

November 7-9, 2017

 <p>www.epaosc.org/rrt6-homepage</p>	<p>Meeting Location:</p> <p>US EPA Training Center 16650 Westgrove Drive Addison, Texas</p>	<p>RRT Co-Chairs:</p> <p>Ronnie Crossland, EPA Crossland.Ronnie@epa.gov</p> <p>Michael Sams, USCG Michael.K.Sams@uscg.mil</p>	<p>RRT Coordinators:</p> <p>Steve Mason, EPA Mason.Steve@epa.gov</p> <p>Todd Peterson, USCG Todd.M.Peterson@uscg.mil</p>
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RRT-6 Executive Committee Meeting – Tuesday, November 7, 2017

1:00 – 4:30 PM Executive Meeting (Invite only)

Day 1 -- RRT-6 General Session -- Wednesday, November 8, 2017

Time	Topic	Presenter / Facilitator
8:30 – 8:45 AM	Introductions / Administrative Announcements / Opening Statements	Ronnie Crossland, EPA / Michael Sams, USCG
8:45– 9:15 AM	Review of 2018 RRT Priorities / Status	Michael Sams, USCG
9:15 – 9:30 AM	Open Forum	All
9:30 – 9:45 AM	Break	
9:45 – 10:45 AM	Emergency Support Function (ESF)-10 Hurricane Response – Harvey <ul style="list-style-type: none"> Lessons Learned (Natural Disaster Operational Workgroup (NDOW), Orphan Containers, Vessels, Hazmat) 	Jimmy Martinez, TGLO Anthony Buck, TCEQ John Martin, Nick Brescia, EPA Michael Sams, USCG
10:45 – 11:15 AM	National Response Center (NRC) Notification Process	Lee Brittle, USCG
11:15 AM – 12:45 PM	Lunch	
12:45 – 1:45 PM	State Reports (NM, TX, AR, OK & LA)	State Agencies
1:45 – 2:15 PM	POSEIDON - Airborne Remote Sensing Platform for Oil Spill Response, Emergency Response and SAR support	Alessandro Vagata, Fototerra Aerial Survey
2:15 – 3:00 PM	Mission Assignments 101	Steve Mason, EPA
3:00 – 3:15 PM	Break	
3:15 – 4:15 PM	Federal Agency Reports	Federal Agencies
4:15– 4:45 PM	BSEE Oil Spill Response Research Activities	Gary Petrae, Kristi McKinney, BSEE
4:45 PM	Adjourn	

Networking Session – Location TBD

Adobe Connect: <https://epawebconferencing.acms.com/region6rrtmeeting/>

Conference Call: 866-299-3188 Pin: 214-665-2292#

Day 2 -- RRT-6 General Session -- Thursday, November 9, 2017

Time	Topic	Presenter / Facilitator	
8:30 – 9:15 AM	Integrating Response Planning into Gulf Coast Restoration	Michael Sams, USCG	
9:15 – 9:45 AM	Potential Preparedness and Response Resources	Ann Hayward Walker, SEA Consulting	
9:45 – 10:00 AM	Break		
10:00 – 10:45 AM	Integrating Oil Spill Trajectory Simulations to Guide Estimates of Human Health Risk	Dr. Helena Solo-Gabriele, University of Miami	
10:45 – 11:30 AM	Stone Energy ISRRT exercise summary	Pat Eiland, Stone Energy Roger Scheuermann, HWCG Michael Sams, USCG	
11:30 AM – 12:30 PM	Lunch		
12:30 – 1:30 PM	USCG FOSC Reports	USCG FOSCs	
1:30 – 2:30 PM	EPA FOSC Reports	EPA FOSCs	
2:30 – 2:45 PM	Open Forum	All	
2:45 – 3:00 PM	Closing Remarks	Ronnie Crossland, EPA / Michael Sams, USCG	
3:00 PM	Adjourn		
Adobe Connect: https://epawebconferencing.acms.com/region6rrtmeeting/ Conference Call: 866-299-3188 Pin: 214-665-2292#			
Dates for next RRT Meetings:	Confirmed	Spring 2018	May 9-10, 2018
	Confirmed	Fall 2018	November 7-8, 2018
	Proposed	Spring 2019	May 8-9, 2019

Office of Pipeline Safety

Pipeline and Hazardous Materials Safety Administration

Overview



November 2017
RRT6



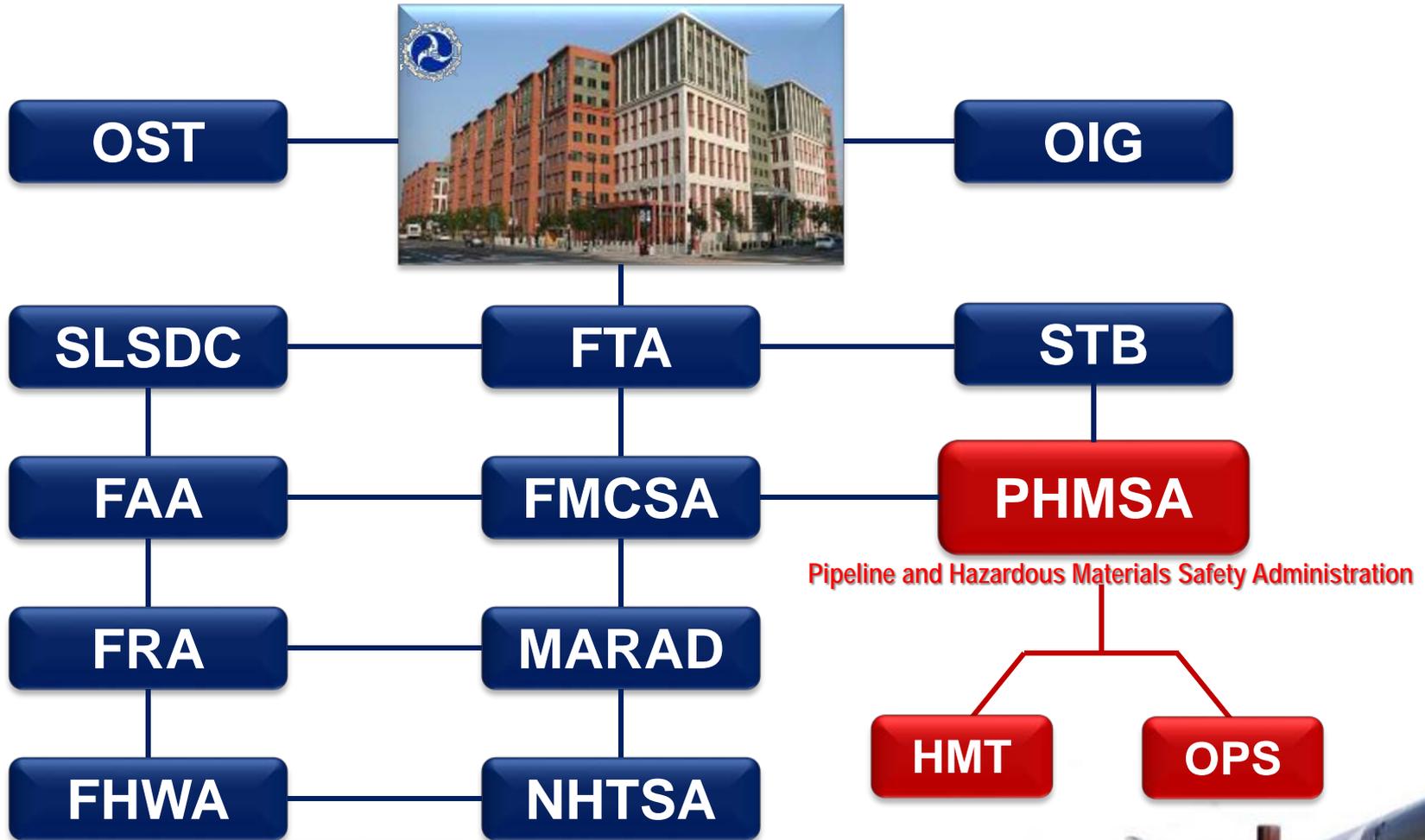
Investigate – Analyze – Prevent

To Protect People and the Environment From the Risks of
Hazardous Materials Transportation



Who is PHMSA?

