force listed on the following lines. For example, for an Engine Strike Team with the call sign "XLT459" show "XLT459" in this box and then in the next five rows, list the unique identifier for the five engines assigned to the Strike Team.
	• ST or TF	Use ST or TF to indicate whether the resource is part of a Strike Team or Task Force. See above for additional instructions.
6	**Order Request #**	The order request number will be assigned by the agency dispatching resources or personnel to the incident. Use existing protocol as appropriate for the jurisdiction and/or discipline, since several incident numbers may be used for the same incident.
7	**Date/Time Check-In**	Enter date (month/day/year) and time of check-in (24-hour clock) to the incident.
8	**Leader's Name**	• For equipment, enter the operator's name. • Enter the Strike Team or Task Force leader's name. • Leave blank for single resource personnel (overhead).
9	**Total Number of Personnel**	Enter total number of personnel associated with the resource. Include leaders.
10	**Incident Contact Information**	Enter available contact information (e.g., radio frequency, cell phone number, etc.) for the incident.
11	**Home Unit or Agency**	Enter the home unit or agency to which the resource or individual is normally assigned (may not be departure location).
12	**Departure Point, Date and Time**	Enter the location from which the resource or individual departed for this incident. Enter the departure time using the 24-hour clock.
13	**Method of Travel**	Enter the means of travel the individual used to bring himself/herself to the incident (e.g., bus, truck, engine, personal vehicle, etc.).
14	**Incident Assignment**	Enter the incident assignment at time of dispatch.
15	**Other Qualifications**	Enter additional duties (ICS positions) pertinent to the incident that the resource/individual is qualified to perform. Note that resources should not be reassigned on the incident without going through the established ordering process. This data may be useful when resources are demobilized and remobilized for another incident.

Block Number	Block Title	Instructions
16	**Data Provided to Resources Unit**	Enter the date and time that the information pertaining to that entry was transmitted to the Resources Unit, and the initials of the person who transmitted the information.
17	**Prepared by** • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position/title, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

GENERAL MESSAGE (ICS 213)

1. Incident Name (Optional):		
2. To (Name and Position):		
3. From (Name and Position):		
4. Subject:	**5. Date:**	**6. Time**
7. Message:		
8. Approved by: Name: _____ Signature: _____ Position/Title: _____		
9. Reply:		
10. Replied by: Name: _____ Position/Title: _____ Signature: _____		
ICS 213	Date/Time: _____	

ICS 213
General Message

Purpose. The General Message (ICS 213) is used by the incident dispatchers to record incoming messages that cannot be orally transmitted to the intended recipients. The ICS 213 is also used by the Incident Command Post and other incident personnel to transmit messages (e.g., resource order, incident name change, other ICS coordination issues, etc.) to the Incident Communications Center for transmission via radio or telephone to the addressee. This form is used to send any message or notification to incident personnel that requires hard-copy delivery.

Preparation. The ICS 213 may be initiated by incident dispatchers and any other personnel on an incident.

Distribution. Upon completion, the ICS 213 may be delivered to the addressee and/or delivered to the Incident Communication Center for transmission.

Notes:

- The ICS 213 is a three-part form, typically using carbon paper. The sender will complete Part 1 of the form and send Parts 2 and 3 to the recipient. The recipient will complete Part 2 and return Part 3 to the sender.
- A copy of the ICS 213 should be sent to and maintained within the Documentation Unit.
- Contact information for the sender and receiver can be added for communications purposes to confirm resource orders. Refer to 213RR example (Appendix B)

Block Number	Block Title	Instructions
1	**Incident Name** (Optional)	Enter the name assigned to the incident. This block is optional.
2	**To** (Name and Position)	Enter the name and position the General Message is intended for. For all individuals, use at least the first initial and last name. For Unified Command, include agency names.
3	**From** (Name and Position)	Enter the name and position of the individual sending the General Message. For all individuals, use at least the first initial and last name. For Unified Command, include agency names.
4	**Subject**	Enter the subject of the message.
5	**Date**	Enter the date (month/day/year) of the message.
6	**Time**	Enter the time (using the 24-hour clock) of the message.
7	**Message**	Enter the content of the message. Try to be as concise as possible.
8	**Approved by** • Name • Signature • Position/Title	Enter the name, signature, and ICS position/title of the person approving the message.
9	**Reply**	The intended recipient will enter a reply to the message and return it to the originator.
10	**Replied by** • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position/title, and signature of the person replying to the message. Enter date (month/day/year) and time prepared (24-hour clock).

ACTIVITY LOG (ICS 214)

1. Incident Name:	2. Operational Period: Date From: Time From:	Date To: Time To:

3. Name:	4. ICS Position:	5. Home Agency (and Unit):

6. Resources Assigned:

Name	ICS Position	Home Agency (and Unit)

7. Activity Log:

Date/Time	Notable Activities

8. Prepared by: Name: _____ Position/Title: _____ Signature: _____

 Date/Time: _____

ACTIVITY LOG (ICS 214)

1. Incident Name:	2. Operational Period: Date From: Date To: Time From: Time To:

7. Activity Log (continuation):

Date/Time	Notable Activities

ICS 214
Activity Log

Purpose. The Activity Log (ICS 214) records details of notable activities at any ICS level, including single resources, equipment, Task Forces, etc. These logs provide basic incident activity documentation, and a reference for any after-action report.

Preparation. An ICS 214 can be initiated and maintained by personnel in various ICS positions as it is needed or appropriate. Personnel should document how relevant incident activities are occurring and progressing, or any notable events or communications.

Distribution. Completed ICS 214s are submitted to supervisors, who forward them to the Documentation Unit. All completed original forms must be given to the Documentation Unit, which maintains a file of all ICS 214s. It is recommended that individuals retain a copy for their own records.

Notes:

- The ICS 214 can be printed as a two-sided form.
- Use additional copies as continuation sheets as needed, and indicate pagination as used.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	**Name**	Enter the title of the organizational unit or resource designator (e.g., Facilities Unit, Safety Officer, Strike Team).
4	**ICS Position**	Enter the name and ICS position of the individual in charge of the Unit.
5	**Home Agency** (and Unit)	Enter the home agency of the individual completing the ICS 214. Enter a unit designator if utilized by the jurisdiction or discipline.
6	**Resources Assigned**	Enter the following information for resources assigned:
	• Name	Use this section to enter the resource's name. For all individuals, use at least the first initial and last name. Cell phone number for the individual can be added as an option.
	• ICS Position	Use this section to enter the resource's ICS position (e.g., Finance Section Chief).
	• Home Agency (and Unit)	Use this section to enter the resource's home agency and/or unit (e.g., Des Moines Public Works Department, Water Management Unit).
7	**Activity Log** • Date/Time • Notable Activities	• Enter the time (24-hour clock) and briefly describe individual notable activities. Note the date as well if the operational period covers more than one day. • Activities described may include notable occurrences or events such as task assignments, task completions, injuries, difficulties encountered, etc. • This block can also be used to track personal work habits by adding columns such as "Action Required," "Delegated To," "Status," etc.
8	**Prepared by** • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position/title, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

OPERATIONAL PLANNING WORKSHEET (ICS 215)

1. Incident Name:	2. Operational Period: Date From: Time From: Date To: Time To:

3. Branch	4. Division, Group, or Other	5. Work Assignment & Special Instructions	6. Resources													7. Overhead Position(s)	8. Special Equipment & Supplies	9. Reporting Location	10. Requested Arrival Time
			Req.																
			Have																
			Need																
			Req.																
			Have																
			Need																
			Req.																
			Have																
			Need																
			Req.																
			Have																
			Need																
			Req.																
			Have																
			Need																
			Req.																
			Have																
			Need																
		11. Total Resources Required																	
		12. Total Resources Have on Hand																	
		13. Total Resources Need To Order																	

14. Prepared by:

Name: _____

Position/Title: _____

Signature: _____

Date/Time: _____

ICS 215
Operational Planning Worksheet

Purpose. The Operational Planning Worksheet (ICS 215) communicates the decisions made by the Operations Section Chief during the Tactics Meeting concerning resource assignments and needs for the next operational period. The ICS 215 is used by the Resources Unit to complete the Assignment Lists (ICS 204) and by the Logistics Section Chief for ordering resources for the incident.

Preparation. The ICS 215 is initiated by the Operations Section Chief and often involves logistics personnel, the Resources Unit, and the Safety Officer. The form is shared with the rest of the Command and General Staffs during the Planning Meeting. It may be useful in some disciplines or jurisdictions to prefill ICS 215 copies prior to incidents.

Distribution. When the Branch, Division, or Group work assignments and accompanying resource allocations are agreed upon, the form is distributed to the Resources Unit to assist in the preparation of the ICS 204. The Logistics Section will use a copy of this worksheet for preparing requests for resources required for the next operational period.

Notes:

- This worksheet can be made into a wall mount.
- Also available as 8½ x 14 (legal size) and 11 x 17 chart.
- If additional pages are needed, use a blank ICS 215 and repaginate as needed.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	**Branch**	Enter the Branch of the work assignment for the resources.
4	**Division, Group, or Other**	Enter the Division, Group, or other location (e.g., Staging Area) of the work assignment for the resources.
5	**Work Assignment & Special Instructions**	Enter the specific work assignments given to each of the Divisions/Groups and any special instructions, as required.
6	**Resources**	Complete resource headings for category, kind, and type as appropriate for the incident. The use of a slash indicates a single resource in the upper portion of the slash and a Strike Team or Task Force in the bottom portion of the slash.
	• Required	Enter, for the appropriate resources, the number of resources by type (engine, squad car, Advanced Life Support ambulance, etc.) required to perform the work assignment.
	• Have	Enter, for the appropriate resources, the number of resources by type (engines, crew, etc.) available to perform the work assignment.
	• Need	Enter the number of resources needed by subtracting the number in the "Have" row from the number in the "Required" row.
7	**Overhead Position(s)**	List any supervisory and nonsupervisory ICS position(s) not directly assigned to a previously identified resource (e.g., Division/Group Supervisor, Assistant Safety Officer, Technical Specialist, etc.).
8	**Special Equipment & Supplies**	List special equipment and supplies, including aviation support, used or needed. This may be a useful place to monitor span of control.
9	**Reporting Location**	Enter the specific location where the resources are to report (Staging Area, location at incident, etc.).
10	**Requested Arrival Time**	Enter the time (24-hour clock) that resources are requested to arrive at the reporting location.

Block Number	Block Title	Instructions
11	**Total Resources Required**	Enter the total number of resources required by category/kind/type as preferred (e.g., engine, squad car, ALS ambulance, etc.). A slash can be used again to indicate total single resources in the upper portion of the slash and total Strike Teams/ Task Forces in the bottom portion of the slash.
12	**Total Resources Have on Hand**	Enter the total number of resources on hand that are assigned to the incident for incident use. A slash can be used again to indicate total single resources in the upper portion of the slash and total Strike Teams/Task Forces in the bottom portion of the slash.
13	**Total Resources Need To Order**	Enter the total number of resources needed. A slash can be used again to indicate total single resources in the upper portion of the slash and total Strike Teams/Task Forces in the bottom portion of the slash.
14	**Prepared by** • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).

INCIDENT ACTION PLAN SAFETY ANALYSIS (ICS 215A)

1. Incident Name:	2. Incident Number:
3. Date/Time Prepared: Date: Time:	4. Operational Period: Date From: Date To: Time From: Time To:

5. Incident Area	6. Hazards/Risks	7. Mitigations

8. **Prepared by** (Safety Officer): Name: _____ Signature: _____

Prepared by (Operations Section Chief): Name: _____ Signature: _____

ICS 215A Date/Time: _____

ICS 215A
Incident Action Plan Safety Analysis

Purpose. The purpose of the Incident Action Plan Safety Analysis (ICS 215A) is to aid the Safety Officer in completing an operational risk assessment to prioritize hazards, safety, and health issues, and to develop appropriate controls. This worksheet addresses communications challenges between planning and operations, and is best utilized in the planning phase and for Operations Section briefings.

Preparation. The ICS 215A is typically prepared by the Safety Officer during the incident action planning cycle. When the Operations Section Chief is preparing for the tactics meeting, the Safety Officer collaborates with the Operations Section Chief to complete the Incident Action Plan Safety Analysis. This worksheet is closely linked to the Operational Planning Worksheet (ICS 215). Incident areas or regions are listed along with associated hazards and risks. For those assignments involving risks and hazards, mitigations or controls should be developed to safeguard responders, and appropriate incident personnel should be briefed on the hazards, mitigations, and related measures. Use additional sheets as needed.

Distribution. When the safety analysis is completed, the form is distributed to the Resources Unit to help prepare the Operations Section briefing. All completed original forms must be given to the Documentation Unit.

Notes:

- This worksheet can be made into a wall mount, and can be part of the IAP.
- If additional pages are needed, use a blank ICS 215A and repaginate as needed.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Incident Number**	Enter the number assigned to the incident.
3	**Date/Time Prepared**	Enter date (month/day/year) and time (using the 24-hour clock) prepared.
4	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (24-hour clock) and end date and time for the operational period to which the form applies.
5	**Incident Area**	Enter the incident areas where personnel or resources are likely to encounter risks. This may be specified as a Branch, Division, or Group.
6	**Hazards/Risks**	List the types of hazards and/or risks likely to be encountered by personnel or resources at the incident area relevant to the work assignment.
7	**Mitigations**	List actions taken to reduce risk for each hazard indicated (e.g., specify personal protective equipment or use of a buddy system or escape routes).
8	**Prepared by** (Safety Officer and Operations Section Chief) • Name • Signature • Date/Time	Enter the name of both the Safety Officer and the Operations Section Chief, who should collaborate on form preparation. Enter date (month/day/year) and time (24-hour clock) reviewed.

SUPPORT VEHICLE/EQUIPMENT INVENTORY (ICS 218)

1. Incident Name:	2. Incident Number:	3. Date/Time Prepared: Date: Time:	4. Vehicle/Equipment Category:

5. Vehicle/Equipment Information

Order Request Number	Incident ID No.	Vehicle or Equipment Classification	Vehicle or Equipment Make	Category/ Kind/Type, Capacity, or Size	Vehicle or Equipment Features	Agency or Owner	Operator Name or Contact	Vehicle License or ID No.	Incident Assignment	Incident Start Date and Time	Incident Release Date and Time

ICS 218 | **6. Prepared by:** Name: _____ Position/Title: _____ Signature: _____

ICS 218
Support Vehicle/Equipment Inventory

Purpose. The Support Vehicle/Equipment Inventory (ICS 218) provides an inventory of all transportation and support vehicles and equipment assigned to the incident. The information is used by the Ground Support Unit to maintain a record of the types and locations of vehicles and equipment on the incident. The Resources Unit uses the information to initiate and maintain status/resource information.

Preparation. The ICS 218 is prepared by Ground Support Unit personnel at intervals specified by the Ground Support Unit Leader.

Distribution. Initial inventory information recorded on the form should be given to the Resources Unit. Subsequent changes to the status or location of transportation and support vehicles and equipment should be provided to the Resources Unit immediately.