U. S. Department of Transportation (DOT)



Hazardous Liquid Pipeline

212,635 miles

7,864 b.o.tanks

514 pipeline operators

Gas Transmission Pipeline

300,324 miles

1033 pipeline operators

Gas Gathering Pipeline

17,605 miles

367 pipeline operators

Gas Distribution Pipeline

Mains and Services

2,210,066 miles

1,361 pipeline operators

Liquefied Natural Gas

152 plants

223 tanks

84 operators

Pipeline Facilities by System Type – CY 2016
PDM's data as-of 11/1/2017

Regulated Facilities, Entities and Commodities

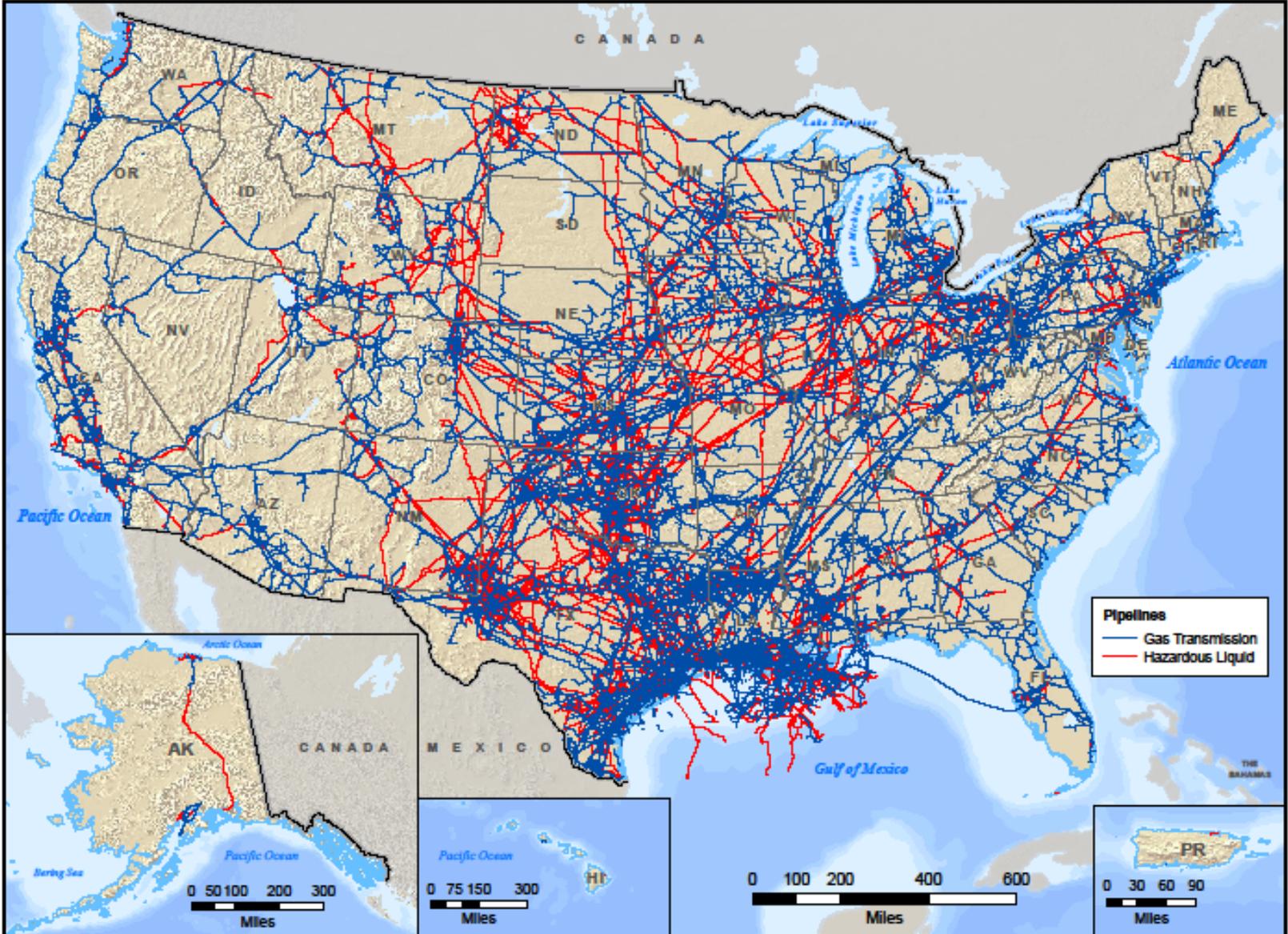




U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration
PHMSA-2016-0000001

Gas Transmission and Hazardous Liquid Pipelines in the United States

National Pipeline Mapping System



U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration
Projection: Albers Equal Area Conic
Map created August, 2016

PHMSA Regional Offices



Investigate – Analyze – Prevent

To Protect People and the Environment From the Risks of
Hazardous Materials Transportation



PHMSA

Accident Investigation Division (AID)

Motto: Investigate – Analyze – Prevent

Established April 1, 2017



PHMSA Accident Investigation Division

- **PURPOSE**

- Evaluates all reports of incidents/accidents
- Conducts Accident Investigations
- Conducts Root Cause Determinations to determine causal and contributing factors to pipeline and liquefied natural gas facility incidents
- Captures and actively shares lessons learned safety finding with internal and external stakeholders.
- Conducts education and outreach to help advance pipeline safety
- Evaluates and identify emerging safety trends



Meet AID

- Director, Peter Katchmar
- Operations Supervisor, Chris Ruhl
- Investigators
 - Brian Pierzina
 - Julie Halliday
 - Darren Lemmerman
 - Gery Bauman
 - Alex Colletti
 - Michael C. Jones
- Executive Assistant, Jennifer Loney



AID Investigation Criteria

A release of product and one or more of the following:

- Death
- Personal injury necessitating hospitalization
- Property damage exceeding \$500K
- Hazardous liquid spill of 500 or more barrels
- Fire or explosion
- Major spill into a body of water
- Pipeline systems with recent failure history
- Significant media attention
- Release impacted:
 - an HCA
 - High Population Area
 - Other Populated Areas
 - Commercially navigable waterway, or major waterbody
 - Unusually Sensitive Area (USA) - (drinking water resource, ecological, threatened species)



Opportunities to work together

- Incident coordination
 - Situational awareness
 - Evidence collection
 - Investigation
 - Pipeline Operation
- Pipeline FRPs
- Pipeline expertise





- 8/7/17, Minneapolis, MN
- 3rd Party Damage
- 100+ people evacuated (60 kids)
- Stub knocked off by bulldozer 3' below grade. Pipeline was marked earlier in the day.



Hurricane Harvey ESF-10 Texas



Anthony Buck
TCEQ

Jimmy Martinez
TGLO

John Martin
EPA

Michael Sams
USCG



Topics

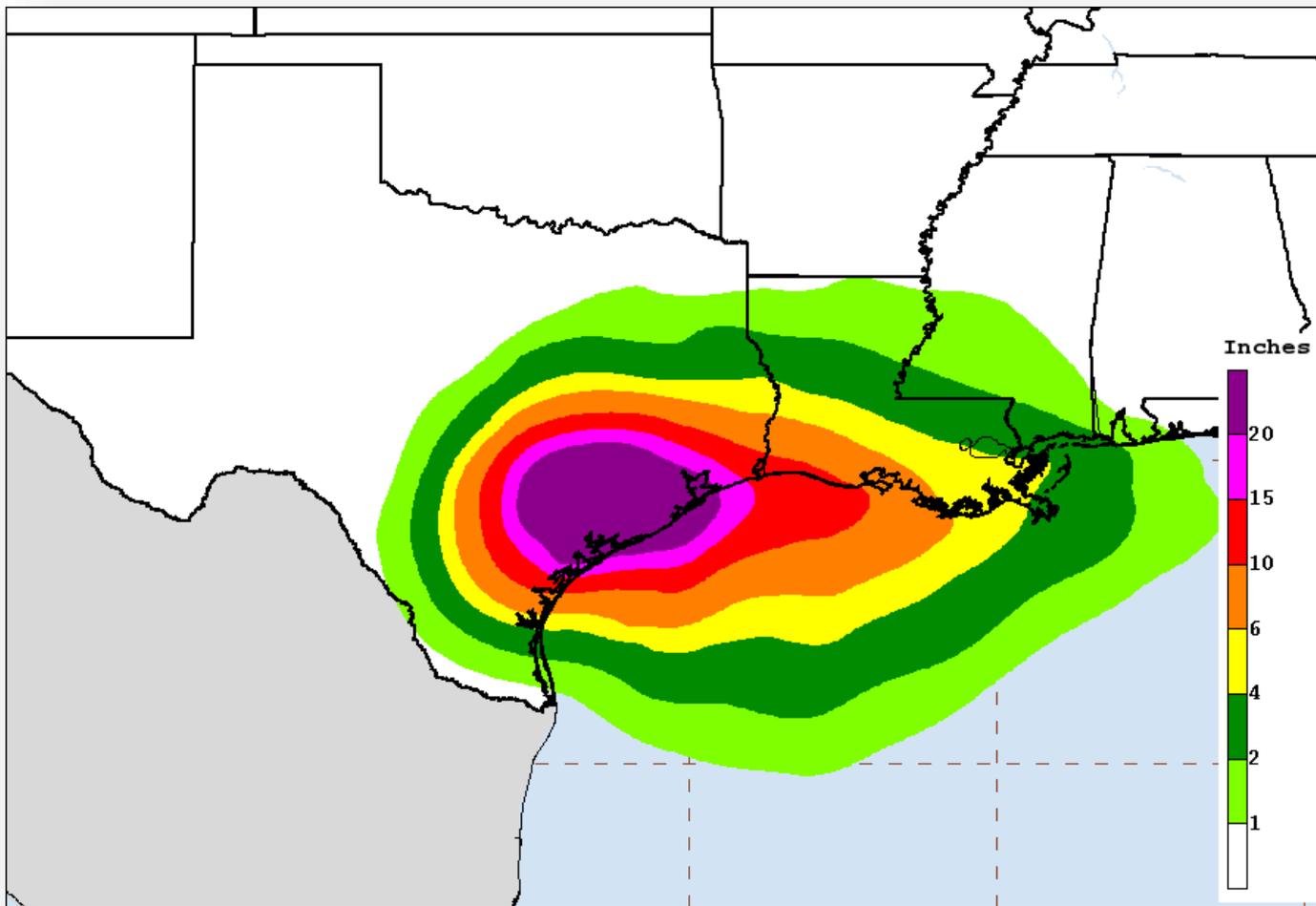
- Overview
- Pre-Landfall
- Post-Landfall
- Organization
- Response Objectives
- Priorities
- NDOW
- Missions
- Accomplishments
- Lessons Learned and Best Practices
- Status and path forward