Notes:

- If additional pages are needed, use a blank ICS 218 and repaginate as needed.
- Also available as 8½ x 14 (legal size) and 11 x 17 chart.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Incident Number**	Enter the number assigned to the incident.
3	**Date/Time Prepared**	Enter the date (month/day/year) and time (using the 24-hour clock) the form is prepared.
4	**Vehicle/Equipment Category**	Enter the specific vehicle or equipment category (e.g., buses, generators, dozers, pickups/sedans, rental cars, etc.). Use a separate sheet for each vehicle or equipment category.
5	**Vehicle/Equipment Information**	Record the following information:
	Order Request Number	Enter the order request number for the resource as used by the jurisdiction or discipline, or the relevant EMAC order request number.
	Incident Identification Number	Enter any special incident identification numbers or agency radio identifier assigned to the piece of equipment used only during the incident, if this system if used (e.g., "Decontamination Unit 2," or "Water Tender 14").
	Vehicle or Equipment Classification	Enter the specific vehicle or equipment classification (e.g., bus, backhoe, Type 2 engine, etc.) as relevant.
	Vehicle or Equipment Make	Enter the vehicle or equipment manufacturer name (e.g., "GMC," "International").
	Category/Kind/Type, Capacity, or Size	Enter the vehicle or equipment category/kind/type, capacity, or size (e.g., 30-person bus, 3/4-ton truck, 50 kW generator).
	Vehicle or Equipment Features	Indicate any vehicle or equipment features such as 2WD, 4WD, towing capability, number of axles, heavy-duty tires, high clearance, automatic vehicle locator (AVL), etc.
	Agency or Owner	Enter the name of the agency or owner of the vehicle or equipment.
	Operator Name or Contact	Enter the operator name and/or contact information (cell phone, radio frequency, etc.).
	Vehicle License or Identification Number	Enter the license plate number or another identification number (such as a serial or rig number) of the vehicle or equipment.
	Incident Assignment	Enter where the vehicle or equipment will be located at the incident and its function (use abbreviations per discipline or jurisdiction).

Block Number	Block Title	Instructions
5 (continued)	Incident Start Date and Time	Indicate start date (month/day/year) and time (using the 24-hour clock) for driver or for equipment as may be relevant.
	Incident Release Date and Time	Enter the date (month/day/year) and time (using the 24-hour clock) the vehicle or equipment is released from the incident.
6	**Prepared by** • Name • Position/Title • Signature	Enter the name, ICS position/title, and signature of the person preparing the form.

ICS 219
Resource Status Card (T-Card)

Purpose. Resource Status Cards (ICS 219) are also known as "T-Cards," and are used by the Resources Unit to record status and location information on resources, transportation, and support vehicles and personnel. These cards provide a visual display of the status and location of resources assigned to the incident.

Preparation. Information to be placed on the cards may be obtained from several sources including, but not limited to:

- Incident Briefing (ICS 201).
- Incident Check-In List (ICS 211).
- General Message (ICS 213).
- Agency-supplied information or electronic resource management systems.

Distribution. ICS 219s are displayed in resource status or "T-Card" racks where they can be easily viewed, retrieved, updated, and rearranged. The Resources Unit typically maintains cards for resources assigned to an incident until demobilization. At demobilization, all cards should be turned in to the Documentation Unit.

Notes. There are eight different status cards (see list below) and a header card, to be printed front-to-back on cardstock. Each card is printed on a different color of cardstock and used for a different resource category/kind/type. The format and content of information on each card varies depending upon the intended use of the card.

- 219-1: Header Card – Gray (used only as label cards for T-Card racks)
- 219-2: Crew/Team Card – Green
- 219-3: Engine Card – Rose
- 219-4: Helicopter Card – Blue
- 219-5: Personnel Card – White
- 219-6: Fixed-Wing Card – Orange
- 219-7: Equipment Card – Yellow
- 219-8: Miscellaneous Equipment/Task Force Card – Tan
- 219-10: Generic Card – Light Purple

Acronyms. Abbreviations utilized on the cards are listed below:

- AOV: Agency-owned vehicle
- ETA: Estimated time of arrival
- ETD: Estimated time of departure
- ETR: Estimated time of return
- O/S Mech: Out-of-service for mechanical reasons
- O/S Pers: Out-of-service for personnel reasons
- O/S Rest: Out-of-service for rest/recuperation purposes/guidelines, or due to operating time limits/policies for pilots, operators, drivers, equipment, or aircraft
- POV: Privately owned vehicle

Prepared by:
Date/Time:
ICS 219-1 HEADER CARD (GRAY)

Prepared by:
Date/Time:
ICS 219-1 HEADER CARD (GRAY)

ICS 219-1: Header Card

Block Title	Instructions
Prepared by **Date/Time**	Enter the name of the person preparing the form. Enter the date (month/day/year) and time prepared (using the 24-hour clock).

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Front

Date/Time Checked In:

Leader Name:

Primary Contact Information:

Crew/Team ID #(s) or Name(s):

Manifest: ☐ Yes ☐ No

Total Weight:

Method of Travel to Incident:
☐ AOV ☐ POV ☐ Bus ☐ Air ☐ Other

Home Base:

Departure Point:

ETD:

ETA:

Transportation Needs at Incident:
☐ Vehicle ☐ Bus ☐ Air ☐ Other

Date/Time Ordered:

Remarks:

Prepared by:

Date/Time:

ICS 219-2 CREW/TEAM (GREEN)

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Back

Incident Location: **Time:**

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Incident Location: **Time:**

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Incident Location: **Time:**

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Incident Location: **Time:**

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Prepared by:

Date/Time:

ICS 219-2 CREW/TEAM (GREEN)

ICS 219-2: Crew/Team Card

Block Title	Instructions
ST/Unit	Enter the State and/or unit identifier (3–5 letters) used by the authority having jurisdiction.
LDW (Last Day Worked)	Indicate the last available workday that the resource is allowed to work
# Pers	Enter total number of personnel associated with the crew/team. Include leaders.
Order #	The order request number will be assigned by the agency dispatching resources or personnel to the incident. Use existing protocol as appropriate for the jurisdiction and/or discipline, since several incident numbers may be used for the same incident.
Agency	Use this section to list agency name or designator (e.g., ORC, ARL, NYPD).
Cat/Kind/Type	Enter the category/kind/type based on NIMS, discipline, or jurisdiction guidance.
Name/ID #	Use this section to enter the resource name or unique identifier (e.g., 13, Bluewater, Utility 32).
Date/Time Checked In	Enter date (month/day/year) and time of check-in (24-hour clock) to the incident.
Leader Name	Enter resource leader's name (use at least the first initial and last name).
Primary Contact Information	Enter the primary contact information (e.g., cell phone number, radio, etc.) for the leader. If radios are being used, enter function (command, tactical, support, etc.), frequency, system, and channel from the Incident Radio Communications Plan (ICS 205). Phone and pager numbers should include the area code and any satellite phone specifics.
Crew/Team ID #(s) or Name(s)	Provide the identifier number(s) or name(s) for this crew/team (e.g., Air Monitoring Team 2, Entry Team 3).
Manifest ☐ Yes ☐ No	Use this section to enter whether or not the resource or personnel has a manifest. If they do, indicate the manifest number.
Total Weight	Enter the total weight for the crew/team. This information is necessary when the crew/team are transported by charter air.
Method of Travel to Incident ☐ AOV ☐ POV ☐ Bus ☐ Air ☐ Other	Check the box(es) for the appropriate method(s) of travel the individual used to bring himself/herself to the incident. AOV is "agency-owned vehicle." POV is "privately owned vehicle."
Home Base	Enter the home base to which the resource or individual is normally assigned (may not be departure location).
Departure Point	Enter the location from which the resource or individual departed for this incident.
ETD	Use this section to enter the crew/team's estimated time of departure (using the 24-hour clock) from their home base.
ETA	Use this section to enter the crew/team's estimated time of arrival (using the 24-hour clock) at the incident.

Block Title	Instructions
Transportation Needs at Incident ☐ Vehicle ☐ Bus ☐ Air ☐ Other	Check the box(es) for the appropriate method(s) of transportation at the incident.
Date/Time Ordered	Enter date (month/day/year) and time (24-hour clock) the crew/team was ordered to the incident.
Remarks	Enter any additional information pertaining to the crew/team.
BACK OF FORM	
Incident Location	Enter the location of the crew/team.
Time	Enter the time (24-hour clock) the crew/team reported to this location.
Status ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: _____	Enter the crew/team's current status: • Assigned – Assigned to the incident • O/S Rest – Out-of-service for rest/recuperation purposes/guidelines, or due to operating time limits/policies for pilots, operators, drivers, equipment, or aircraft • O/S Pers – Out-of-service for personnel reasons • Available – Available to be assigned to the incident • O/S Mech – Out-of-service for mechanical reasons • ETR – Estimated time of return
Notes	Enter any additional information pertaining to the crew/team's current location or status.
Prepared by **Date/Time**	Enter the name of the person preparing the form. Enter the date (month/day/year) and time prepared (using the 24-hour clock).

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Front

Date/Time Checked In:

Leader Name:

Primary Contact Information:

Resource ID #(s) or Name(s):

Home Base:

Departure Point:

ETD: | **ETA:**

Date/Time Ordered:

Remarks:

Prepared by:

Date/Time:

ICS 219-3 ENGINE (ROSE)

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Back

Incident Location: | **Time:**

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Incident Location: | **Time:**

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Incident Location: | **Time:**

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Incident Location: | **Time:**

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Prepared by:

Date/Time:

ICS 219-3 ENGINE (ROSE)

ICS 219-3: Engine Card

Block Title	Instructions
ST/Unit	Enter the State and or unit identifier (3–5 letters) used by the authority having jurisdiction.
LDW (Last Day Worked)	Indicate the last available workday that the resource is allowed to work
# Pers	Enter total number of personnel associated with the resource. Include leaders.
Order #	The order request number will be assigned by the agency dispatching resources or personnel to the incident. Use existing protocol as appropriate for the jurisdiction and/or discipline since several incident numbers may be used for the same incident.
Agency	Use this section to list agency name or designator (e.g., ORC, ARL, NYPD).
Cat/Kind/Type	Enter the category/kind/type based on NIMS, discipline, or jurisdiction guidance.
Name/ID #	Use this section to enter the resource name or unique identifier (e.g., 13, Bluewater, Utility 32).
Date/Time Checked In	Enter date (month/day/year) and time of check-in (24-hour clock) to the incident.
Leader Name	Enter resource leader's name (use at least the first initial and last name).
Primary Contact Information	Enter the primary contact information (e.g., cell phone number, radio, etc.) for the leader. If radios are being used, enter function (command, tactical, support, etc.), frequency, system, and channel from the Incident Radio Communications Plan (ICS 205). Phone and pager numbers should include the area code and any satellite phone specifics.
Resource ID #(s) or Name(s)	Provide the identifier number(s) or name(s) for the resource(s).
Home Base	Enter the home base to which the resource or individual is normally assigned (may not be departure location).
Departure Point	Enter the location from which the resource or individual departed for this incident.
ETD	Use this section to enter the resource's estimated time of departure (using the 24-hour clock) from their home base.
ETA	Use this section to enter the resource's estimated time of arrival (using the 24-hour clock) at the incident.
Date/Time Ordered	Enter date (month/day/year) and time (24-hour clock) the resource was ordered to the incident.
Remarks	Enter any additional information pertaining to the resource.
BACK OF FORM	
Incident Location	Enter the location of the resource.
Time	Enter the time (24-hour clock) the resource reported to this location.
Status ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: _____	Enter the resource's current status: • Assigned – Assigned to the incident • O/S Rest – Out-of-service for rest/recuperation purposes/guidelines, or due to operating time limits/policies for pilots, operators, drivers, equipment, or aircraft • O/S Pers – Out-of-service for personnel reasons • Available – Available to be assigned to the incident • O/S Mech – Out-of-service for mechanical reasons • ETR – Estimated time of return
Notes	Enter any additional information pertaining to the resource's current location or status.

Block Title	Instructions
Prepared by **Date/Time**	Enter the name of the person preparing the form. Enter the date (month/day/year) and time prepared (using the 24-hour clock).

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Front

Date/Time Checked In:
Pilot Name:
Home Base:
Departure Point:
ETD: / ETA:
Destination Point:
Date/Time Ordered:
Remarks:
Prepared by:
Date/Time:
ICS 219-4 HELICOPTER (BLUE)

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Back

Incident Location:	Time:
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	
Incident Location:	Time:
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	
Incident Location:	Time:
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	
Incident Location:	Time:
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	
Prepared by:	
Date/Time:	
ICS 219-4 HELICOPTER (BLUE)	

ICS 219-4: Helicopter Card

Block Title	Instructions
ST/Unit	Enter the State and or unit identifier (3–5 letters) used by the authority having jurisdiction.
LDW (Last Day Worked)	Indicate the last available workday that the resource is allowed to work.
# Pers	Enter total number of personnel associated with the resource. Include the pilot.
Order #	The order request number will be assigned by the agency dispatching resources or personnel to the incident. Use existing protocol as appropriate for the jurisdiction and/or discipline since several incident numbers may be used for the same incident.
Agency	Use this section to list agency name or designator (e.g., ORC, ARL, NYPD).
Cat/Kind/Type	Enter the category/kind/type based on NIMS, discipline, or jurisdiction guidance.
Name/ID #	Use this section to enter the resource name or unique identifier.
Date/Time Checked In	Enter date (month/day/year) and time of check-in (24-hour clock) to the incident.
Pilot Name:	Enter pilot's name (use at least the first initial and last name).
Home Base	Enter the home base to which the resource or individual is normally assigned (may not be departure location).
Departure Point	Enter the location from which the resource or individual departed for this incident.
ETD	Use this section to enter the resource's estimated time of departure (using the 24-hour clock) from their home base.
ETA	Use this section to enter the resource's estimated time of arrival (using the 24-hour clock) at the destination point.
Destination Point	Use this section to enter the location at the incident where the resource has been requested to report.
Date/Time Ordered	Enter date (month/day/year) and time (24-hour clock) the resource was ordered to the incident.
Remarks	Enter any additional information pertaining to the resource.
BACK OF FORM	
Incident Location	Enter the location of the resource.
Time	Enter the time (24-hour clock) the resource reported to this location.
Status ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: _____	Enter the resource's current status: • Assigned – Assigned to the incident • O/S Rest – Out-of-service for rest/recuperation purposes/guidelines, or due to operating time limits/policies for pilots, operators, drivers, equipment, or aircraft • O/S Pers – Out-of-service for personnel reasons • Available – Available to be assigned to the incident • O/S Mech – Out-of-service for mechanical reasons • ETR – Estimated time of return
Notes	Enter any additional information pertaining to the resource's current location or status.
Prepared by **Date/Time**	Enter the name of the person preparing the form. Enter the date (month/day/year) and time prepared (using the 24-hour clock).