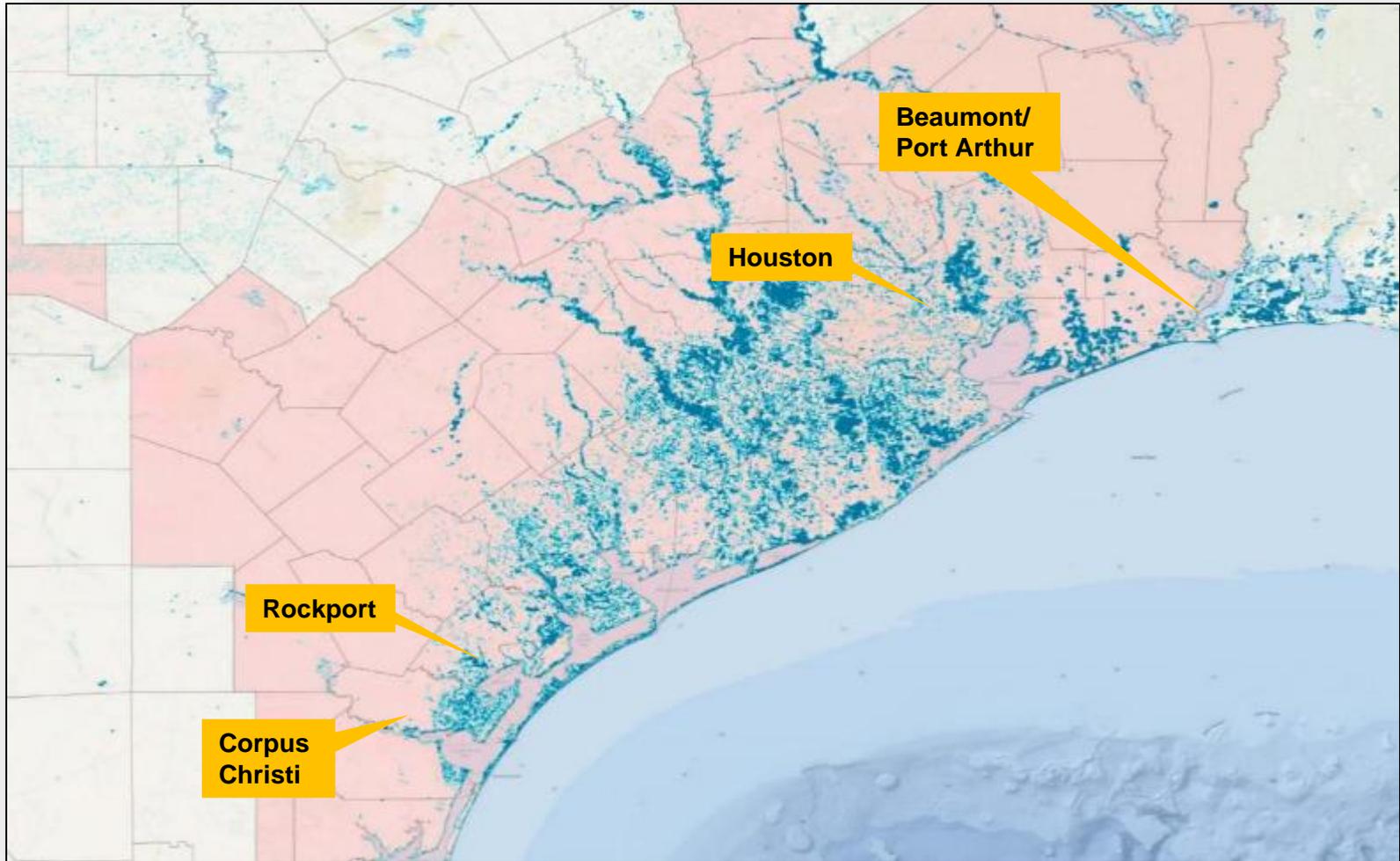
Overview



Rainfall



Flooding



Pre-Landfall

- Successful Coordination
- Agencies operating under ESF-10 began a daily unified conference call to begin planning and pinpointing potential operational needs per the forecasted impacted areas (EPA, USCG, TCEQ, TGLO).
- Agencies pre-deployed resources to safe areas to await the Hurricanes arrival.



Post-landfall

- Successful Coordination
- The US Environmental Protection Agency (EPA), Texas Commission on Environmental Quality (TCEQ), the Texas General Land Office (TGLO) and the U.S. Coast Guard (USCG) established a Unified Command to evaluate and mitigate oil and hazardous materials discharge/releases from facilities, sunken vessels and orphan containers.
- Compiled assets/resources on hand



Command and General Staff Meeting

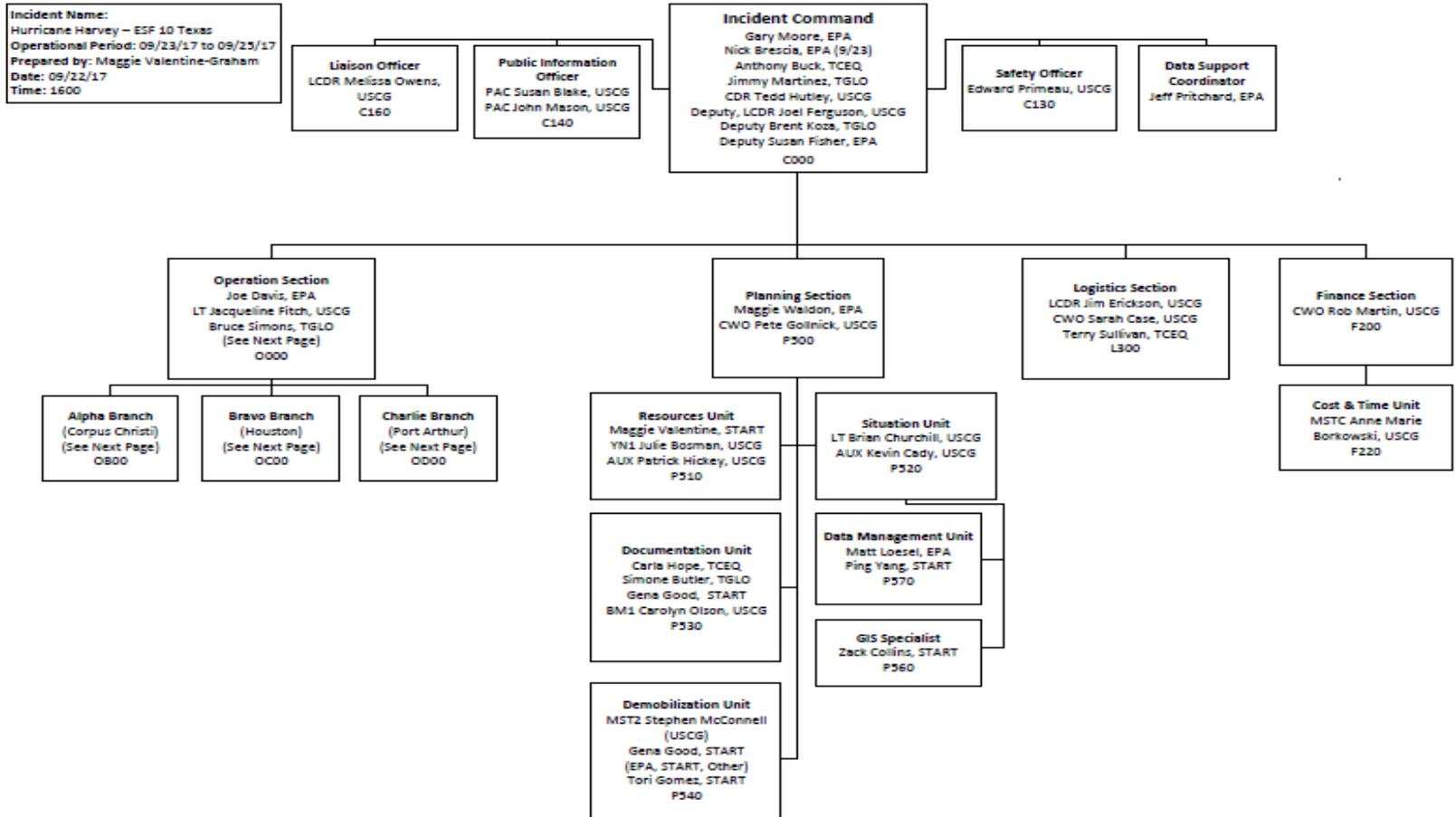


Post-landfall

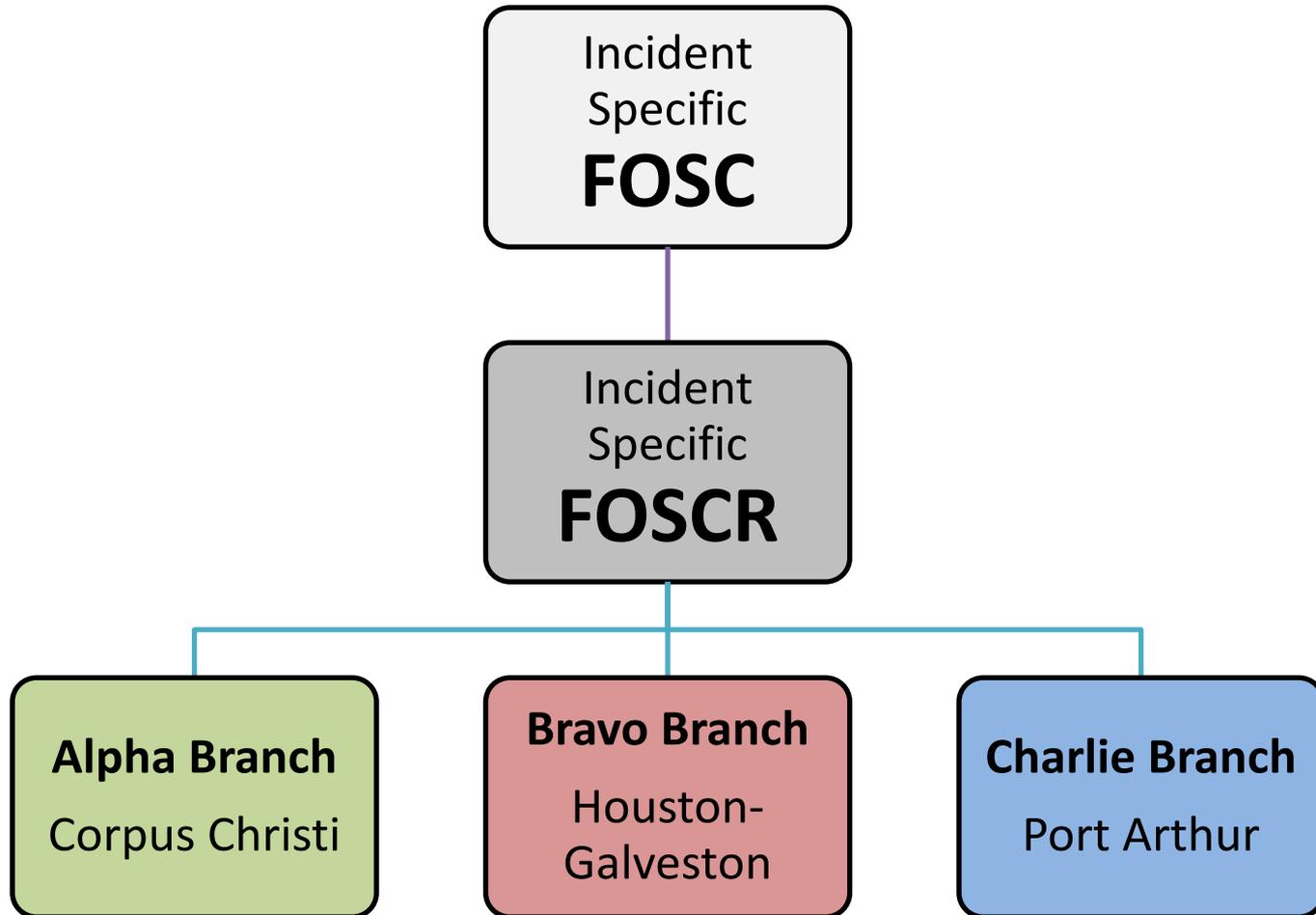
- Dispatched resources to each location and coordinated with the Unified Command Regional Offices and determined the three primary geographical impacted locations
- Created three branches under operations for the response (Alpha, Bravo, Charlie) and developed the operational structure for each location
- Operational Structure was approved and unified Incident Action Plan (IAP) process began