ST/Unit:	Name:	Position/Title:

Front

Date/Time Checked In:

Name:

Primary Contact Information:

Manifest:	Total Weight:
☐ Yes ☐ No	

Method of Travel to Incident:
☐ AOV ☐ POV ☐ Bus ☐ Air ☐ Other

Home Base:

Departure Point:

ETD:	ETA:

Transportation Needs at Incident:
☐ Vehicle ☐ Bus ☐ Air ☐ Other

Date/Time Ordered:

Remarks:

Prepared by:

Date/Time:

ICS 219-5 PERSONNEL (WHITE CARD)

ST/Unit:	Name:	Position/Title:

Back

Incident Location:	Time:

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Incident Location:	Time:

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Incident Location:	Time:

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Incident Location:	Time:

Status:
☐ Assigned ☐ O/S Rest ☐ O/S Pers
☐ Available ☐ O/S Mech ☐ ETR: ____

Notes:

Prepared by:

Date/Time:

ICS 219-5 PERSONNEL (WHITE CARD)

ICS 219-5: Personnel Card

Block Title	Instructions
ST/Unit	Enter the State and or unit identifier (3–5 letters) used by the authority having jurisdiction.
Name	Enter the individual's first initial and last name.
Position/Title	Enter the individual's ICS position/title.
Date/Time Checked In	Enter date (month/day/year) and time of check-in (24-hour clock) to the incident.
Name	Enter the individual's full name.
Primary Contact Information	Enter the primary contact information (e.g., cell phone number, radio, etc.) for the leader. If radios are being used, enter function (command, tactical, support, etc.), frequency, system, and channel from the Incident Radio Communications Plan (ICS 205). Phone and pager numbers should include the area code and any satellite phone specifics.
Manifest ☐ Yes ☐ No	Use this section to enter whether or not the resource or personnel has a manifest. If they do, indicate the manifest number.
Total Weight	Enter the total weight for the crew. This information is necessary when the crew are transported by charter air.
Method of Travel to Incident ☐ AOV ☐ POV ☐ Bus ☐ Air ☐ Other	Check the box(es) for the appropriate method(s) of travel the individual used to bring himself/herself to the incident. AOV is "agency-owned vehicle." POV is "privately owned vehicle."
Home Base	Enter the home base to which the resource or individual is normally assigned (may not be departure location).
Departure Point	Enter the location from which the resource or individual departed for this incident.
ETD	Use this section to enter the crew's estimated time of departure (using the 24-hour clock) from their home base.
ETA	Use this section to enter the crew's estimated time of arrival (using the 24-hour clock) at the incident.
Transportation Needs at Incident ☐ Vehicle ☐ Bus ☐ Air ☐ Other	Check the box(es) for the appropriate method(s) of transportation at the incident.
Date/Time Ordered	Enter date (month/day/year) and time (24-hour clock) the crew was ordered to the incident.
Remarks	Enter any additional information pertaining to the crew.
BACK OF FORM	
Incident Location	Enter the location of the crew.
Time	Enter the time (24-hour clock) the crew reported to this location.

Block Title	Instructions
Status ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: _____	Enter the crew's current status: • Assigned – Assigned to the incident • O/S Rest – Out-of-service for rest/recuperation purposes/guidelines, or due to operating time limits/policies for pilots, operators, drivers, equipment, or aircraft • O/S Pers – Out-of-service for personnel reasons • Available – Available to be assigned to the incident • O/S Mech – Out-of-service for mechanical reasons • ETR – Estimated time of return
Notes	Enter any additional information pertaining to the crew's current location or status.
Prepared by **Date/Time**	Enter the name of the person preparing the form. Enter the date (month/day/year) and time prepared (using the 24-hour clock).

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Front

Date/Time Checked-In:
Pilot Name:
Home Base:
Departure Point:
ETD: / ETA:
Destination Point:
Date/Time Ordered:
Manufacturer:
Remarks:
Prepared by:
Date/Time:
ICS 219-6 FIXED-WING (ORANGE)

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Back

Incident Location:	Time:
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	

Incident Location:	Time:
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	

Incident Location:	Time:
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	

Incident Location:	Time:
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	
Prepared by:	
Date/Time:	
ICS 219-6 FIXED-WING (ORANGE)	

ICS 219-6: Fixed-Wing Card

Block Title	Instructions
ST/Unit	Enter the State and or unit identifier (3–5 letters) used by the authority having jurisdiction.
LDW (Last Day Worked)	Indicate the last available workday that the resource is allowed to work.
# Pers	Enter total number of personnel associated with the resource. Include the pilot.
Order #	The order request number will be assigned by the agency dispatching resources or personnel to the incident. Use existing protocol as appropriate for the jurisdiction and/or discipline since several incident numbers may be used for the same incident.
Agency	Use this section to list agency name or designator (e.g., ORC, ARL, NYPD).
Cat/Kind/Type	Enter the category/kind/type based on NIMS, discipline, or jurisdiction guidance.
Name/ID #	Use this section to enter the resource name or unique identifier.
Date/Time Checked In	Enter date (month/day/year) and time of check-in (24-hour clock) to the incident.
Pilot Name:	Enter pilot's name (use at least the first initial and last name).
Home Base	Enter the home base to which the resource or individual is normally assigned (may not be departure location).
Departure Point	Enter the location from which the resource or individual departed for this incident.
ETD	Use this section to enter the resource's estimated time of departure (using the 24-hour clock) from their home base.
ETA	Use this section to enter the resource's estimated time of arrival (using the 24-hour clock) at the destination point.
Destination Point	Use this section to enter the location at the incident where the resource has been requested to report.
Date/Time Ordered	Enter date (month/day/year) and time (24-hour clock) the resource was ordered to the incident.
Manufacturer	Enter the manufacturer of the aircraft.
Remarks	Enter any additional information pertaining to the resource.
BACK OF FORM	
Incident Location	Enter the location of the resource.
Time	Enter the time (24-hour clock) the resource reported to this location.
Status ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: _____	Enter the resource's current status: • Assigned – Assigned to the incident • O/S Rest – Out-of-service for rest/recuperation purposes/guidelines, or due to operating time limits/policies for pilots, operators, drivers, equipment, or aircraft • O/S Pers – Out-of-service for personnel reasons • Available – Available to be assigned to the incident • O/S Mech – Out-of-service for mechanical reasons • ETR – Estimated time of return
Notes	Enter any additional information pertaining to the resource's current location or status.
Prepared by **Date/Time**	Enter the name of the person preparing the form. Enter the date (month/day/year) and time prepared (using the 24-hour clock).

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Front

Date/Time Checked In:
Leader Name:
Primary Contact Information:
Resource ID #(s) or Name(s):
Home Base:
Departure Point:
ETD: ETA:
Date/Time Ordered:
Remarks:
Prepared by:
Date/Time:
ICS 219-7 EQUIPMENT (YELLOW)

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Back

Incident Location:	Time:
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	
Incident Location:	Time:
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	
Incident Location:	Time:
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	
Incident Location:	Time:
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	
Prepared by:	
Date/Time:	
ICS 219-7 EQUIPMENT (YELLOW)	

ICS 219-6: Fixed-Wing Card

Block Title	Instructions
ST/Unit	Enter the State and or unit identifier (3–5 letters) used by the authority having jurisdiction.
LDW (Last Day Worked)	Indicate the last available workday that the resource is allowed to work.
# Pers	Enter total number of personnel associated with the resource. Include the pilot.
Order #	The order request number will be assigned by the agency dispatching resources or personnel to the incident. Use existing protocol as appropriate for the jurisdiction and/or discipline since several incident numbers may be used for the same incident.
Agency	Use this section to list agency name or designator (e.g., ORC, ARL, NYPD).
Cat/Kind/Type	Enter the category/kind/type based on NIMS, discipline, or jurisdiction guidance.
Name/ID #	Use this section to enter the resource name or unique identifier.
Date/Time Checked In	Enter date (month/day/year) and time of check-in (24-hour clock) to the incident.
Pilot Name:	Enter pilot's name (use at least the first initial and last name).
Home Base	Enter the home base to which the resource or individual is normally assigned (may not be departure location).
Departure Point	Enter the location from which the resource or individual departed for this incident.
ETD	Use this section to enter the resource's estimated time of departure (using the 24-hour clock) from their home base.
ETA	Use this section to enter the resource's estimated time of arrival (using the 24-hour clock) at the destination point.
Destination Point	Use this section to enter the location at the incident where the resource has been requested to report.
Date/Time Ordered	Enter date (month/day/year) and time (24-hour clock) the resource was ordered to the incident.
Manufacturer	Enter the manufacturer of the aircraft.
Remarks	Enter any additional information pertaining to the resource.
BACK OF FORM	
Incident Location	Enter the location of the resource.
Time	Enter the time (24-hour clock) the resource reported to this location.
Status ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: _____	Enter the resource's current status: • Assigned – Assigned to the incident • O/S Rest – Out-of-service for rest/recuperation purposes/guidelines, or due to operating time limits/policies for pilots, operators, drivers, equipment, or aircraft • O/S Pers – Out-of-service for personnel reasons • Available – Available to be assigned to the incident • O/S Mech – Out-of-service for mechanical reasons • ETR – Estimated time of return
Notes	Enter any additional information pertaining to the resource's current location or status.
Prepared by **Date/Time**	Enter the name of the person preparing the form. Enter the date (month/day/year) and time prepared (using the 24-hour clock).

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Front

Date/Time Checked In:
Leader Name:
Primary Contact Information:
Resource ID #(s) or Name(s):
Home Base:
Departure Point:
ETD: / ETA:
Date/Time Ordered:
Remarks:
Prepared by:
Date/Time:
ICS 219-8 MISCELLANEOUS EQUIPMENT/TASK FORCE (TAN)

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Back

Incident Location:	Time:
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	

Incident Location:	Time:
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	

Incident Location:	Time:
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	

Incident Location:	Time:
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	

Prepared by:
Date/Time:
ICS 219-8 MISCELLANEOUS EQUIPMENT/TASK FORCE (TAN)

ICS 219-8: Miscellaneous Equipment/Task Force Card

Block Title	Instructions
ST/Unit	Enter the State and or unit identifier (3–5 letters) used by the authority having jurisdiction.
LDW (Last Day Worked)	Indicate the last available work day that the resource is allowed to work.
# Pers	Enter total number of personnel associated with the resource. Include leaders.
Order #	The order request number will be assigned by the agency dispatching resources or personnel to the incident. Use existing protocol as appropriate for the jurisdiction and/or discipline since several incident numbers may be used for the same incident.
Agency	Use this section to list agency name or designator (e.g., ORC, ARL, NYPD).
Cat/Kind/Type	Enter the category/kind/type based on NIMS, discipline, or jurisdiction guidance.
Name/ID #	Use this section to enter the resource name or unique identifier (e.g., 13, Bluewater, Utility 32).
Date/Time Checked In	Enter date (month/day/year) and time of check-in (24-hour clock) to the incident.
Leader Name	Enter resource leader's name (use at least the first initial and last name).
Primary Contact Information	Enter the primary contact information (e.g., cell phone number, radio, etc.) for the leader. If radios are being used, enter function (command, tactical, support, etc.), frequency, system, and channel from the Incident Radio Communications Plan (ICS 205). Phone and pager numbers should include the area code and any satellite phone specifics.
Resource ID #(s) or Name(s)	Provide the identifier number or name for this resource.
Home Base	Enter the home base to which the resource or individual is normally assigned (may not be departure location).
Departure Point	Enter the location from which the resource or individual departed for this incident.
ETD	Use this section to enter the resource's estimated time of departure (using the 24-hour clock) from their home base.
ETA	Use this section to enter the resource's estimated time of arrival (using the 24-hour clock) at the incident.
Date/Time Ordered	Enter date (month/day/year) and time (24-hour clock) the resource was ordered to the incident.
Remarks	Enter any additional information pertaining to the resource.
BACK OF FORM	
Incident Location	Enter the location of the resource.
Time	Enter the time (24-hour clock) the resource reported to this location.
Status ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: _____	Enter the resource's current status: • Assigned – Assigned to the incident • O/S Rest – Out-of-service for rest/recuperation purposes/guidelines, or due to operating time limits/policies for pilots, operators, drivers, equipment, or aircraft • O/S Pers – Out-of-service for personnel reasons • Available – Available to be assigned to the incident • O/S Mech – Out-of-service for mechanical reasons • ETR – Estimated time of return
Notes	Enter any additional information pertaining to the resource's current location or status.

Block Title	Instructions
Prepared by **Date/Time**	Enter the name of the person preparing the form. Enter the date (month/day/year) and time prepared (using the 24-hour clock).

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Front

Date/Time Checked In:
Leader Name:
Primary Contact Information:
Resource ID #(s) or Name(s):
Home Base:
Departure Point:
ETD: ETA:
Date/Time Ordered:
Remarks:
Prepared by: Date/Time:
ICS 219-10 GENERIC (LIGHT PURPLE)

ST/Unit:	LDW:	# Pers:	Order #:
Agency	Cat/Kind/Type		Name/ID #

Back

Incident Location:	Time:
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	
Incident Location:	Time:
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	
Incident Location:	Time:
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	
Incident Location:	Time:
Status: ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: ____	
Notes:	
Prepared by: Date/Time:	
ICS 219-10 GENERIC (LIGHT PURPLE)	

ICS 219-10: Generic Card

Block Title	Instructions
ST/Unit	Enter the State and or unit identifier (3–5 letters) used by the authority having jurisdiction.
LDW (Last Day Worked)	Indicate the last available workday that the resource is allowed to work.
# Pers	Enter total number of personnel associated with the resource. Include leaders.
Order #	The order request number will be assigned by the agency dispatching resources or personnel to the incident. Use existing protocol as appropriate for the jurisdiction and/or discipline since several incident numbers may be used for the same incident.
Agency	Use this section to list agency name or designator (e.g., ORC, ARL, NYPD).
Cat/Kind/Type	Enter the category/kind/type based on NIMS, discipline, or jurisdiction guidance.
Name/ID #	Use this section to enter the resource name or unique identifier (e.g., 13, Bluewater, Utility 32).
Date/Time Checked In	Enter date (month/day/year) and time of check-in (24-hour clock) to the incident.
Leader Name	Enter resource leader's name (use at least the first initial and last name).
Primary Contact Information	Enter the primary contact information (e.g., cell phone number, radio, etc.) for the leader. If radios are being used, enter function (command, tactical, support, etc.), frequency, system, and channel from the Incident Radio Communications Plan (ICS 205). Phone and pager numbers should include the area code and any satellite phone specifics.
Resource ID #(s) or Name(s)	Provide the identifier number(s) or name(s) for this resource.
Home Base	Enter the home base to which the resource or individual is normally assigned (may not be departure location).
Departure Point	Enter the location from which the resource or individual departed for this incident.
ETD	Use this section to enter the resource's estimated time of departure (using the 24-hour clock) from their home base.
ETA	Use this section to enter the resource's estimated time of arrival (using the 24-hour clock) at the incident.
Date/Time Ordered	Enter date (month/day/year) and time (24-hour clock) the resource was ordered to the incident.
Remarks	Enter any additional information pertaining to the resource.
BACK OF FORM	
Incident Location	Enter the location of the resource.
Time	Enter the time (24-hour clock) the resource reported to this location.
Status ☐ Assigned ☐ O/S Rest ☐ O/S Pers ☐ Available ☐ O/S Mech ☐ ETR: _____	Enter the resource's current status: • Assigned – Assigned to the incident • O/S Rest – Out-of-service for rest/recuperation purposes/guidelines, or due to operating time limits/policies for pilots, operators, drivers, equipment, or aircraft • O/S Pers – Out-of-service for personnel reasons • Available – Available to be assigned to the incident • O/S Mech – Out-of-service for mechanical reasons • ETR – Estimated time of return
Notes	Enter any additional information pertaining to the resource's current location or status.