UC Organization



USCG ESF-10 Organization



Unified Command Mobile Command Post



RESPONSE OBJECTIVES

- **“GET TEXAS BACK TO NORMAL”**
- Maximize protection of public, health, and safety.
- Coordinate response effort through the Unified Command.
- Drinking water and wastewater systems
- Orphaned containers or discharges
- Identify and address pollution targets.
- Critical infrastructure, chemical, and refining facilities
- Inform the public, stakeholders, and the media of response
- Deploy unique EPA assets to support the unified command
- Secure Superfund sites



Priorities

- Assessment, prioritization, mitigation, and monitoring of oil and hazardous substance targets throughout impacted area utilizing Natural Disaster Operational Workgroup (NDOW) protocols
- Environmental Protection
- Information management and situational awareness
- Unified and efficient government support to the state of Texas



Natural Disaster Operational Planning Workgroup (NDOW)

- The Natural Disaster Operational Workgroup (NDOW) was created as a result of the Hurricane Ike.
- Tool to improve coordination between State and Federal Agencies operating under Emergency Support Functions (ESF)'s 3 and 10.
- The NDOW established a framework of standard operational procedures, standardized data quality objectives, one common database system, training and exercises for effective coordination of multi-agency response to man-made and natural disasters.

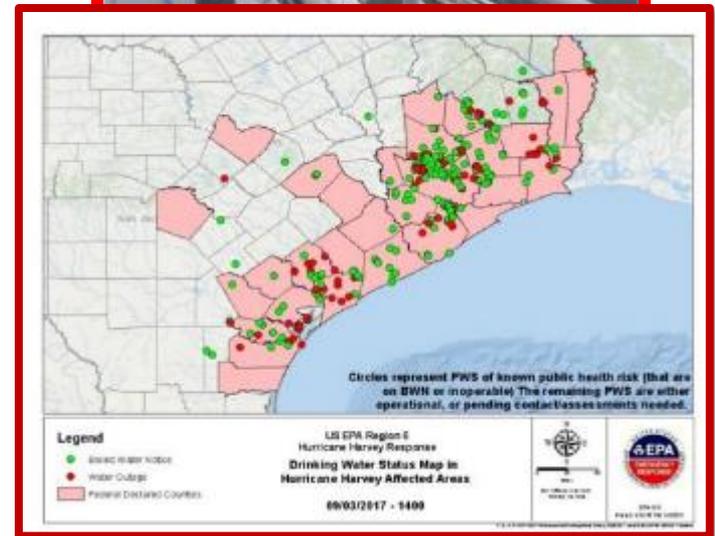
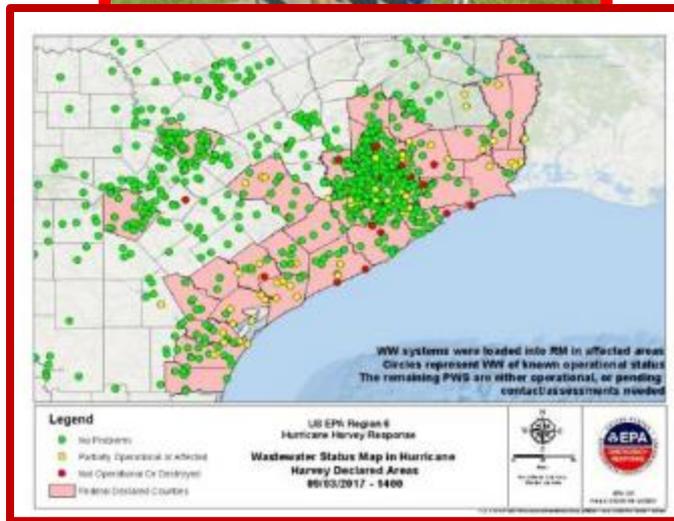


NDOW Framework

- The NDOW framework is a concept of operations and not intended to impose new, additional or unfunded net resource requirements on State or Federal agencies.
- In support of the National Incident Management System (NIMS) the framework optimally engages existing State and Federal resources and authorities, incorporating the full capabilities of all sectors.
- The NDOW intends to institutionalize and expand use of standardized procedures throughout all Gulf Coast Regional Response Team (RRT) agencies to ensure effective incident response in support of community recovery.



Drinking Water / Waste Water Assessments



Orphaned Container Recovery

Port Arthur Orphan Container Recovery



Corpus Christi – EPA OSCs
Sampling Drums at Pad in Level B

Corpus Christi Orphan
Container Recovery –
Port Aransas



Superfund Sites



ASPECT Activities

- DHS and DOE requested monitoring
- Pipelines
- Refineries
- Releases at chemical and oil facilities
- Releases and orphan containers





Arkema Chemical Facility, Crosby, TX





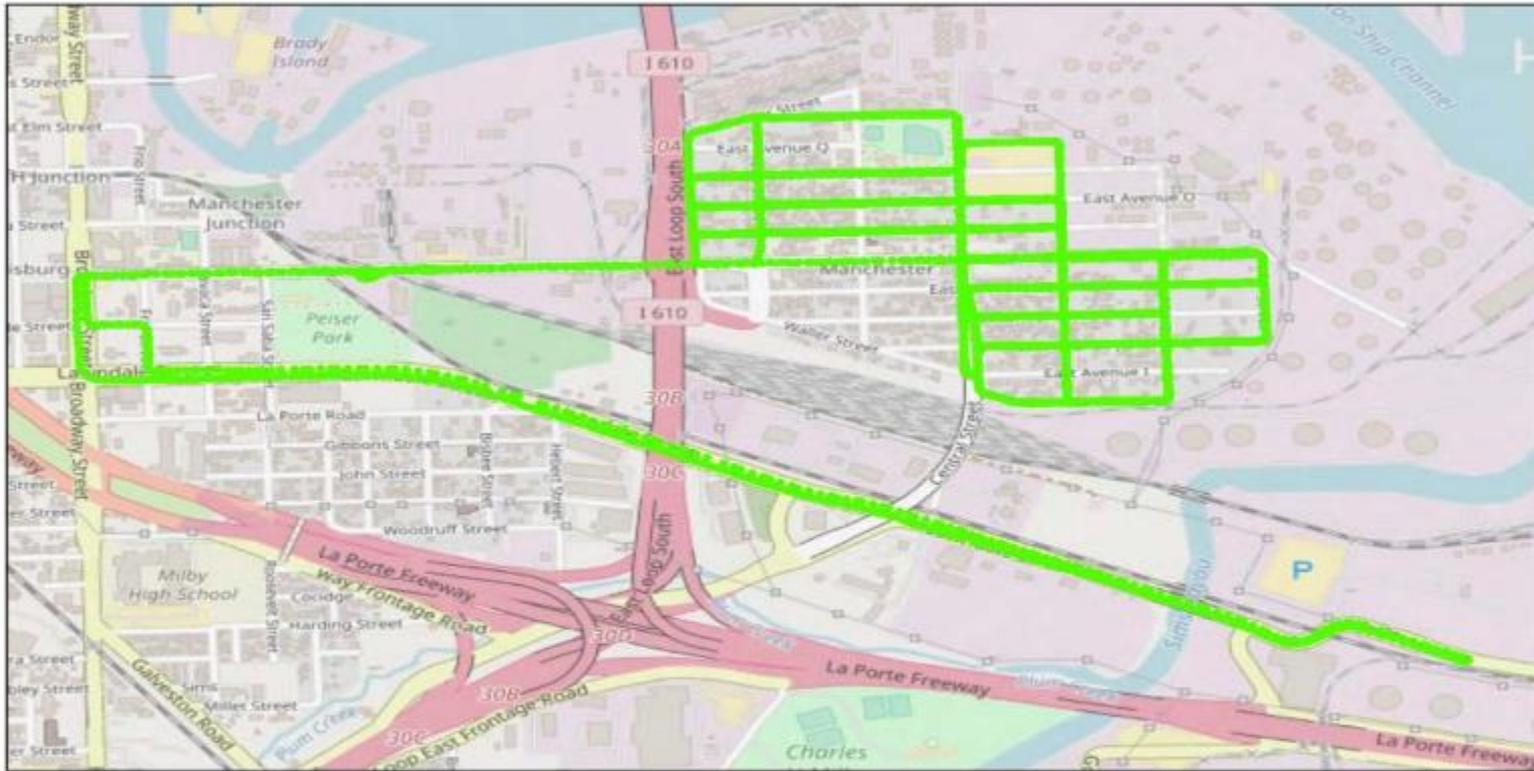
TAGA Activities



- Refinery monitoring
- Sensitive community monitoring
- Chemical manufacturing corridor monitoring



TAGA Product



Substance	CAS #	Short-term AMCV Health (ppb)
1,1-dichloroethylene	75-35-4	180
benzene	71-43-2	180
m/p-xylene	179601-23-1	1700
o-xylene	95-47-6	1700
tetrachloroethylene	127-18-4	1000
toluene	108-88-3	4000
trichloroethylene	79-01-6	100

Legend

● No Readings Above Benchmarks

What's an AMCV?
 AMCV is a collective term used to describe chemical species air concentrations used to evaluate air monitoring data that are not tested for an health and welfare. Short-term AMCVs are based on data concerning acute health effects. AMCVs only contain health-based Reference Values (RVs) and health and welfare-based ESL values. AMCVs are screening levels used in TCEQ's evaluation of ambient air monitoring data to assess the potential for measured concentrations of specific chemicals to cause health or welfare effects. Health-based AMCVs are safe levels of which exposure is unlikely to result in adverse health effects. ESLs are screening levels used by the TCEQ's air permitting process to establish maximum emission rates that are within into enforceable standards. Health-based RVs are set 10 percent lower than the safe level, or AMCV. This additional buffer allows TCEQ to take into account exposure to chemicals from multiple sources in air permit reviews.

USA EPA REGION 6 TAGA Runs on 20170905



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EPA GIS
Printed: 8:54:16 PM, 8/2/2017

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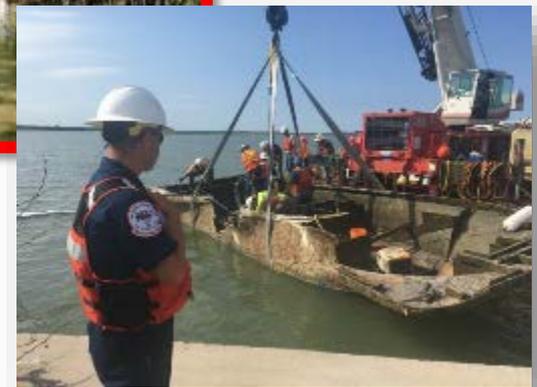
ESF-10 Missions

- Establish UC
- Evaluate/mitigate oil & hazardous materials discharge/releases from:
 - Facilities
 - Sunken vessels
 - Orphan containers



Accomplishments

- 648 Hazard Evaluations completed and closed
- 256 spills/discharge investigation completed
- 1,055 orphan containers recovered
- 625 drinking water assessments completed
- 441 waste water assessments completed
- Daily aerial over-flights for air monitoring
- Fuel waivers and No Action Assurance letters issued to support response/recovery activities
- Vessels – 108
- Oil – 51,423 gallons;
- Hazmat – 5,896 pounds
- Hazmat – 68 gallons



What made it successful?

- Open communication between all agencies prior to landfall (Daily Unified Conference calls)
- Planning activities occurred before landfall and resources were organized accordingly
- Early co-location of Unified Command operational personnel allowed efficient and coordinated operations to occur
- Meeting with State Regional Offices to determine needs and to build operational structure
- Unified Command worked very well together and solved problems as a unified team



Lessons Learned/Best Practices

1. Mission Assignments
2. Assign Incident Specific FOSC and FOSCR
3. Conduct daily conference Calls
4. Natural Disaster Operational Workgroup (NDOW) /Response Manger (RM)
5. EPA assigned a Weston Solutions RM subject matter expert to D8
6. Establish staging areas early



Further impacts

- Hurricane Harvey ESF-10 Unified Command was able to share insight and best practices with Unified Commands standing up for Hurricanes Irma and Maria



Questions





National Response Center

RRT 6 Meeting, Dallas, TX
November 8, 2017

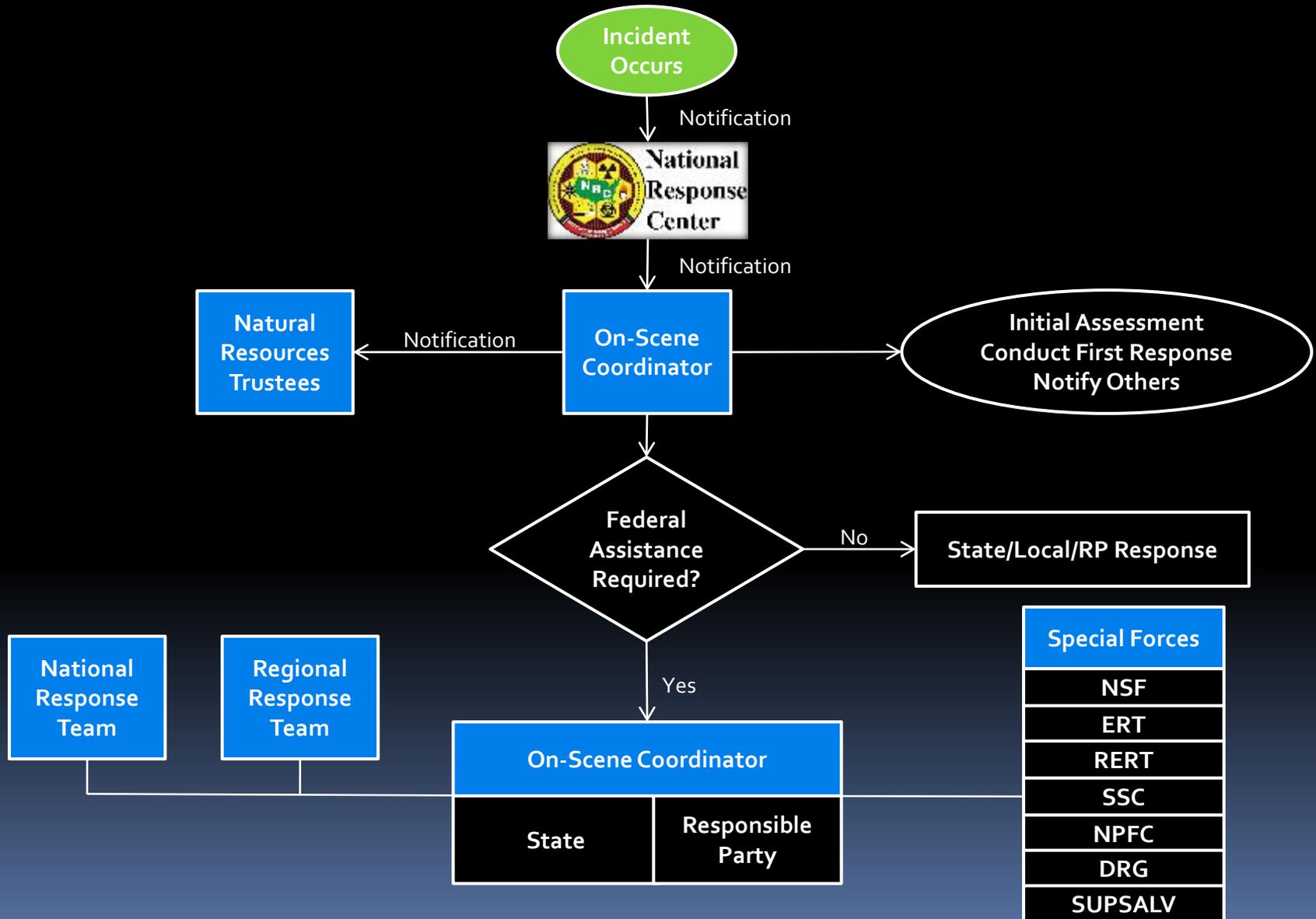
NRC Overview & Core Function

- Established in 1974 to be:
 - The SINGLE point of contact for *all* pollution incident reporting.
 - The *communications center* for the National Response Team (NRT).
- The NRC is an independent government entity managed directly by the NRT. We are NOT the USCG!

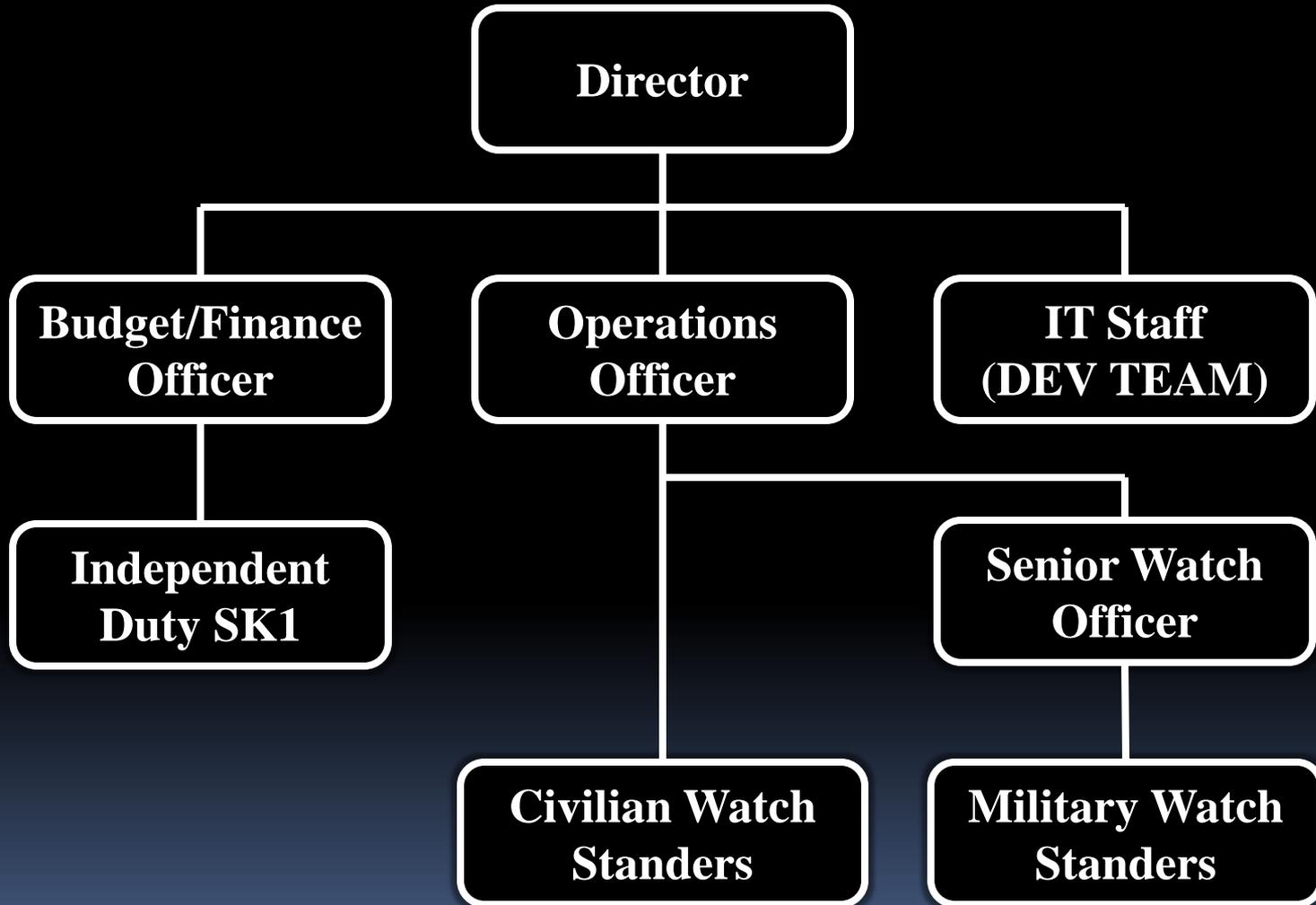
Reference: 40 CFR 300.125(a)