Block Title	Instructions
Prepared by **Date/Time**	Enter the name of the person preparing the form. Enter the date (month/day/year) and time prepared (using the 24-hour clock).

AIR OPERATIONS SUMMARY (ICS 220)

1. Incident Name:	2. Operational Period: Date From: Date To: Time From: Time To:	3. Sunrise: Sunset:

4. Remarks (safety notes, hazards, air operations special equipment, etc.):	5. Ready Alert Aircraft: Medivac: New Incident:	6. Temporary Flight Restriction Number: Altitude: Center Point:

7. Personnel:	Name:	Phone Number:
Air Operations Branch Director		
Air Support Group Supervisor		
Air Tactical Group Supervisor		
Helicopter Coordinator		
Helibase Manager		

8. Frequencies:	AM	FM
Air/Air Fixed-Wing		
Air/Air Rotary-Wing – Flight Following		
Air/Ground		
Command		
Deck Coordinator		
Take-Off & Landing Coordinator		
Air Guard		

9. Fixed-Wing (category/kind/type, make/model, N#, base):
Air Tactical Group Supervisor Aircraft:
Other Fixed-Wing Aircraft:

10. Helicopters (use additional sheets as necessary):

FAA N#	Category/Kind/Type	Make/Model	Base	Available	Start	Remarks

11. Prepared by: Name: _____ Position/Title: _____ Signature: _____

 Date/Time: _____

AIR OPERATIONS SUMMARY (ICS 220)

1. Incident Name:	2. Operational Period: Date From: Date To: Time From: Time To:	3. Sunrise: Sunset:

12. Task/Mission/Assignment (category/kind/type and function includes: air tactical, reconnaissance, personnel transport, search and rescue, etc.):

Category/Kind/Type and Function	Name of Personnel or Cargo (if applicable) or Instructions for Tactical Aircraft	Mission Start	Fly From	Fly To

11. Prepared by: Name: _____ Position/Title: _____ Signature: _____

 Date/Time: _____

ICS 220
Air Operations Summary

Purpose. The Air Operations Summary (ICS 220) provides the Air Operations Branch with the number, type, location, and specific assignments of helicopters and air resources.

Preparation. The ICS 220 is completed by the Operations Section Chief or the Air Operations Branch Director during each Planning Meeting. General air resources assignment information is obtained from the Operational Planning Worksheet (ICS 215), which also is completed during each Planning Meeting. Specific designators of the air resources assigned to the incident are provided by the Air and Fixed-Wing Support Groups. If aviation assets would be utilized for rescue or are referenced on the Medical Plan (ICS 206), coordinate with the Medical Unit Leader and indicate on the ICS 206.

Distribution. After the ICS 220 is completed by Air Operations personnel, the form is given to the Air Support Group Supervisor and Fixed-Wing Coordinator personnel. These personnel complete the form by indicating the designators of the helicopters and fixed-wing aircraft assigned missions during the specified operational period. This information is provided to Air Operations personnel who, in turn, give the information to the Resources Unit.

Notes:

- If additional pages are needed for any form page, use a blank ICS 220 and repaginate as needed.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Operational Period** • Date and Time From • Date and Time To	Enter the start date (month/day/year) and time (using the 24-hour clock) and end date and time for the operational period to which the form applies.
3	**Sunrise/Sunset**	Enter the sunrise and sunset times.
4	**Remarks** (safety notes, hazards, air operations special equipment, etc.)	Enter special instructions or information, including safety notes, hazards, and priorities for Air Operations personnel.
5	**Ready Alert Aircraft** • Medivac • New Incident	Identify ready alert aircraft that will be used as Medivac for incident assigned personnel and indicate on the Medical Plan (ICS 206). Identify aircraft to be used for new incidents within the area or new incident(s) within an incident.
6	**Temporary Flight Restriction Number** • Altitude • Center Point	Enter Temporary Flight Restriction Number, altitude (from the center point), and center point (latitude and longitude). This number is provided by the Federal Aviation Administration (FAA) or is the order request number for the Temporary Flight Restriction.
7	**Personnel** • Name • Phone Number	Enter the name and phone number of the individuals in Air Operations.
	Air Operations Branch Director	
	Air Support Group Supervisor	
	Air Tactical Group Supervisor	
	Helicopter Coordinator	
	Helibase Manager	

Block Number	Block Title	Instructions
8	**Frequencies** • AM • FM	Enter primary air/air, air/ground (if applicable), command, deck coordinator, take-off and landing coordinator, and other radio frequencies to be used during the incident.
	Air/Air Fixed-Wing	
	Air/Air Rotary-Wing – Flight Following	Flight following is typically done by Air Operations.
	Air/Ground	
	Command	
	Deck Coordinator	
	Take-Off & Landing Coordinator	
	Air Guard	
9	**Fixed-Wing** (category/kind/type, make/model, N#, base)	Enter the category/kind/type based on NIMS, discipline, or jurisdiction guidance, make/model, N#, and base of air assets allocated to the incident.
	Air Tactical Group Supervisor Aircraft	
	Other Fixed-Wing Aircraft	
10	**Helicopters**	Enter the following information about the helicopter resources allocated to the incident.
	FAA N#	Enter the FAA N#.
	Category/Kind/Type	Enter the helicopter category/kind/type based on NIMS, discipline, or jurisdiction guidance.
	Make/Model	Enter the make and model of the helicopter.
	Base	Enter the base where the helicopter is located.
	Available	Enter the time the aircraft is available.
	Start	Enter the time the aircraft becomes operational.
	Remarks	
11	**Prepared by** • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (24-hour clock).
12	**Task/Mission/Assignment** (category/kind/type and function includes: air tactical, reconnaissance, personnel transport, search and rescue, etc.)	Enter the specific assignment (e.g., water or retardant drops, logistical support, or availability status for a specific purpose, support backup, recon, Medivac, etc.). If applicable, enter the primary air/air and air/ground radio frequency to be used. Mission assignments may be listed by priority.
	Category/Kind/Type and Function	
	Name of Personnel or Cargo (if applicable) or Instructions for Tactical Aircraft	
	Mission Start	
	Fly From	Enter the incident location or air base the aircraft is flying from.
	Fly To	Enter the incident location or air base the aircraft is flying to.

DEMOBILIZATION CHECK-OUT (ICS 221)

1. Incident Name:	2. Incident Number:	
3. Planned Release Date/Time: Date: Time:	4. Resource or Personnel Released:	5. Order Request Number:

6. Resource or Personnel:

You and your resources are in the process of being released. Resources are not released until the checked boxes below have been signed off by the appropriate overhead and the Demobilization Unit Leader (or Planning Section representative).

LOGISTICS SECTION

	Unit/Manager	Remarks	Name	Signature
☐	Supply Unit			
☐	Communications Unit			
☐	Facilities Unit			
☐	Ground Support Unit			
☐	Security Manager			
☐				

FINANCE/ADMINISTRATION SECTION

	Unit/Leader	Remarks	Name	Signature
☐	Time Unit			
☐				
☐				

OTHER SECTION/STAFF

	Unit/Other	Remarks	Name	Signature
☐				
☐				

PLANNING SECTION

	Unit/Leader	Remarks	Name	Signature
☐				
☐	Documentation Leader			
☐	Demobilization Leader			

7. Remarks:

8. Travel Information:

Estimated Time of Departure: _____

Destination: _____

Travel Method: _____

Manifest: ☐ Yes ☐ No

Number: _____

Room Overnight: ☐ Yes ☐ No

Actual Release Date/Time: _____

Estimated Time of Arrival: _____

Contact Information While Traveling: _____

Area/Agency/Region Notified: _____

9. Reassignment Information: ☐ Yes ☐ No

Incident Name: _____

Location: _____

Incident Number: _____

Order Request Number: _____

10. Prepared by: Name: _____ Position/Title: _____ Signature: _____

ICS 221 Date/Time: _____

ICS 221
Demobilization Check-Out

Purpose. The Demobilization Check-Out (ICS 221) ensures that resources checking out of the incident have completed all appropriate incident business, and provides the Planning Section information on resources released from the incident. Demobilization is a planned process and this form assists with that planning.

Preparation. The ICS 221 is initiated by the Planning Section, or a Demobilization Unit Leader if designated. The Demobilization Unit Leader completes the top portion of the form and checks the appropriate boxes in Block 6 that may need attention after the Resources Unit Leader has given written notification that the resource is no longer needed. The individual resource will have the appropriate overhead personnel sign off on any checked box(es) in Block 6 prior to release from the incident.

Distribution. After completion, the ICS 221 is returned to the Demobilization Unit Leader or the Planning Section. All completed original forms must be given to the Documentation Unit. Personnel may request to retain a copy of the ICS 221.

Notes:

- Members are not released until form is complete when all of the items checked in Block 6 have been signed off.
- If additional pages are needed for any form page, use a blank ICS 221 and repaginate as needed.

Block Number	Block Title	Instructions
1	**Incident Name**	Enter the name assigned to the incident.
2	**Incident Number**	Enter the number assigned to the incident.
3	**Planned Release Date/Time**	Enter the date (month/day/year) and time (using the 24-hour clock) of the planned release from the incident.
4	**Resource or Personnel Released**	Enter name of the individual or resource being released.
5	**Order Request Number**	Enter order request number (or agency demobilization number) of the individual or resource being released.
6	**Resource or Personnel** You and your resources are in the process of being released. Resources are not released until the checked boxes below have been signed off by the appropriate overhead and the Demobilization Unit Leader (or Planning Section representative). • Unit/Leader/Manager/Other • Remarks • Name • Signature	Resources are not released until the checked boxes below have been signed off by the appropriate overhead. Blank boxes are provided for any additional unit requirements as needed (e.g., Safety Officer, Agency Representative, etc.).
	Logistics Section ☐ Supply Unit ☐ Communications Unit ☐ Facilities Unit ☐ Ground Support Unit ☐ Security Manager	The Demobilization Unit Leader will enter an "X" in the box to the left of those Units requiring the resource to check out. Identified Unit Leaders or other overhead are to sign the appropriate line to indicate release.

Block Number	Block Title	Instructions
6 (continued)	**Finance/Administration Section** ☐ Time Unit	The Demobilization Unit Leader will enter an "X" in the box to the left of those Units requiring the resource to check out. Identified Unit Leaders or other overhead are to sign the appropriate line to indicate release.
	Other Section/Staff ☐	The Demobilization Unit Leader will enter an "X" in the box to the left of those Units requiring the resource to check out. Identified Unit Leaders or other overhead are to sign the appropriate line to indicate release.
	Planning Section ☐ Documentation Leader ☐ Demobilization Leader	The Demobilization Unit Leader will enter an "X" in the box to the left of those Units requiring the resource to check out. Identified Unit Leaders or other overhead are to sign the appropriate line to indicate release.
7	**Remarks**	Enter any additional information pertaining to demobilization or release (e.g., transportation needed, destination, etc.). This section may also be used to indicate if a performance rating has been completed as required by the discipline or jurisdiction.
8	**Travel Information**	Enter the following travel information:
	Room Overnight	Use this section to enter whether or not the resource or personnel will be staying in a hotel overnight prior to returning home base and/or unit.
	Estimated Time of Departure	Use this section to enter the resource's or personnel's estimated time of departure (using the 24-hour clock).
	Actual Release Date/Time	Use this section to enter the resource's or personnel's actual release date (month/day/year) and time (using the 24-hour clock).
	Destination	Use this section to enter the resource's or personnel's destination.
	Estimated Time of Arrival	Use this section to enter the resource's or personnel's estimated time of arrival (using the 24-hour clock) at the destination.
	Travel Method	Use this section to enter the resource's or personnel's travel method (e.g., POV, air, etc.).
	Contact Information While Traveling	Use this section to enter the resource's or personnel's contact information while traveling (e.g., cell phone, radio frequency, etc.).
	Manifest ☐ Yes ☐ No Number	Use this section to enter whether or not the resource or personnel has a manifest. If they do, indicate the manifest number.
	Area/Agency/Region Notified	Use this section to enter the area, agency, and/or region that was notified of the resource's travel. List the name (first initial and last name) of the individual notified and the date (month/day/year) he or she was notified.
9	**Reassignment Information** ☐ Yes ☐ No	Enter whether or not the resource or personnel was reassigned to another incident. If the resource or personnel was reassigned, complete the section below.
	Incident Name	Use this section to enter the name of the new incident to which the resource was reassigned.
	Incident Number	Use this section to enter the number of the new incident to which the resource was reassigned.
	Location	Use this section to enter the location (city and State) of the new incident to which the resource was reassigned.
	Order Request Number	Use this section to enter the new order request number assigned to the resource or personnel.

Block Number	Block Title	Instructions
10	**Prepared by** • Name • Position/Title • Signature • Date/Time	Enter the name, ICS position, and signature of the person preparing the form. Enter date (month/day/year) and time prepared (using the 24-hour clock).

INCIDENT PERSONNEL PERFORMANCE RATING (ICS 225)

THIS RATING IS TO BE USED ONLY FOR DETERMINING AN INDIVIDUAL'S PERFORMANCE ON AN INCIDENT/EVENT

1. Name:	2. Incident Name:	3. Incident Number:
4. Home Unit Name and Address:	5. Incident Agency and Address:	
6. Position Held on Incident:	7. Date(s) of Assignment: From: To:	8. Incident Complexity Level: ☐1 ☐2 ☐3 ☐4 ☐5
		9. Incident Definition:

10. Evaluation

Rating Factors	N/A	1 – Unacceptable	2	3 – Met Standards	4	5 – Exceeded Expectations
11. Knowledge of the Job/ Professional Competence: Ability to acquire, apply, and share technical and administrative knowledge and skills associated with description of duties. (Includes operational aspects such as marine safety, seamanship, airmanship, SAR, etc., as appropriate.)	☐	Questionable competence and credibility. Operational or specialty expertise inadequate or lacking in key areas. Made little effort to grow professionally. Used knowledge as power against others or bluffed rather than acknowledging ignorance. Effectiveness reduced due to limited knowledge of own organizational role and customer needs. ☐	☐	Competent and credible authority on specialty or operational issues. Acquired and applied excellent operational or specialty expertise for assigned duties. Showed professional growth through education, training, and professional reading. Shared knowledge and information with others clearly and simply. Understood own organizational role and customer needs. ☐	☐	Superior expertise; advice and actions showed great breadth and depth of knowledge. Remarkable grasp of complex issues, concepts, and situations. Rapidly developed professional growth beyond expectations. Vigorously conveyed knowledge, directly resulting in increased workplace productivity. Insightful knowledge of own role, customer needs, and value of work. ☐
12. Ability To Obtain Performance/Results: Quality, quantity, timeliness, and impact of work.	☐	Routine tasks accomplished with difficulty. Results often late or of poor quality. Work had a negative impact on department or unit. Maintained the status quo despite opportunities to improve. ☐	☐	Got the job done in all routine situations and in many unusual ones. Work was timely and of high quality; required same of subordinates. Results had a positive impact on IMT. Continuously improved services and organizational effectiveness. ☐	☐	Maintained optimal balance among quality, quantity, and timeliness of work. Quality of own and subordinates' work surpassed expectations. Results had a significant positive impact on the IMT. Established clearly effective systems of continuous improvement. ☐
13. Planning/ Preparedness: Ability to anticipate, determine goals, identify relevant information, set priorities and deadlines, and create a shared vision of the Incident Management Team (IMT).	☐	Got caught by the unexpected; appeared to be controlled by events. Set vague or unrealistic goals. Used unreasonable criteria to set priorities and deadlines. Rarely had plan of action. Failed to focus on relevant information. ☐	☐	Consistently prepared. Set high but realistic goals. Used sound criteria to set priorities and deadlines. Used quality tools and processes to develop action plans. Identified key information. Kept supervisors and stakeholders informed. ☐	☐	Exceptional preparation. Always looked beyond immediate events or problems. Skillfully balanced competing demands. Developed strategies with contingency plans. Assessed all aspects of problems, including underlying issues and impact. ☐
14. Using Resources: Ability to manage time, materials, information, money, and people (i.e., all IMT components as well as external publics).	☐	Concentrated on unproductive activities or often overlooked critical demands. Failed to use people productively. Did not follow up. Mismanaged information, money, or time. Used ineffective tools or left subordinates without means to accomplish tasks. Employed wasteful methods. ☐	☐	Effectively managed a variety of activities with available resources. Delegated, empowered, and followed up. Skilled time manager, budgeted own and subordinates' time productively. Ensured subordinates had adequate tools, materials, time, and direction. Cost conscious, sought ways to cut waste. ☐	☐	Unusually skilled at bringing scarce resources to bear on the most critical of competing demands. Optimized productivity through effective delegation, empowerment, and follow-up control. Found ways to systematically reduce cost, eliminate waste, and improve efficiency. ☐
15. Adaptability/Attitude: Ability to maintain a positive attitude and modify work methods and priorities in response to new information, changing conditions, political realities, or unexpected obstacles.	☐	Unable to gauge effectiveness of work, recognize political realities, or make adjustments when needed. Maintained a poor outlook. Overlooked or screened out new information. Ineffective in ambiguous, complex, or pressured situations. ☐	☐	Receptive to change, new information, and technology. Effectively used benchmarks to improve performance and service. Monitored progress and changed course as required. Maintained a positive approach. Effectively dealt with pressure and ambiguity. Facilitated smooth transitions. Adjusted direction to accommodate political realities. ☐	☐	Rapidly assessed and confidently adjusted to changing conditions, political realities, new information, and technology. Very skilled at using and responding to measurement indicators. Championed organizational improvements. Effectively dealt with extremely complex situations. Turned pressure and ambiguity into constructive forces for change. ☐
16. Communication Skills: Ability to speak effectively and listen to understand. Ability to express facts and ideas clearly and convincingly.	☐	Unable to effectively articulate ideas and facts; lacked preparation, confidence, or logic. Used inappropriate language or rambled. Nervous or distracting mannerisms detracted from message. Failed to listen carefully or was too argumentative. Written material frequently unclear, verbose, or poorly organized. Seldom proofread. ☐	☐	Effectively expressed ideas and facts in individual and group situations; nonverbal actions consistent with spoken message. Communicated to people at all levels to ensure understanding. Listened carefully for intended message as well as spoken words. Written material clear, concise, and logically organized. Proofread conscientiously. ☐	☐	Clearly articulated and promoted ideas before a wide range of audiences; accomplished speaker in both formal and extemporaneous situations. Adept at presenting complex or sensitive issues. Active listener; remarkable ability to listen with open mind and identify key issues. Clearly and persuasively expressed complex or controversial material, directly contributing to stated objectives. ☐

INCIDENT PERSONNEL PERFORMANCE RATING (ICS 225)

1. Name:	2. Incident Name:	3. Incident Number:

10. Evaluation

Rating Factors	N/A	1 – Unacceptable	2	3 – Met Standards	4	5 – Exceeded Expectations
17. Ability To Work on a Team: Ability to manage, lead and participate in teams, encourage cooperation, and develop esprit de corps.	☐	Used teams ineffectively or at wrong times. Conflicts mismanaged or often left unresolved, resulting in decreased team effectiveness. Excluded team members from vital information. Stifled group discussions or did not contribute productively. Inhibited cross functional cooperation to the detriment of unit or service goals. ☐	☐	Skillfully used teams to increase unit effectiveness, quality, and service. Resolved or managed group conflict, enhanced cooperation, and involved team members in decision process. Valued team participation. Effectively negotiated work across functional boundaries to enhance support of broader mutual goals. ☐	☐	Insightful use of teams raised unit productivity beyond expectations. Inspired high level of esprit de corps, even in difficult situations. Major contributor to team effort. Established relationships and networks across a broad range of people and groups, raising accomplishments of mutual goals to a remarkable level. ☐
18. Consideration for Personnel/Team Welfare: Ability to consider and respond to others' personal needs, capabilities, and achievements; support for and application of worklife concepts and skills.	☐	Seldom recognized or responded to needs of people; left outside resources untapped despite apparent need. Ignorance of individuals' capabilities increased chance of failure. Seldom recognized or rewarded deserving subordinates or other IMT members. ☐	☐	Cared for people. Recognized and responded to their needs; referred to outside resources as appropriate. Considered individuals' capabilities to maximize opportunities for success. Consistently recognized and rewarded deserving subordinates or other IMT members. ☐	☐	Always accessible. Enhanced overall quality of life. Actively contributed to achieving balance among IMT requirements and professional and personal responsibilities. Strong advocate for subordinates; ensured appropriate and timely recognition, both formal and informal. ☐
19. Directing Others: Ability to influence or direct others in accomplishing tasks or missions.	☐	Showed difficulty in directing or influencing others. Low or unclear work standards reduced productivity. Failed to hold subordinates accountable for shoddy work or irresponsible actions. Unwilling to delegate authority to increase efficiency of task accomplishment. ☐	☐	A leader who earned others' support and commitment. Set high work standards; clearly articulated job requirements, expectations, and measurement criteria; held subordinates accountable. When appropriate, delegated authority to those directly responsible for the task. ☐	☐	An inspirational leader who motivated others to achieve results not normally attainable. Won people over rather than imposing will. Clearly articulated vision; empowered subordinates to set goals and objectives to accomplish tasks. Modified leadership style to best meet challenging situations. ☐
20. Judgment/Decisions Under Stress: Ability to make sound decisions and provide valid recommendations by using facts, experience, political acumen, common sense, risk assessment, and analytical thought.	☐	Decisions often displayed poor analysis. Failed to make necessary decisions, or jumped to conclusions without considering facts, alternatives, and impact. Did not effectively weigh risk, cost, and time considerations. Unconcerned with political drivers on organization. ☐	☐	Demonstrated analytical thought and common sense in making decisions. Used facts, data, and experience, and considered the impact of alternatives and political realities. Weighed risk, cost, and time considerations. Made sound decisions promptly with the best available information. ☐	☐	Combined keen analytical thought, an understanding of political processes, and insight to make appropriate decisions. Focused on the key issues and the most relevant information. Did the right thing at the right time. Actions indicated awareness of impact of decisions on others. Not afraid to take reasonable risks to achieve positive results. ☐
21. Initiative Ability to originate and act on new ideas, pursue opportunities to learn and develop, and seek responsibility without guidance and supervision.	☐	Postponed needed action. Implemented or supported improvements only when directed to do so. Showed little interest in career development. Feasible improvements in methods, services, or products went unexplored. ☐	☐	Championed improvement through new ideas, methods, and practices. Anticipated problems and took prompt action to avoid or resolve them. Pursued productivity gains and enhanced mission performance by applying new ideas and methods. ☐	☐	Aggressively sought out additional responsibility. A self-learner. Made worthwhile ideas and practices work when others might have given up. Extremely innovative. Optimized use of new ideas and methods to improve work processes and decisionmaking. ☐
22. Physical Ability for the Job: Ability to invest in the IMT's future by caring for the physical health and emotional well-being of self and others.	☐	Failed to meet minimum standards of sobriety. Tolerated or condoned others' alcohol abuse. Seldom considered subordinates' health and well-being. Unwilling or unable to recognize and manage stress despite apparent need. ☐	☐	Committed to health and well-being of self and subordinates. Enhanced personal performance through activities supporting physical and emotional well-being. Recognized and managed stress effectively. ☐	☐	Remarkable vitality, enthusiasm, alertness, and energy. Consistently contributed at high levels of activity. Optimized personal performance through involvement in activities that supported physical and emotional well-being. Monitored and helped others deal with stress and enhance health and well-being. ☐
23. Adherence to Safety: Ability to invest in the IMT's future by caring for the safety of self and others.	☐	Failed to adequately identify and protect personnel from safety hazards. ☐	☐	Ensured that safe operating procedures were followed. ☐	☐	Demonstrated a significant commitment toward safety of personnel. ☐

24. Remarks:

25. Rated Individual (This rating has been discussed with me)**:**

Signature: _____ Date/Time: _____

26. Rated by: Name: _____ Signature: _____

Home Unit: _____ Position Held on This Incident: _____

ICS 225 Date/Time: _____

ICS 225
Incident Personnel Performance Rating

Purpose. The Incident Personnel Performance Rating (ICS 225) gives supervisors the opportunity to evaluate subordinates on incident assignments. THIS RATING IS TO BE USED ONLY FOR DETERMINING AN INDIVIDUAL'S PERFORMANCE ON AN INCIDENT/EVENT.

Preparation. The ICS 225 is normally prepared by the supervisor for each subordinate, using the evaluation standard given in the form. The ICS 225 will be reviewed with the subordinate, who will sign at the bottom. It will be delivered to the Planning Section before the rater leaves the incident

Distribution. The ICS 225 is provided to the Planning Section Chief before the rater leaves the incident.

Notes:

- Use a blank ICS 225 for each individual.
- Additional pages can be added based on individual need.

Block Number	Block Title	Instructions
1	**Name**	Enter the name of the individual being rated.
2	**Incident Name**	Enter the name assigned to the incident.
3	**Incident Number**	Enter the number assigned to the incident.
4	**Home Unit Address**	Enter the physical address of the home unit for the individual being rated.
5	**Incident Agency and Address**	Enter the name and address of the authority having jurisdiction for the incident.
6	**Position Held on Incident**	Enter the position held (e.g., Resources Unit Leader, Safety Officer, etc.) by the individual being rated.
7	**Date(s) of Assignment** • From • To	Enter the date(s) (month/day/year) the individual was assigned to the incident.
8	**Incident Complexity Level** ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Indicate the level of complexity for the incident.
9	**Incident Definition**	Enter a general definition of the incident in this block. This may be a general incident category or kind description, such as "tornado," "wildfire,", "bridge collapse,", "civil unrest," "parade," "vehicle fire," "mass casualty," etc.
10	**Evaluation**	Enter "X" under the appropriate column indicating the individual's level of performance for each duty listed.
	N/A	The duty did not apply to this incident.
	1 – Unacceptable	Does not meet minimum requirements of the individual element. Deficiencies/Improvements needed must be identified in Remarks.
	2 – Needs Improvement	Meets some or most of the requirements of the individual element. IDENTIFY IMPROVEMENT NEEDED IN REMARKS.
	3 – Met Standards	Satisfactory. Employee meets all requirements of the individual element.

Block Number	Block Title	Instructions
	4 – Fully Successful	Employee meets all requirements and exceeds one or several of the requirements of the individual element.
10	5 – Exceeded Expectations	Superior. Employee consistently exceeds the performance requirements.
11	**Knowledge of the Job/ Professional Competence:**	Ability to acquire, apply, and share technical and administrative knowledge and skills associated with description of duties. (Includes operational aspects such as marine safety, seamanship, airmanship, SAR, etc., as appropriate.)
12	**Ability To Obtain Performance/Results:**	Quality, quantity, timeliness, and impact of work.
13	**Planning/Preparedness:**	Ability to anticipate, determine goals, identify relevant information, set priorities and deadlines, and create a shared vision of the Incident Management Team (IMT).
14	**Using Resources:**	Ability to manage time, materials, information, money, and people (i.e., all IMT components as well as external publics).
15	**Adaptability/Attitude:**	Ability to maintain a positive attitude and modify work methods and priorities in response to new information, changing conditions, political realities, or unexpected obstacles.
16	**Communication Skills:**	Ability to speak effectively and listen to understand. Ability to express facts and ideas clearly and convincingly.
17	**Ability To Work on a Team:**	Ability to manage, lead and participate in teams, encourage cooperation, and develop esprit de corps.
18	**Consideration for Personnel/Team Welfare:**	Ability to consider and respond to others' personal needs, capabilities, and achievements; support for and application of worklife concepts and skills.
19	**Directing Others:**	Ability to influence or direct others in accomplishing tasks or missions.
20	**Judgment/Decisions Under Stress:**	Ability to make sound decisions and provide valid recommendations by using facts, experience, political acumen, common sense, risk assessment, and analytical thought.
21	**Initiative**	Ability to originate and act on new ideas, pursue opportunities to learn and develop, and seek responsibility without guidance and supervision.
22	**Physical Ability for the Job:**	Ability to invest in the IMT's future by caring for the physical health and emotional well-being of self and others.
23	**Adherence to Safety:**	Ability to invest in the IMT's future by caring for the safety of self and others.
24	**Remarks**	Enter specific information on why the individual received performance levels.
25	**Rated Individual** (This rating has been discussed with me) • Signature • Date/Time	Enter the signature of the individual being rated. Enter the date (month/day/year) and the time (24-hour clock) signed.
26	**Rated by** • Name • Signature • Home Unit • Position Held on This Incident • Date/Time	Enter the name, signature, home unit, and position held on the incident of the person preparing the form and rating the individual. Enter the date (month/day/year) and the time (24-hour clock) prepared.

Weavertown Environmental Group **covers it all.**

24 365 7

CAPABILITIES AND QUALIFICATIONS FOR HAZARDOUS EMERGENCY RESPONSE SERVICES

Prepared By:

The Weavertown Group
2 Dorrington Road
Carnegie, Pennsylvania 15106
(724) 746-4850

March 2013

TABLE OF CONTENTS

1.0 INTRODUCTION 1

2.0 CERTIFICATIONS 2
2.1 OSRO CLASSIFICATION 2
2.2 PERMITS AND LICENSES 2

3.0 FACILITIES 5

4.0 PERSONNEL 16

5.0 CONTAINMENT EQUIPMENT 17
5.1 CONTAINMENT BOOM/MOBILE RESPONSE UNITS 18
5.2 WATER CRAFT 18
5.3 SHORELINE CLEAN-UP 19
5.4 SORBENT MATERIAL GUIDELINES 19

6.0 RECOVERY CAPABILITIES 20
6.1 PUMPS 20
6.2 VACUUM UNITS 20
6.3 HEAVY EQUIPMENT 21

7.0 STORAGE CAPACITY 22
7.1 TANK TRAILERS 22
7.2 FIXED FACILITIES 22
7.3 POWER UNITS 23
7.4 REFRIGERATED UNITS 23
7.5 OTHER TRAILERS 23
7.6 DUMP UNITS 23
7.7 ROLL-OFF UNITS 23
7.8 TOWING UNITS 23

8.0 COMMUNICATIONS 24

9.0 MISCELLANOUS RESPONSE EQUIPMENT 25
9.1 RESPONSE/WORK/UTILITY TRUCKS 25
9.2 AIR SURVEILLANCE AND MONITORING 25
9.3 MISCELLANEOUS EQUIPMENT AND SUPPLIES 26
9.4 REFERENCES 26

10.0 WEG EMERGENCY RESPONSE PROCEDURES 27

1.0 INTRODUCTION

Weavertown Environmental Group (WEG), a division of Weavertown Transport Leasing Inc. (WTL), respectfully submits the following capabilities and qualifications for hazardous emergency response contract services. These services include spill clean-up services, so that the client may comply with the Oil Pollution Act of 1990 (OPA 90) and the Uniform Safety Act. Information provided is based upon the United States Coast Guard (USCG) Oil Spill Removal Organization (OSRO) Guidelines. These guidelines are also utilized by the United States Environmental Protection Agency (US EPA).