National Response System – Concept of Response



NRC Organizational Structure





Notification Process

Incoming call to report incident

Watchstander completes report in the NRC database (IRIS)

IRIS queues notifications

Verbal/Email/Fax
On-Scene Coordinator
(EPA/USCG)

Email/Fax
State Gov't Agencies
Local Gov't Agencies

Verbal/Email/Fax
NRT Member Agencies
Federal Agencies w/ MOA

Incident Reporting Information System (IRIS)



TRAINING Main Menu

v. 22

Take Incident Report

View Pending Notifications

Browse Reports

Maintain Lookup Tables

Query Data

IRIS Reports Menu

Recover Lost Calls

Watch Tools

EXIT IRIS

National Response Center Incident Reporting Information System

Preliminary Information

v. 22.1

Is this a DRILL? Yes No

Is this an Incident involving a RELEASE of materials? Yes No

[Next](#)

[Return to Main Menu](#)

Cancel

Report Number 5000675

Material Release

Incident Reporting and Information System

Reporting Party

Anonymous

Phone1 (800)867-5309 Type PRIMARY L

Last Name TUTONE Count

First Name JENNY

Phone2 Type L

Phone3 Type L

Company

Org Type PRIVATE CITIZEN L

Address 2703 MLK JR. AVE. SE

City WASHINGTON

State DC L

Zip 20593

Source TELEPHONE L

E-Mail jenny@gmail.com

Calling on behalf of the Responsible Party Yes No

Are You or Your Company Responsible for the Material Released Yes No

Suspected Responsible Party

Last Name UNKNOWN C U

First Name

Phone1 Type L

Phone2 Type L

Phone3 Type L

Company

Org Type UNKNOWN L

Address

City

State XX L

Zip

Copy Reporting Party Address to the Incident Location Yes No

Copy Suspected Party Address to the Incident Location Yes No

Next

Cancel

Report Number 5000675

Material Release

Incident Reporting and Information System

Incident Description

Description Of Incident CALLER STATED... E Sp

Sensitive Information E Sp

Incident Date 28-MAR-2017 Local Time 0900 ODP OCCURRED L

Type Of Incident UNKNOWN SHEEN L

Incident Cause UNKNOWN L

Incident Location

Location Description UNKNOWN SHEEN INCIDENT E

Address Location POTOMAC RIVER State DC L
County WASHINGTON D.C. L
Zip

Nearest City WASHINGTON

Distance from Nearest City Units Direction from Nearest City L

Section Township Range

Latitude Degrees Minutes Seconds Quadrant Prev

Longitude Degrees Minutes Seconds Quadrant Next

RELEASED MATERIAL(S)

	CHRIS		CAS		Name Of Material	
▲	OUN	L	000000-00-0	L	UNKNOWN OIL	L
		L		L		L
		L		L		L
▼		L		L		L

Amount	Unit		Any Reach Water?		Amount	Unit
0	UNKNOWN AMOUNT	L	YES	L	0	UNKNOWN AMOUNT
		L		L		L
		L		L		L
		L		L		L

CAMEO Chemical Search

Next Material

Prev

Next

Material In Water Information

Body of Water is Affected Offshore Yes No

Tributary of

River Mile Marker Water Supply Contaminated Yes No Unk

Wave Condition L

Current Speed L

Current Direction L

Water Temperature Degrees Fahrenheit

Sheen Information

Sheen Length Units L Sheen Width Units L

Color L

Direction of Movement L

Odor Description

[Prev](#)

[Next](#)

Cancel

Report Number 5000675

Material Release

Incident Reporting and Information System

Impact Information

Medium Affected L

Detailed Medium Info

Fire Involved Yes No Unk

Injuries Yes No Unk

Fatalities Yes No Unk

Evacuations Yes No Unk

Damages Yes No Unk

Road Closed Yes No Unk

Track Closed Yes No Unk

Passengers Transferred Yes No Unk

Air Corridor Closed Yes No Unk

Waterway Closed Yes No Unk

Environmental Impact Yes No Unk

Media Interest L

Prev

Next

Cancel

Report Number 5000675

Material Release

Incident Reporting and Information System

Weather Information

Weather Conditions PARTLY CLOUD L

Air Temperature °F °C

Wind Speed Wind Speed Unit L

Wind Direction L

Remedial Action Information

Remedial Action Taken NONE L E Sp

Release Been Secured Yes No Unk

Duration of Release Duration Unit L

Rate of Release Release Unit L Per L

Additional Agency Information

Federal Agency Notified USCG STA WASHINGTON

State/Local Agency Notified DCFD

State/Local Agency On-Scene

State Agency's Number

Additional Information

Prev

CALLER STATED...

E Sp

FINISH

Report Number

Notifications to be Made

Notify	Unitid	Type of Notification	Unit	Sub Unit	Voice Phone	
<input checked="" type="checkbox"/>	EPAIII	PRIMARY	U.S. EPA III	MAIN OFFICE	999	9999999
<input type="checkbox"/>	SECBALT	SECONDARY	SECTOR MD-NATIONAL CAF	SECTOR COMMAND C	999	9999999
<input type="checkbox"/>	USCGD5	TERTIARY	USCG DISTRICT 5	MAIN OFFICE	999	9999999

Add Notification

Additional Agencies

Notify	Unitid		Unit	Sub Unit	Voice Phone	
<input type="checkbox"/>		L				
<input type="checkbox"/>		L				
<input type="checkbox"/>		L				
<input type="checkbox"/>		L				
<input type="checkbox"/>		L				
<input type="checkbox"/>		L				

PREV

Automatic Notifications

Process Notifications

Unitid	Unit	Sub Unit
CDC	CENTERS FOR DISEASE CONTROL	GRASP
CGHSOC	DHS NOC	NOC
DCHSEM	DC HOMELAND SECURITY EMERG MGMT	COMMAND CENTER
DDOE	DISTRICT DEPT OF ENVIRONMENT	COMMAND CENTER
DHSDTRA	DHS DEFENSE THREAT REDUCTION AGENCY	CHEMICAL AND BIOLOGICAL TECH
DOTCMC	DOT CRISIS MANAGEMENT CENTER	MAIN OFFICE
NICC	NATIONAL INFRASTRUCTURE COORD CTR	MAIN OFFICE
NOAADC	NOAA RPTS FOR DC	MAIN OFFICE
NRCHQ	NATIONAL RESPONSE CENTER HQ	AUTOMATIC REPORTS
RPTPAR	REPORTING PARTY	RP SUBMITTER
SNMDIII	OFFICE OF ENV. POLICY & COMPLIANCE	MAIN OFFICE
USCGD5	USCG DISTRICT 5	D5 DRAT

GIS: CG1V GIS Viewer

Used by NRC personnel to:

- Plot location of reported incident
- Verify *USCG Captain of the Port (COTP)* zone
- Verify *EPA/USCG On-Scene Coordinator (OSC) jurisdiction*

Contents

Catalog Layers Added Layers Legend

Select from the following Map Services and Layers to add content to the map. Additional content may be added using the Map-Content functions.

- ▶ **Operational Feeds**
- ▲ **Reference Layers**
 - ▶ **Chemical**
 - ▶ **Coast Guard Boundaries**
 - ▶ **Emergency Services**
 - ▶ **Energy**
 - ▲ **Jurisdictions**
 - Coast Guard Units
 - Coast Guard Sectors
 - Captain of the Port Zones
 - Coast Guard Districts
 - Coast Guard Areas
 - Coast Guard Stations
 - Coast Guard-EPA Pollution
 - ▶ **Marine Boundaries**
 - ▶ **Telecommunications**
 - ▶ **Transportation**
 - ▶ **Charts**



Outstanding Notifications

Current User: TRAIN

[View All Users](#)

[View Current User](#) v. 22.1

[Exit](#)

	Call #	Unitid	Org/Sub Org	Calltaker	Selected	Status	Time Of Status
<input type="button" value="View"/>	5000646	DOTFAA	FEDERAL AVIATION ADMINIST	TRAIN	03/09 1131		L
<input type="button" value="Send"/>		Person Notified	SD	Voice Phone	Fax Phone	Fax Mail Page	Email
				999 9999999	202 2671322	F N N	Pager
<input type="button" value="View"/>	5000646	EPAERD	EPA OEM / MAIN OFFICE	TRAIN	03/09 1131		L
<input type="button" value="Send"/>		Person Notified	SD	Voice Phone	Fax Phone	Fax Mail Page	Email
			717	999 9999999	202 2671322	N F N	HQS-PF-fl dr-IRIS Training@
<input type="button" value="View"/>	5000646	NRC SW	NRC COMMAND DUTY OFFICE F	TRAIN	03/09 1131		L
<input type="button" value="Send"/>		Person Notified	SD	Voice Phone	Fax Phone	Fax Mail Page	Email
				999 9999999	202 2671322	N F S	HQS-PF-fl dr-IRIS Training@
<input type="button" value="View"/>	5000646	PHMSA	PIPELINE & HAZMAT SAFETY A	TRAIN	03/09 1131		L
<input type="button" value="Send"/>		Person Notified	SD	Voice Phone	Fax Phone	Fax Mail Page	Email
			796	999 9999999	202 2671322	N F N	HQS-PF-fl dr-IRIS Training@
<input type="button" value="View"/>	5000646	SECSF	SECTOR SAN FRANCISCO / MA	TRAIN	03/09 1131		L
<input type="button" value="Send"/>		Person Notified	SD	Voice Phone	Fax Phone	Fax Mail Page	Email
			760	999 9999999	202 2671322	N F N	HQS-PF-fl dr-IRIS Training@