WEG's OSRO Number is 075. OSRO information can be found on the US Coast Guard's Website at http://www.uscg.mil/hq/g-m/nmc/response/index.htm#OSRO.

WEG employees maintain current certifications in their respective emergency response level (Technician, Incident Commander, Boom Deployment, etc.) in accordance with OSHA and OPA requirements. Maintenance of this certification requires at least 8 hours of yearly classroom or related instruction on emergency response issues, measures, and controls. In addition, employees routinely participate in actual emergency incidents (over 400 in 2009), which significantly enhances their effectiveness and emergency response performance.

2.0 CERTIFICATIONS

WEG responders hold certifications issued by both governmental regulatory agencies and the Chemical Manufacturer's Associations (CMA). WEG is a response contractor for the CMA CHEMTREC®/CHEMNET system. In accordance with Pennsylvania Act 165, WEG has two Pennsylvania Emergency Management Agency (PEMA) certified Hazardous Materials Emergency Response teams. WEG can respond to any DOT category of hazardous material including radioactive and explosive materials.

2.1 OSRO Classification

Currently, WEG holds the following USCG OSRO ratings. This rating is based on the actual capabilities and equipment owned by WEG and does not include equipment owned by affiliated response organizations.

Pittsburgh port:	Class MM, W1, W2, W3 for River and Canal Environment Class MM rating for Inland Environment
Huntington port:	Class MM, W1, W2, W3 for River and Canal Environment Class MM rating for Inland Environment

2.2 Permits and Licenses

EPA ID#:

PAD980707442

Solid Waste Disposal and/or Processing Facility Permit:

101532 Issued: 7/26/90 Expires: Current

Asbestos Abatement Contractor License

Allegheny Health Dept. #: ACAL-01-2028 Issued: 1/1/03 Expires: current

Asbestos Licenses Held

State	License Number	Expiration
Pennsylvania	C0202A	current
Ohio	1587	current
West Virginia	AC000553	current

AST and UST Tank – Company number is 23

State	License Type	Expiration
Pennsylvania	AST & UST	Current
Ohio	UST	Current
West Virginia	UST & AST	Current

MSHA Certification Number CDC

State DOT, HWT, SWT and IWT Transportation Permits

State	Permit #	Expiration
Alabama	PAD980707422	current
Arkansas	PC-1509-02	current
Connecticut	CT-HW-446	current
Delaware	DE-HW-144	current
Delaware	DE-SW-144	current
Illinois	UPW-0207532-OH	current
Indiana	IN9720/0000-01	N/A
Kansas	PAD98070721/01	
Kentucky	PAD980707442	N/A
Kentucky	SW-00721	current
Maine	ME-HWT-368	current
Maine	ME-WOT-074	current
Maryland	HWH-468	current
Massachusetts	DPU# 35819	current
Michigan	UPW-0207532-OH	current
Michigan	LIW0207532MI	current
Minnesota	UPW-0207532-OH	current

State DOT, HWT, SWT and IWT Transportation Permits (continued)

State	Permit #	Expiration
Missouri	H-1679	current
Nevada	UPW-0207532-OH	current
New Hampshire	TNH-0417	current
New Jersey	O-9951	current
New Jersey	18721	current
New York	PA-108	current
North Carolina	N/A	N/A
Ohio	UPW-0207532-OH	current
Ohio	00-T-00032	current
Oklahoma	3559	current
Pennsylvania	PA-AH-0263	current
Pennsylvania	PA-HC-0020	current
Rhode Island	RI-588	current
South Carolina	PAD980707442	current
Tennessee	PAD980707442	current
Texas	41959	N/A
Virginia	PAD980707442	current
West Virginia	IMW-99-92	current
West Virginia	UPW-0207532-OH	current

3.0 FACILITIES

"ONE-CALL" 24-HOUR EMERGENCY NUMBER: 1-800-746-4850

(b) (7)(F)

The Weavertown Group 2 Dorrington Road Carnegie, PA 15106	724-746-4850	Fax: 412-429-0219
The Weavertown Group 3866 Millers Run Road McDonald, PA 15057	724-746-4850	Fax: 724-746-8468
Weavertown Industrial Services, Inc. 12455 Paul Coffey Blvd. Ashland, KY 41102	606-928-2454	Fax: 606-928-2485
The Weavertown Group C/O Exxon Company USA P.O. Box 713 Charleston, WV 25323	304-346-0160	Fax: 304-346-0162
The Weavertown Group 101 Jackson Street East Liverpool, OH 43920	330-385-2563	Fax: 330-385-2695
The Weavertown Group 50810 State Route 7 New Matamoras, OH 45767	740-865-2511	Fax: 740-865-3066
The Weavertown Group 61 Pine Mountain Road Lock Haven, PA 17745	570-796-6880	Fax: 570-796-6883
The Weavertown Group 1678 New Stanton/Ruffsdale Road Hunker, PA 15639	724-755-1000	Fax: 724-755-0165
The Weavertown Group 2741 Stonecreek Road SW New Philadelphia, OH 44663	330-312-3361	
The Weavertown Group 3000 Sage Road Houston, Texas 77056	800-746-4850	

ALL EMERGENCY CALLS ARE TO BE MADE TO THE 24-HOUR EMERGENCY NUMBER:
1-800-746-4850

CORPORATE HEADQUARTERS

Mailing Address	Physical Location	Phone	Fax
2 Dorrington Road, Carnegie, Pennsylvania 15106	2 Dorrington Road, Carnegie, Pennsylvania 15106	724-746-4850 800-746-4850 (24-HOUR)	412-429-0219



CECIL, PENNSYLVANIA

Mailing Address	Physical Location	Phone	Fax
3866 Millers Run Road, McDonald, Pennsylvania 15057	State Route 50, Cecil, Pennsylvania 15321	724-746-4850 800-746-4850 (24-HOUR)	724-746-8468



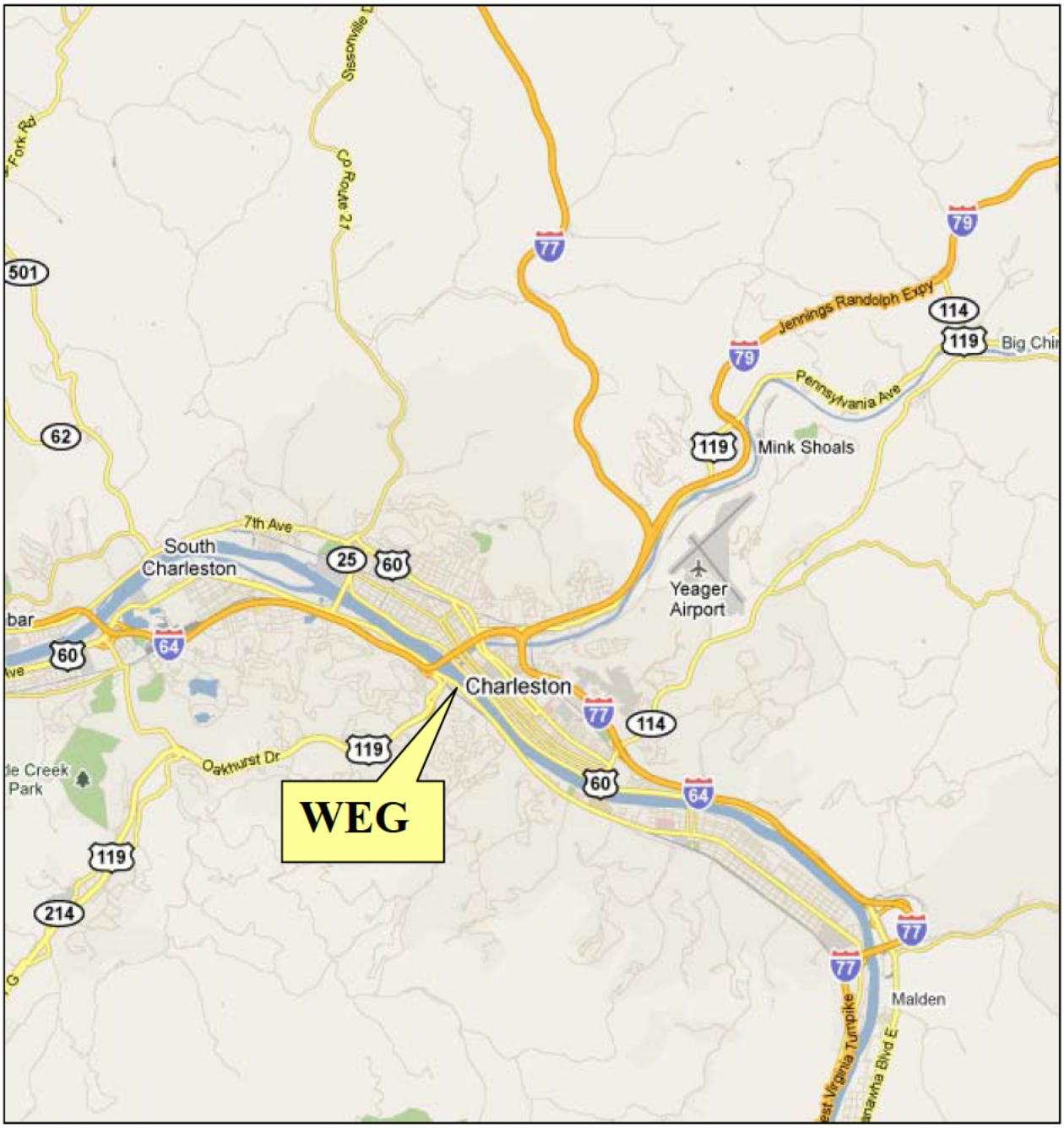
NEW MATAMORAS, OHIO

Mailing Address	Physical Location	Phone	Fax
2 Dorrington Road, Carnegie, Pennsylvania 15106	50810 State Route 7, New Matamoras, Ohio 45767	740-865-2511 800-746-4850 (24-HOUR)	740-865-3066



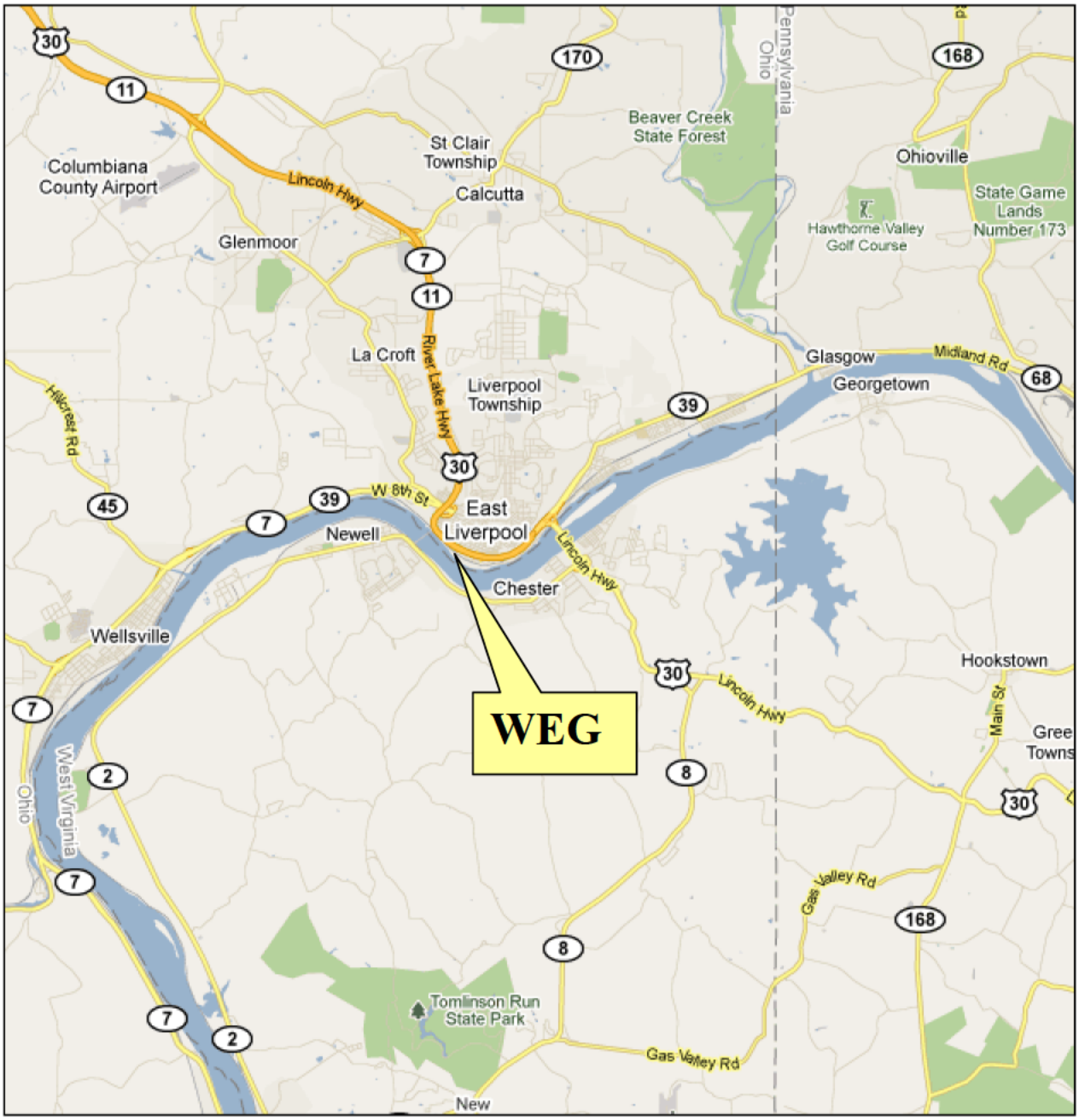
CHARLESTON, WEST VIRGINIA

Mailing Address	Physical Location	Phone	Fax
P.O. Box 713, Charleston, West Virginia 25323	C/o Exxon Company, USA Standard & McCorkle Avenue, Charleston, West Virginia 25314	304-346-0160 800-746-4850 (24-HOUR)	304-346-0162



EAST LIVERPOOL, OHIO

Mailing Address	Physical Location	Phone	Fax
101 Jackson Street, East Liverpool, Ohio 43920	101 Jackson Street, East Liverpool, Ohio 43920	330-385-2563 800-746-4850 (24-HOUR)	330-385-2695



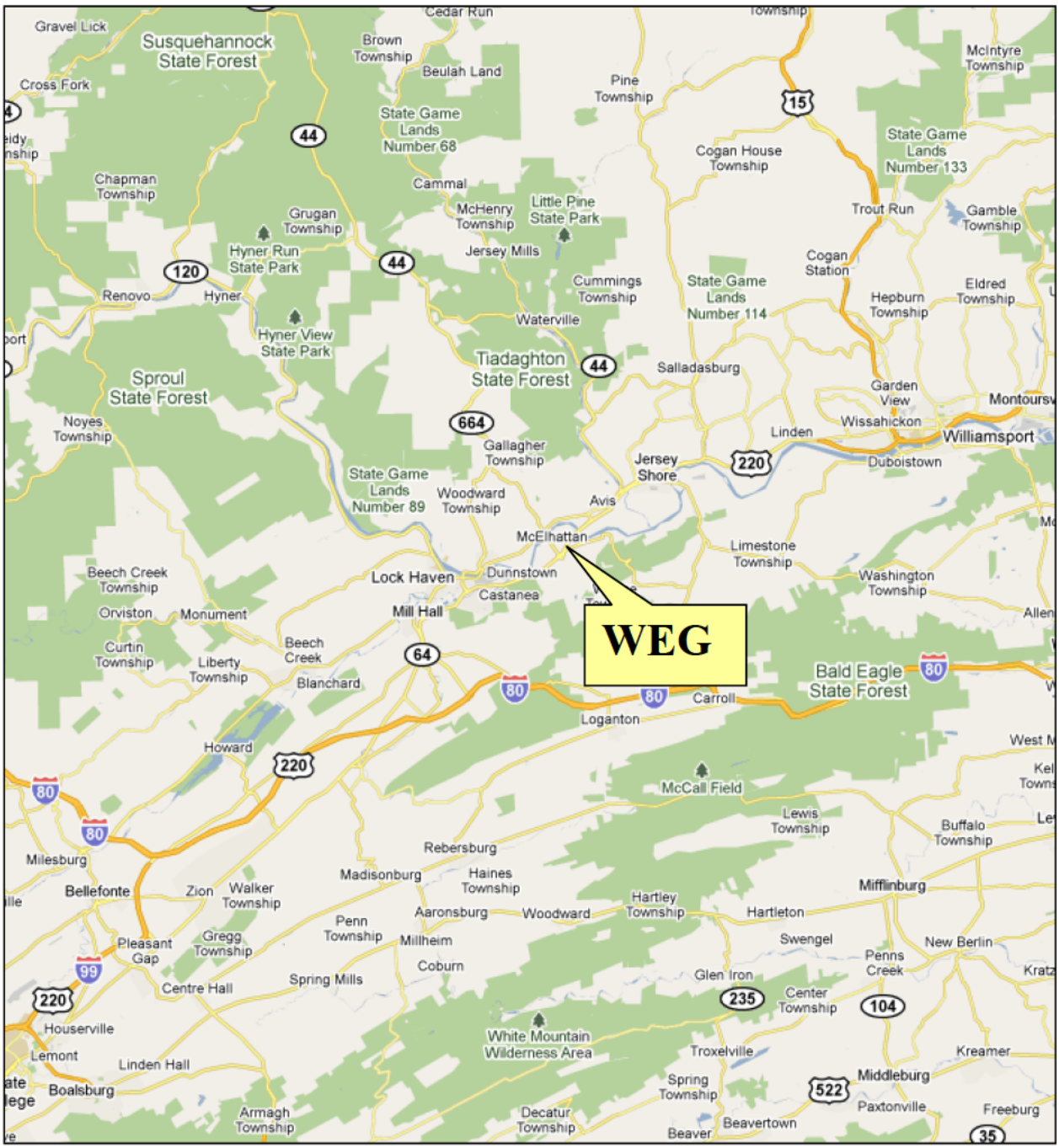
ASHLAND, KENTUCKY

Mailing Address	Physical Location	Phone	Fax
12455 Paul Coffey Blvd., Ashland, Kentucky 41102	12455 Paul Coffey Blvd., Ashland, Kentucky 41102	606-928-2454 800-746-4850 (24-HOUR)	606-928-2485



LOCK HAVEN, PENNSYLVANIA

Mailing Address	Physical Location	Phone	Fax
61 Pine Mountain Road, Lock Haven, Pennsylvania 17745	61 Pine Mountain Road, Lock Haven, Pennsylvania 17745	570-796-6880 800-746-4850 (24-HOUR)	570-796-6883



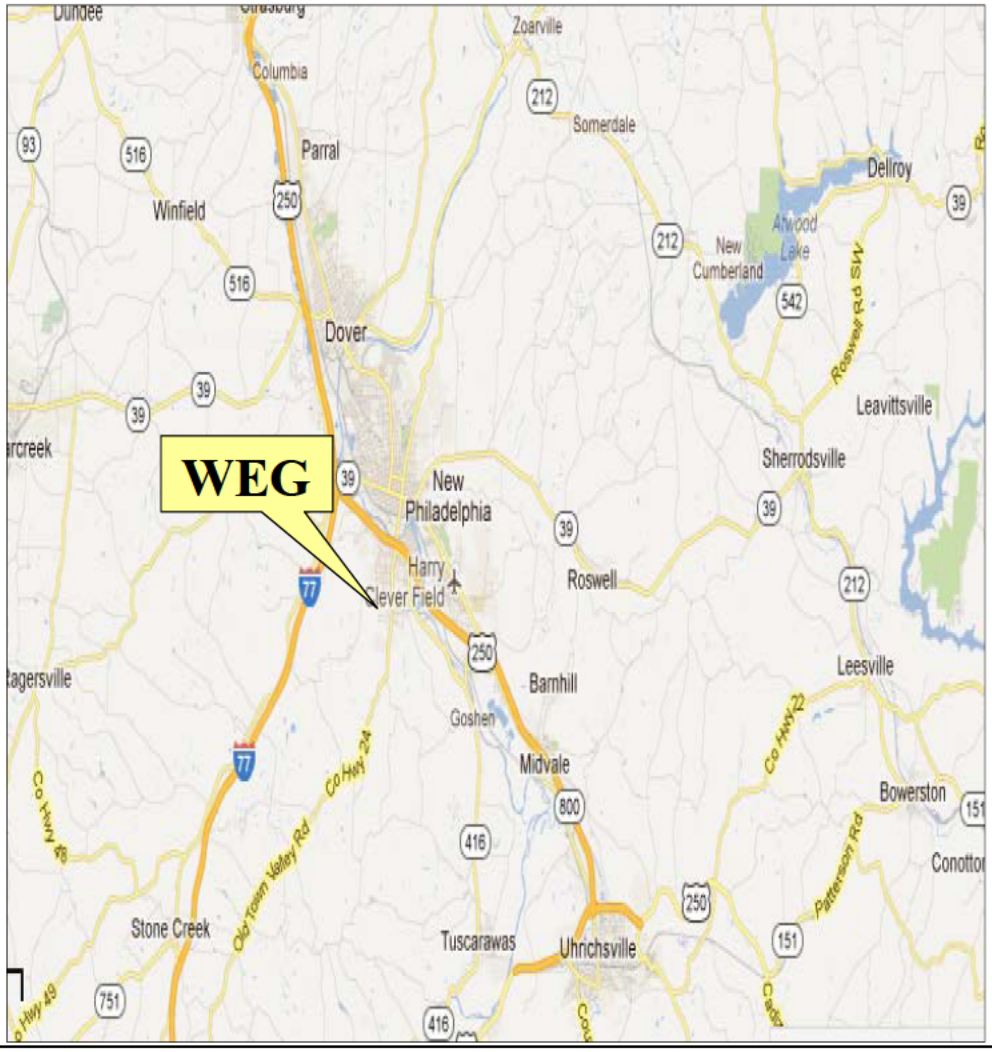
NEW STANTON, PENNSYLVANIA

Mailing Address	Physical Location	Phone	Fax
1678 New Stanton Ruffsdale Road Hunker, PA 15639	1678 New Stanton Ruffsdale Road Hunker, PA 15639	724-755-1000 800-746-4850 (24-HOUR)	724-755-0165



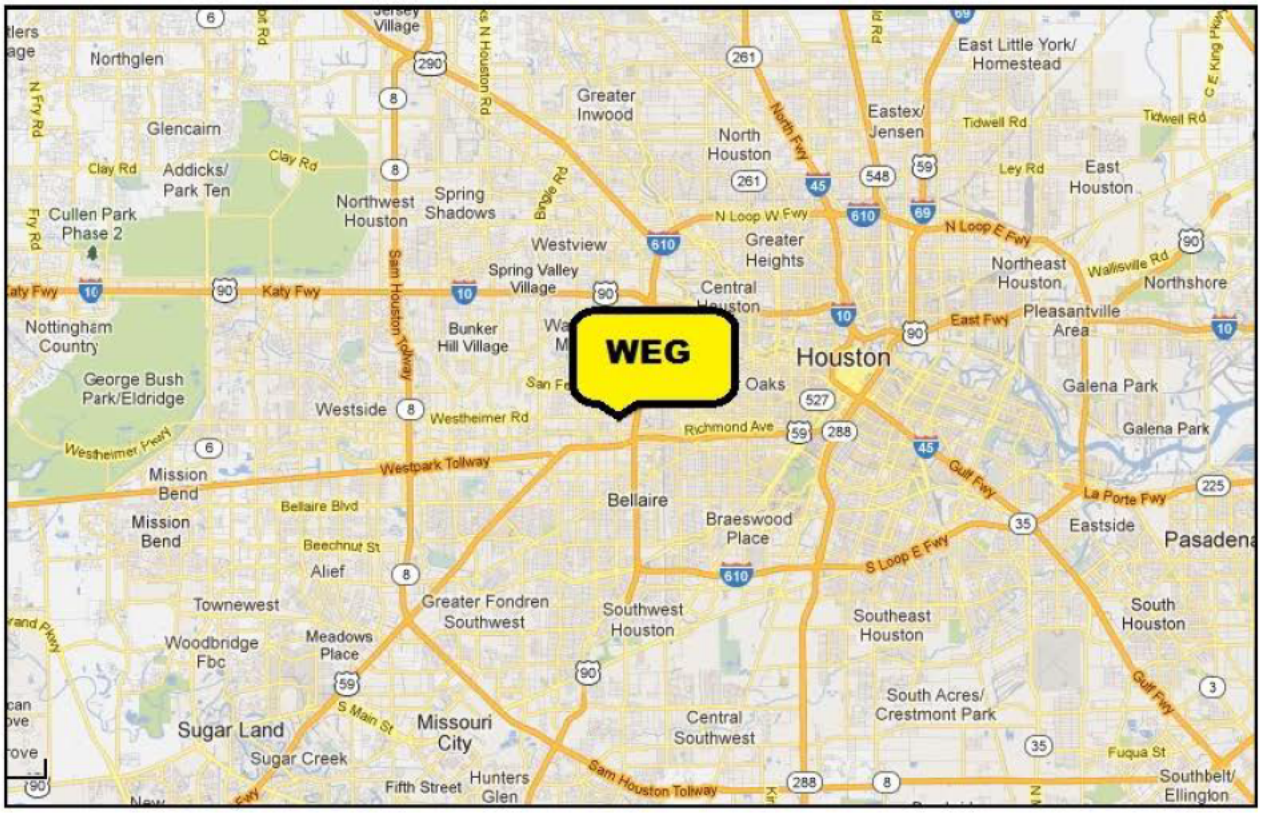
NEW PHILADELPHIA, OHIO

Mailing Address	Physical Location	Phone	Fax
2741 Stonecreek Road New Philadelphia, Ohio 44663	2741 Stonecreek Road New Philadelphia, Ohio 44663	330-312-3361 800-746-4850 (24-HOUR)	



HOUSTON, TEXAS

Mailing Address	Physical Location	Phone	Fax
3000 Sage Road Houston, Texas 77056	3000 Sage Road Houston, TX 77056	800-746-4850 (24-HOUR)	



4.0 PERSONNEL

With the exception of the clerical staff, all employees have had the required 40-hour health and safety course for hazardous waste operations with the necessary refresher programs. In addition, WEG has full time employees at the Hazardous Materials Emergency Response Technician Level, Hazardous Materials Emergency Response Specialist Level, and On-Scene Commanders Level as defined by the Occupational Safety and Health Administration's "Hazardous Waste Operations and Emergency Response Standard (HAZWOPER)." Included in this group are chemists, engineers, and individuals with emergency medical certifications. Individuals from the Carnegie/McDonald, Pennsylvania offices at Technician Level or greater have over 240 hours of training in accordance with Pennsylvania Act 165 "Hazardous Materials Protection Act."

WEG currently has an on-call (part-time) group of employees at the Hazardous Materials Emergency Response Specialist Level. As a certified hazardous materials response team in the Commonwealth of Pennsylvania, WEG can call on the resources of the certified teams, which provide additional personnel at a minimum of Technician Level.

The locations of WEG responders are as follows:

Carnegie/McDonald, Pennsylvania facility	Technician Level Specialist Level On-Scene Commanders Level Tank Car & Highway Emergency Response Specialist
New Matamoras, Ohio facility	Technician Level Specialist Level On-scene Commanders Level
Charleston, West Virginia facility	Technician Level Specialist Level On-Scene Commanders Level
Ashland, Kentucky facility	Technician Level Specialist Level On Scene Commanders Level Tank Car & Highway Emergency Response Specialist
East Liverpool, Ohio facility	Technician Level Licensed Tankerman
Lock Haven, Pennsylvania facility	Technician Level Specialist Level On Scene Commanders Level

5.0 CONTAINMENT EQUIPMENT

The following quantities of containment boom are normally located at each of the listed WEG facilities.

McDonald, Pennsylvania facility	6,050 feet of 24-Inch Boom 300 feet of 12-Inch Boom 1,300 feet of 10-Inch Boom 50 feet of 60-Inch Boom > 200 foot Bales of Sorbent Boom
New Matamoras, Ohio facility	4,250 feet of 24-Inch Boom 2,450 feet of 8-Inch Boom > 50 foot Bales of Sorbent Boom
East Liverpool, Ohio	1,000 feet of 24-Inch Boom > 50 foot Bales of Sorbent Boom
Charleston, West Virginia	3,000 feet of 24-Inch Boom 300 feet of 10-Inch Boom 2,300 feet of 8-Inch Boom > 75 foot Bales of Sorbent Boom
Ashland, Kentucky	1,500 feet of 24-Inch Boom 1,500 feet of 12-Inch Boom > 50 foot Bales of Sorbent Boom
Lock Haven, Pennsylvania	1,500 feet of 24-Inch Boom 1,500 feet of 12-Inch Boom > 50 foot Bales of Sorbent Boom

Additional boom is available through Action Supply Company, Three Rivers Pollution Council (Pittsburgh Zone), and Moores Junction Council (Huntington Zone). All boom material is kept on trailers or on the watercraft itself for deployment at any site.

5.1 Containment Boom/Mobile Response Units

1- 48’ Box Van Trailer Containing 5,000 feet of Containment Boom, 500 feet of sorbent boom, 10 bales of sweep, and 10 bales of sorbent pads

2- 40’ Flatbed Trailer Containing 3,000 feet of Containment Boom

1- 16’ Box Trailer Containing 1,000 feet of Containment Boom

1- 22’ Box Trailer Containing Level A, B, C, and D – Personal Protective Equipment and Miscellaneous Tools and Supplies

4- 16’ Utility Trailers Level C, and D – Personal Protective Equipment and Miscellaneous Tools and Supplies

4- 16’ Utility Trailers with Sorbent Materials & Drums

3- Boom and boat trailers

5.2 Water Craft

All watercrafts have communication capability, both marine band and WEG owned frequencies, towbar, and are equipped with lights.