IRIS Notifications Queue

(Radioactive material release; Miami, FL)

NOTIFICATIONS TO BE MADE

Report Number

Notifications to be Made

Notify	Unitid	Type of Notification	Unit	Sub Unit	Voice	Phone
<input checked="" type="checkbox"/>	SECMIAM	PRIMARY	SECTOR MIAMI	SECTOR MIAMI COMM	999	9999999
<input checked="" type="checkbox"/>	EPAIV	SECONDARY	U.S. EPA IV	MAIN OFFICE	999	9999999
<input type="checkbox"/>	SECKEYW	TERTIARY	SECTOR KEY WEST	MAIN OFFICE	999	9999999

Add Notification

Additional Agencies

Notify	Unitid		Unit	Sub Unit	Voice	Phone
<input checked="" type="checkbox"/>	CDC	L	CENTERS FOR DISEASE CO	MAIN OFFICE	999	9999999
<input checked="" type="checkbox"/>	DOE	L	DEPARTMENT OF ENERGY	MAIN OFFICE	999	9999999
<input checked="" type="checkbox"/>	EPAERD	L	EPA OEM	MAIN OFFICE	999	9999999
<input checked="" type="checkbox"/>	EPARERT	L	EPA RAD EMERGENCY RES	EPA HEADQUARTERS		
<input checked="" type="checkbox"/>	NRC	L	NUCLEAR REGULATORY CO	MAIN OFFICE	999	9999999
<input type="checkbox"/>		L				

PREV

Automatic Notifications

Process Notifications

Unitid	Unit	Sub Unit
DHSDNDO	DHS DOMESTIC NUCLEAR DETECTION OFC	DNDO
DHSFLCC	DHS FLORIDA COORDINATION CENTER	COORDINATION CENTER
DOTCMC	DOT CRISIS MANAGEMENT CENTER	MAIN OFFICE
EPAEOC	EPA HQ EMERGENCY OPERATIONS CENTER	MAIN OFFICE
FBISIOC	FBI STRATEGIC INFO OPERATIONS CNTR	MAIN OFFICE
FEMA	FEDERAL EMERGENCY MANAGEMENT AGEN	MAIN OFFICE
FISTSSP	FLD INTEL SUPPORT TEAM SCTR ST PETE	INTELLIGENCE SPECIALIST
FLBER	FL BUREAU OF EMERGENCY RESPONSE	BOCA RATON
FLDLE	FL DEPT OF LAW ENFORCEMENT	STATE FUSION CENTER
FLDOPF	CG-NCC	MAIN OFFICE
NICC	NATIONAL INFRASTRUCTURE COORD CTR	MAIN OFFICE
NOAAFL	NOAA RPTS FOR FL	MAIN OFFICE

1 NRC Report

Notifications:

- Fax: 4
- Email: 46
- Verbal: 7

Notifications

“The NRC receives and *immediately* relays telephone notices of discharges or releases to the appropriate predesignated federal OSC.”

“The telephone report is distributed to any interested NRT member agency or federal entity that has established a *written agreement or understanding* with the NRC.”

...and other agencies (state, local, and tribal) with whom we have established agreements for reporting incidents of a *specific interest*.

NRC Additional Reporting Programs

■ Railroad Incidents

- *Federal Railroad Administration (FRA)*
49CFR219.203 / 49CFR225.9 / 49CFR229.17 / 49CFR230.22 / 49CFR234.7
- *National Transportation Safety Board (NTSB)*
49CFR840.3

■ Hazardous Material Transportation Incidents

- *Pipeline and Hazardous Materials Safety Administration (PHMSA)*
49CFR171.15 / 49CFR191.5 / 49CFR192.612 / 49CFR195.52 / 49CFR195.413

■ Maritime Transportation Security Incidents

(Suspicious Activity and Breach of Security).

- *USCG - MTSA and AWW programs.*
33CFR101.305



NRC Hotlines

- **1-800-424-8802** (*National Pollution Hotline*)
- **Local (202)267-2675**
- **1-800-424-0201** (*Federal Railroad Administration*)
- **Local (202)267-2180**
- **1-877-24-WATCH** (*America's Waterway Watch*)
- **(202)267-4477** (*Telecommunication Device for the Deaf-TDD*)

NRC International Agreements

- **Cross-Border Spill Coordination**
 - Canada – *National Environmental Emergencies Centre (NEEC)*
 - Mexico – *National Communications Center (CENACOM)*
- **NRT Assistance Coordination**
 - Panama -- *Canal Incidents*
 - Arctic -- *Marine Oil Pollution Incidents*



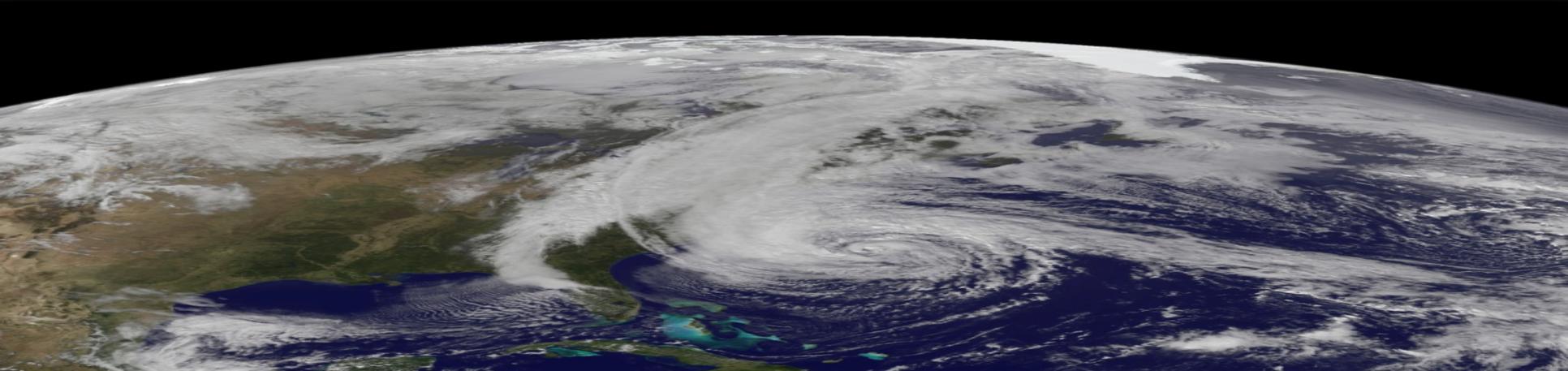
NRC Services & Resources

- ***Customized Incident Notifications*** (via application)
- **Teleconference Communication**
 - * *4 conference lines (maximum: 100 callers/line)*
- **Foreign Language Translation**
 - * *>200 languages*
- **Call Recording**
- **NRT Interaction**
 - * *Incident Summary; Activation*
- **Continuity of Operation (COOP)**
 - TWO *alternate sites*

Continuity Of Operations

The NRC maintains TWO contingency locations.

This is in the event that the primary location at CGHQ is compromised by natural *or* manmade incidents.



'Real Time' Data Transfer Services

NRC also supports 'real time' data feeds to:

USCG: *Marine Information for Safety and Law Enforcement (MISLE)*

EPA : *WebEOC*

DOT: *Hazardous Materials Information System (HMIS)*

Information Requests/FOIA

- You may try to retrieve the data by going to www.nrc.uscg.mil and reviewing the yearly NRC exported spreadsheets.
- This information is updated weekly. The online spreadsheets contain all the information the NRC will release via the FOIA process and excludes security related reports.
- If you cannot locate the information that you are looking for or believe that the report is protected by the Privacy Act, you may submit a **Freedom of Information Act** request in writing to the following address:

Commandant (CG-611)

Attn: FOIA Officer

U.S. Coast Guard Stop 7710

2703 Martin Luther King Jr. Ave. SE

Washington, D.C. 20593-7710

- Submission of FOIA requests *via electronic means* can be sent to the email efoia@uscg.mil.