2- 24’ Pontoon with 115 hp motor

1- 24’ Pontoon with 150 hp motor

1- 23’ Sea Ark 1999 with cabin and twin 150 hp motors

2- 28’ Checkmate 1993 with twin 200 hp motors

1- 21’ Starcraft 1986 with 115 hp motor

1- 18’ Grumman 1988 with 120 hp motor

4- 16’ Workboats, Jon Boat

1- 15’ Workboat, Jon Boat

10- 14’ Workboats, Jon Boat

1- 12’ Workboat, Jon Boat

2- 30 hp Johnson Outboard Motor

1- 25 hp Johnson Outboard Motor

2- 15 hp Johnson Outboard Motors

2- 15 hp Mercury Outboard Motors

11- 9.9 hp Mercury & Evinrude Outboard Motors

5.3 Shoreline Clean-up

10- Portable High Pressure Water Blasters and Steam Units
2- Portable Activated Carbon Filtration Systems
50- Gallons of emulsifier (dispersant)
10- Gallons each of acid and caustic suppressing foam
2- Oil water separators (12,000 gallon capacities)
40- Bales sorbent sweep
40- Bales sorbent pom poms

5.4 Sorbent Material Guidelines

The following guidelines should be used when considering the amount of sorbent materials needed for response based on the sorbents weight to absorbency ratio:

Sorbent Pads – *single pad absorbs 25 times its weight of .19 lbs. Rule of thumb: Each pad absorbs approximately ½ gallon of oil.*
Sorbent Sweep – *each bale of sweep absorbs approximately 35 gallons of oil.*
Sorbent Boom – *each bale of boom absorbs approximately 20 gallons of oil.*
Sorbent Roll – *each section of roll absorbs approximately 20 gallons of oil.*

6.0 RECOVERY CAPABILITIES

WEG has various methods to recover material in waterways, including various types of portable pumps, vacuum trucks, and trailers. Although equipment may be out performing industrial or remedial services, each office maintains in reserve a minimum of one vacuum truck with sufficient hose and skimmers and/or weirs. In the event of an emergency, equipment will be reassigned to the emergency response activities, as appropriate.

6.1 Pumps

1-	3000 GPM H & H Submersible Hydraulic Pump	6” Hyd. Powered
14-	260 GPM Wilden Air Diaphragm Pumps	3” Air Powered
9-	180 GPM Wilden Air Diaphragm Pumps	2” Air Powered
9-	15 GPM Wilden Air Diaphragm Pump	1” Air Powered
9-	250 GPM Gorman Rupp Fire Pumps	2.5” Gasoline Powered
9-	350 GPM Gorman Rupp Fire Pumps	3” Diesel Powered
9-	250 GPM Honda Trash Pumps	2.5” Gasoline Powered
9-	350 GPM Gorman Rupp Trash Pump	3” Gasoline Powered
6-	300 GPM Rope Skimmer	Gasoline Powered
1-	100 GPM Corken Vane Pump (liquefied gases)	Hydraulic Powered
3-	230 GPM Drum Skimmers	Hydraulic Powered
4-	300 GPM Gear Pumps	Hydraulic Powered

6.2 Vacuum Units

1- 1978 J&B 500 CFM International Dry Vacuum Truck with 2,800-gallon capacity
1- 1987 Cusco 3,500 CFM Mack Vacuum Truck with 3,000-gallon capacity
1- 1987 King 4,500 CFM Freightliner Vacuum Truck with 3,300-gallon capacity
1- 1989 King 4,500 CFM Freightliner Vacuum Truck with 3,000-gallon capacity
1- 1992 Cusco 3,500 CFM Freightliner Vacuum Truck with 3,000-gallon capacity
2- 2000 Cusco 3,500 CFM Freightliner Vacuum Trucks with 3,000-gallon capacity
1- 1990 Cusco 4,500 CFM Ford Vacuum Truck with 3,300-gallon capacity
1- 1991 Cusco 2,300 CFM Ford Vacuum Truck with 3,300-gallon capacity
1- 1994 Cusco 2,300 CFM Ford Vacuum Truck with 3,300-gallon capacity
1- 1995 Cusco 2,300 CFM Ford Vacuum Truck with 1,000-gallon capacity

1- 1996 Cusco 2,300 CFM Ford Vacuum Truck with 1,000-gallon capacity

1- 1996 Cusco 2,300 CFM Ford Vacuum Truck with 1,000-gallon capacity

1- 1991 Guzzler 5,400 CFM Wet/Dry Vacuum Truck with 3,000-gallon capacity

1- 1992 Cusco 4,500 CFM Freightliner Vacuum Truck with 3,100-gallon capacity with a high-pressure washer

1- 1989 Keith Hubert 1,500 CFM Skid Vacuum Unit with 3,300-gallon capacity

1- 1991 Fruehauf 1,000 CFM Stainless Steel Vacuum Trailer with 6,000-gallon capacity

2- 1999 Presvac 4,500 CFM Freightliner Vacuum Trucks with 3,000-gallon capacity

2- 2001 Keith Hubert Beringer Vac Unit 2,000 CFM with 3,000-gallon capacity

3- 2004 Fruehauf 1,000 CFM Vacuum Trailer with 6,000-gallon capacity

1- 2007 Cusco Wet/Dry 4,000 CFM Press Vac with 3,000-gallon capacity

1- 2004 Guzzler 6,000 CFM Vacuum Truck with 3,000-gallon capacity

2- 2004 Press Vac 4,000 CFM with 3,000-gallon capacity

The average on water recovery capacity of these vacuum units is 86,400 gallons per day per unit (2,057 barrels per day per unit) as determined using the Coast Guard method described in NVIC 7-92.

6.3 Heavy Equipment

Other equipment WEG can deploy for recovery operations is as follows:

2- Trackhoes

4- Backhoes with Extended-A-Hoe

2- Bulldozers

2- Track Highlift Loaders

1- Rubber Tire Front End Loader

1- Roller Compactor

1- Construction Lift

3- Forklifts

4- Skidloaders

4- Trac Skidloader

7.0 STORAGE CAPACITY

WEG has both fixed and mobile storage capabilities. Fixed facilities are located at the New Matamoras, Ohio facility with a 5 million gallon capacity and the McDonald, Pennsylvania facility with 500,000-gallon capacity. Mobile capacity includes the following, which may be located at various facilities within the WEG system.

7.1 Tank Trailers

Tanker Trailer Capacity 145,500 gallons/3,465 barrels

21- Total Tank Trailers
19- Stainless Steel Tank Trailers-Insulated
1- Carbon Steel Tank Trailer-Insulated
1- Aluminum Compartment Tank Trailers

1972 Penco	1-	7,000 gallon
1977 Fruehauf	1-	7,000 gallon
1978 Fruehauf	1-	7,000 gallon
1979 Trailmobile	2-	7,000 gallon
1980 Fruehauf	1-	7,000 gallon
1985 Fruehauf	1-	6,500 gallon
1988 Fruehauf	2-	7,000 gallon
1990 Fruehauf	1-	7,000 gallon
1991 Fruehauf	2-	6,500 gallon
1994 Brenner	3-	7,000 gallon
1995 Brenner	6-	7,000 gallon

At least ten (10) 20,000 gallon/477 barrels Frac Tanks in reserve.

7.2 Fixed Facilities

McDonald Storage Tanks

4- 71,000 gallon
1- 200,000 gallon
3- 20,000 gallon
2- 10,000 gallon
2- 10,000 gallon

7.3 Power Units

25- Tractor Power Units/Equipped with Roper Pumps

7.4 Refrigerated Units

2- Straight Trucks with Lift-gate

7.5 Other Trailers

2- Flatbeds (43’ & 48’) with Side Kit and Tarp
5- Box Vans
1- Lowboy Tri-axle Trailer
2- Lowboy Equipment Trailer
4- Utility Trailers 16’

7.6 Dump Units

4- Aluminum Dump Trailers
8- Tri-axle Dump Trucks
2- Ton Dump 2 x 2
2- Ton Dump 4 x 4

7.7 Roll-Off Units

5- Tri-axle Roll-off Trailers
8- Tri-axle Roll-off Trucks
350- Roll-off Containers (Various Sizes-Sealed and Unsealed Gates)

7.8 Towing Units

1 45 Ton KenWorth Tow
2- 45 Ton Mack Tow
6- 25 Ton Freightliner Tows
13- 10 Ton Dodge Tow
14- 10 Ton Rollback

8.0 COMMUNICATIONS

As a Pennsylvania certified hazardous materials response team, WEG has the communications equipment and trained personnel necessary to receive and transmit to various emergency response groups through various media. The following is a list of WEG's current inventory of communication equipment.

20- Portable radios private two-frequency channel: 438.00 & 470.00

3- Mobile radio systems: 22 channel low band frequencies in both 30-40 mhz band and 40-50 mhz band; 22 channel high band frequency; and 22 channel ultra-high band frequency

119- Cellular telephones

1- Cellular telephone on the Sea Ark

5- Marine band radios (2 portable)

On-Board Computers with Modem, CAMEO Software, and FAX

9.0 MISCELLANEOUS RESPONSE EQUIPMENT

In the event of a material release on the water or inland, WEG can provide the following additional equipment:

9.1 Response/Work/Utility Trucks

1- 24’ Box Truck with PA Required Hazardous Materials Response, Personal Protective Equipment, Tools, and Supplies

1- 16’ Van with PA Required Hazardous Materials Response, Personal Protective Equipment, Tools, and Supplies

1- Utility Truck with Level B, C, and D Personal Protective Equipment, Miscellaneous Tools, and Supplies

5- 1-Ton Pickup 4 x 4s with Electric Winch and Spot Lights

12- ¾ Ton Pickup 4 x 4s with Electric Winch and Spot Lights

1- ½ Ton Pickup 4 x 4 with Spot Lights

2- ½ Ton Pickup 2 x 2

5- Stake bed Trucks with Tarp and Lift-gate

1- 24’ Box Truck with Lift-gate

2- Decontamination trailer with showers, running hot water, and wash basins

2- 20’ Emergency Response Trailer with PA required Hazardous Materials Response, Personal Protective Equipment, Tools

9.2 Air Surveillance and Monitoring

WEG has an Air Quality Testing trailer, which can respond to an emergency situation. This trailer, manned by trained personnel, can be used to establish air quality and meteorological conditions for both upwind and downwind areas. WEG can then use the collected data to develop projections of plume movement and dispersion. In addition to personal sampling equipment, the trailer contains a variety of air surveillance instrumentation and multimedia sampling gear, including the following:

Combustible Gas Indicators and Oxygen Detectors
Carbon Monoxide Detectors
Hydrogen Sulfide Detectors
Various Colorimetric Tubes and Pumps
Photoionization Detectors (10.2, 10.5 and 11.4 eV probes)
Flameionization Detectors GC Mode and Strip Charts
Radiation Detectors and Dosimeters
Field pH/Conductivity Meters
Infrared Heat Scanners
Industrial Thermometers

9.3 Miscellaneous Equipment and Supplies

Traffic/Road Barrier Control Devices
Portable Generators, Lighting Plants, and Welders
4 – Air Compressors, 175 & 185 CFM
4 – High Velocity Exhaust Fans
2 – Pneumatic Pipe and Tank Patch Systems
4 – Air Powered Hand Tools with Spark Resistant Chisels
Spark Resistant Hand Tools – 2 sets
2 sets Chlorine Kits A, B and C
Various Basic Patch Kits
Various Spark Resistant Tools
2" Flare Stack
Drums of Different Sizes and Makes of Materials
Miscellaneous Hand Tools and Supplies
Saranex and Polyethylene Coated Tyvek Coveralls
Barricade Coveralls and Encapsulating Suits
Plain Tyvek Coveralls
PVC Coated Tyvek Coveralls
PVC Gloves
Leather, Cryogenic, Neoprene, Butyl, Nitrile, Viton, and Silvershield Gloves
PVC Booties
PVC, Neoprene, and Butyl Boots
Nomex Coveralls
NFPA Certified Level A suits

9.4 References

NFPA Fire Protection Guide of Hazardous Materials
DOT Emergency Response Guidebooks
American Railroad Emergency Action Guide
Dangerous Properties of Industrial Materials
NIOSH Pocket Guides
DOT Handling Radiation Emergencies
ACGIH Guidelines for Protective Clothing
GATX Tank Car Manual
B.O.E. Emergency Handling of Hazardous Materials in Surface Transportation
Farm Chemical Handbook
CHRIS Response Methods Handbook
Firefighters Guide to Hazardous Materials
Matheson Gas Book and First Aid
Handbook of Reactive Chemical Hazards
Merck Index
Institute of Makers of Explosives Safety Library Publication
Explosives Handbook

10.0 WEG EMERGENCY RESPONSE PROCEDURES

WEG maintains response personnel that answer the emergency telephone number at the Cecil, Pennsylvania facility 24-hours per day, 365 days per year. These individuals are trained to handle all DOT hazardous materials categories. This crew can select the appropriate emergency response equipment, prepare the necessary heavy equipment, and be enroute to the emergency within 15 to 30 minutes of receipt of an emergency call, for emergencies from the Cecil Office. For emergencies in areas north or south of Pittsburgh, Pennsylvania, crews are dispatched from WEG's, Charleston, or New Matamoras offices by the Cecil office, if not answered by personnel in those offices. Time of response is dependent upon the nature of the incident and amount and location of equipment and personnel necessary to mitigate the incident.

WEG conducts all emergency activities adhering to and exceeding all OSHA, EPA, and conformance standards (e.g. National Fire Protection Association, American National Standards Institute, Compressed Gas Association) for emergency response and material handling. For example, spill response crews upon initiation of control and containment activities are required, as specified in HAZWOPER Standard, to wear a minimum of Level B personal protection, if hazardous materials (for this purpose, substances with established OSHA Permissible Exposure Levels or ACGIH Threshold Limit Values) are present or suspected.

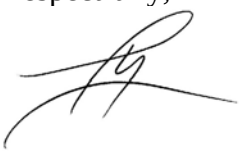
Crews will work in Level B protection until air surveillance has determined that a lower level of protection can be worn in all confined space activities. Additionally, each project manager is required to complete an emergency response health and safety plan and review with all WEG personnel before commencing spill cleanup.

WEG field supervisors or project managers, previous to leaving an incident site, review with the client, if present, the manpower, equipment, and supplies used to mitigate the incident. Forms will be used by WEG to maintain a daily record of personnel, equipment, and supplies. The client is then requested to sign the form expressing satisfaction in the work and releasing WEG crews from the incident.

WEG's primary emergency response area is within 250 miles of Carnegie/McDonald, Pennsylvania, and within 200 miles of Charleston, West Virginia. The McDonald facility is manned 24-hours a day, 365 days per year. Calls into all facilities are forwarded during non-business hours to the McDonald facility, where individuals from those offices are dispatched.

WEG is pleased to have this opportunity to submit these qualifications for emergency spill response services. If you have any questions or comments, please do not hesitate to contact Daryl Heiser or myself at (800) 746-4850.

Respectfully,



Robert Kidd
Emergency Response Administrator