	A	B	C	D	E	F	G	H
1	SEQNOS	DATE TIME RECEIVED	DATE TIME COMPLETE	CALLTYPE	RESPONSIBLE COMPANY	RESPONSIBLE ORG TYPE	RESPONSIBLE CITY	RESPONSIBL
2	1167571	1/1/2017 0:05	1/1/2017 0:08	INC	ENERGY TEXAS, INC.	PUBLIC UTILITY	BEAUMONT	TX
3	1167574	1/1/2017 3:51	1/1/2017 3:55	INC	ULTA MESA SERVICES	PRIVATE ENTERPRISE	HOUSTON	TX
4	1167575	1/1/2017 5:00	1/1/2017 5:04	INC		UNKNOWN		XX
5	1167576	1/1/2017 7:21	1/1/2017 7:27	INC	KINDER MORGAN ENERGY	PRIVATE ENTERPRISE	SAN JOSE	CA
6	1167579	1/1/2017 9:37	1/1/2017 9:45	INC		UNKNOWN		XX
7	1167580	1/1/2017 9:45	1/1/2017 9:48	INC		UNKNOWN		XX
8	1167581	1/1/2017 10:15	1/1/2017 10:19	INC		UNKNOWN		XX
9	1167582	1/1/2017 11:27	1/1/2017 11:43	INC	FLINT HILLS RESOURCES - WEST REFINERY	PRIVATE ENTERPRISE	CORPUS CHRISTI	TX
10	1167584	1/1/2017 12:22	1/1/2017 12:29	INC	SOUTHERN NH HYRDO ELECTRIC	PRIVATE ENTERPRISE	SOUTHBERWICK	ME
11	1167586	1/1/2017 12:31	1/1/2017 12:34	INC		UNKNOWN		XX
12	1167589	1/1/2017 13:26	1/1/2017 13:38	INC	TORM A/S	PRIVATE ENTERPRISE	COPEHAGAN, DENMARK	XX
13	1167591	1/1/2017 13:51	1/1/2017 13:54	INC		UNKNOWN		XX
14	1167592	1/1/2017 14:16	1/1/2017 14:21	INC		UNKNOWN		XX
15	1167593	1/1/2017 14:46	1/1/2017 14:53	INC		UNKNOWN		XX
16	1167594	1/1/2017 15:02	1/1/2017 15:09	INC		UNKNOWN		XX
17	1167595	1/1/2017 15:04	1/1/2017 15:11	INC		UNKNOWN		XX
18	1167600	1/1/2017 15:43	1/1/2017 15:52	INC	ALON REFINERY USA	PRIVATE ENTERPRISE	KROTZ SPRINGS	LA
19	1167601	1/1/2017 16:15	1/1/2017 16:26	INC	FLORIDA MARINE TRANSPORTERS	PRIVATE ENTERPRISE	MANDEVILLE	LA
20	1167602	1/1/2017 17:00	1/1/2017 17:18	INC		PRIVATE CITIZEN		XX
21	1167604	1/1/2017 17:31	1/1/2017 17:40	INC	MAERSK TANKERS	PRIVATE ENTERPRISE		XX
22	1167605	1/1/2017 18:08	1/1/2017 18:14	INC		UNKNOWN		XX
23	1167606	1/1/2017 18:38	1/1/2017 18:47	INC	NOBLE DRILLING	PRIVATE ENTERPRISE	SUGARLAND	TX
24	1167608	1/1/2017 21:57	1/1/2017 22:01	INC		UNKNOWN		XX
25	1167609	1/1/2017 22:24	1/1/2017 22:31	INC		UNKNOWN		XX
26	1167610	1/1/2017 22:50	1/1/2017 22:54	INC		UNKNOWN		XX
27	1167611	1/1/2017 22:59	1/1/2017 23:09	INC	SOUTHWEST GAS	PRIVATE ENTERPRISE	TUCSON	AZ
28	1167613	1/2/2017 1:30	1/2/2017 1:34	INC		UNKNOWN		XX
29	1167614	1/2/2017 8:04	1/2/2017 8:07	INC	SANDERSON FARMS	PRIVATE ENTERPRISE	LAUREL	MS
30	1167615	1/2/2017 8:39	1/2/2017 8:48	INC	NESTLE PROFESSIONAL BEVERAGE	PRIVATE ENTERPRISE	CHICAGO	IL

NRC Statistical Data FY 2017

01 OCT 2016 – 30 SEP 2017

Total Reports Generated	29,976
<i>*Drill Reports</i>	1,658
Agency Notifications	595,501

Number of Reports by Incident Cause (top 10)

01 OCT 2016 – 30 SEP 2017

Unknown	9,463
Equipment Failure	6,552
<i>Suspicious Activity</i>	2,930
Other	2,621
Operator Error	2,092
<i>Trespasser</i>	1,127
Vessel Sinking	1,091
<i>Security Breach</i>	1,027
Dumping	834
Natural Phenomenon	610

Contact the NRC:

24 hours a day, 7 days a week, 365 days a year

1 (800) 424-8802

nrc@uscg.mil

MSTC Horace “Lee” Brittle

Senior Watch Officer, NRC

Horace.L.Brittle@uscg.mil

(202)372-2430

Questions?



NATIONAL RESPONSE CENTER
1-800-424-8802

Airborne Oil Spill Remote Sensing: POSEIDON



REGION 6 Regional Response Team Meeting

November 8th, 2017

EPA Region 6 Training Center - Addison, TX



The Needs. Industry and Government Recommendations for effective Airborne Remote Sensing platforms. DWH aftermath.

Intelligence on the Scene. POSEIDON Mission System: Multi-Sensors Suite, Real Time Data Processing and Communications Network.

Key Advantages. Benefits for Emergency Response, Natural Resources Damage Assessment and Preparedness.

Missions Examples. Texas Coast Monitoring – Hurricane Harvey Assessment Flights





GAP ANALYSIS - In the aftermath of Deepwater Horizon Spill, Industry, University, Governmental Agencies (*) got together in order to focus on **needs for future technologies** to improve oil observations to support a response. The conclusions suggested that for the oil responder community an **effective airborne platform is a must**, and should feature:

Need for:

- **MULTIPLE SENSORS FOR COMPLEMENTARITY/REDUNDANCY;**
- **CLASSIFICATION OF POLLUTANTS, NO FALSE-POSITIVE;**
- **IDENTIFICATION OF OIL TARGETS AS RECOVERABLE OR NON-RECOVERABLE;**
- **GEOREFERENCING THE TARGETS AND TRACKING MOVING OIL;**
- **REAL TIME INFORMATION - FOR TACTICAL AND STRATEGIC USE;**
- **DATA SUITABLE FOR THE COMMON OPERATING PICTURE;**
- **EXPANDING THE OPERATING WINDOW TO LOW-LIGHT CONDITIONS;**
- **READINESS OF CREW AND PLATFORM.**

(*) *Industry and Government Agencies include:*

API - American Petroleum Institute

IGOP – International Association of Oil & Gas Producers

ICCOPR (USCG, NOAA, BSEE, etc.)



POSEIDON

The Answer

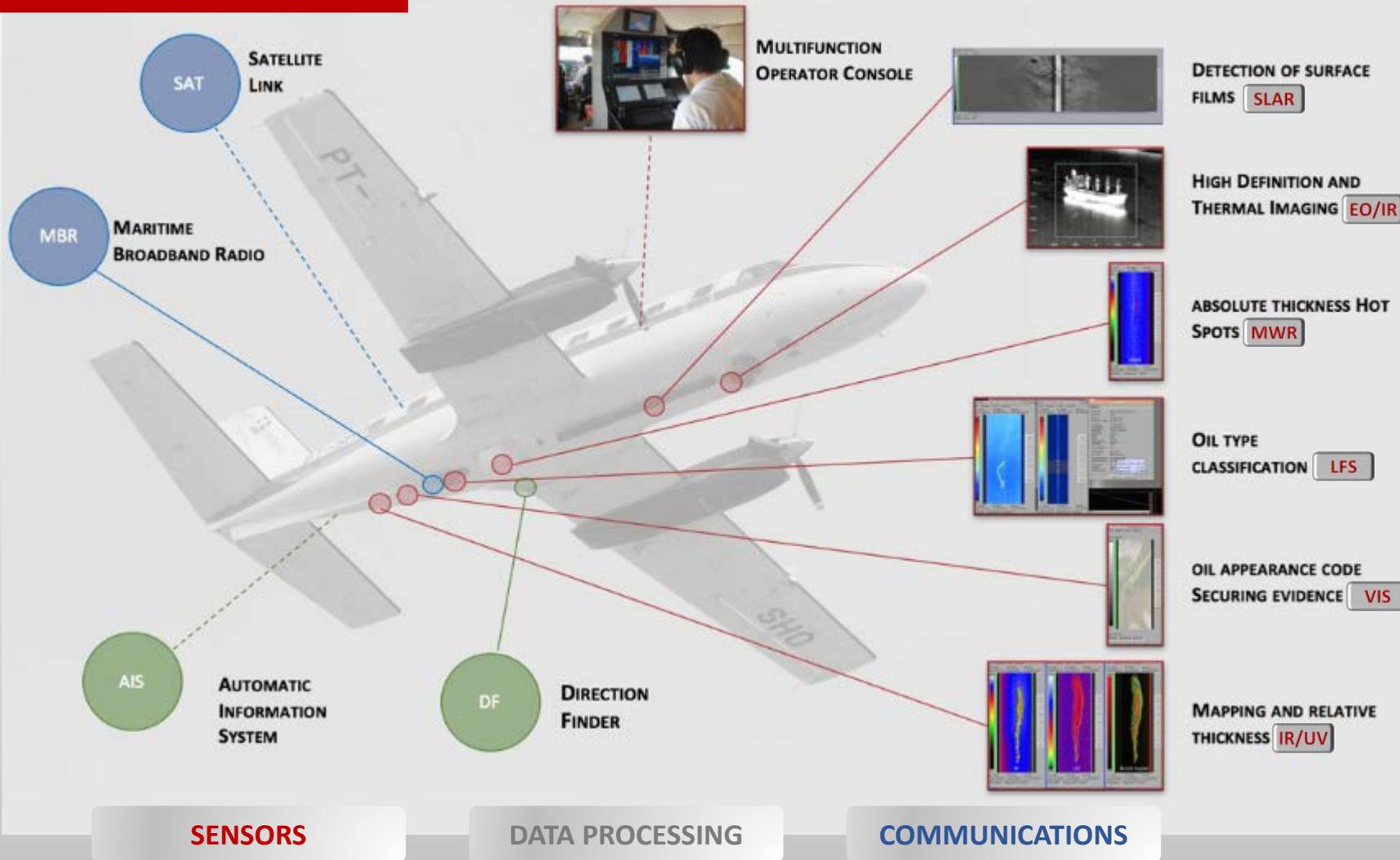


Based in Houston, TX Poseidon entered in service in July 2016. Participating in a program coordinated by BSEE and NOAA to assess new technologies for aerial remote sensing.



Intelligence on the Scene

POSEIDON MISSION SYSTEM



Mission Profile



STEP 1

Far Range Detection

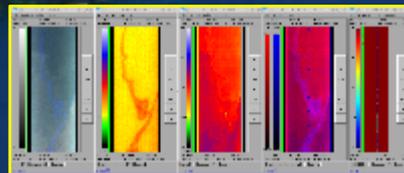
3,000 ft



STEP 4

Data Transfer

3,000 ft or higher



STEP 2

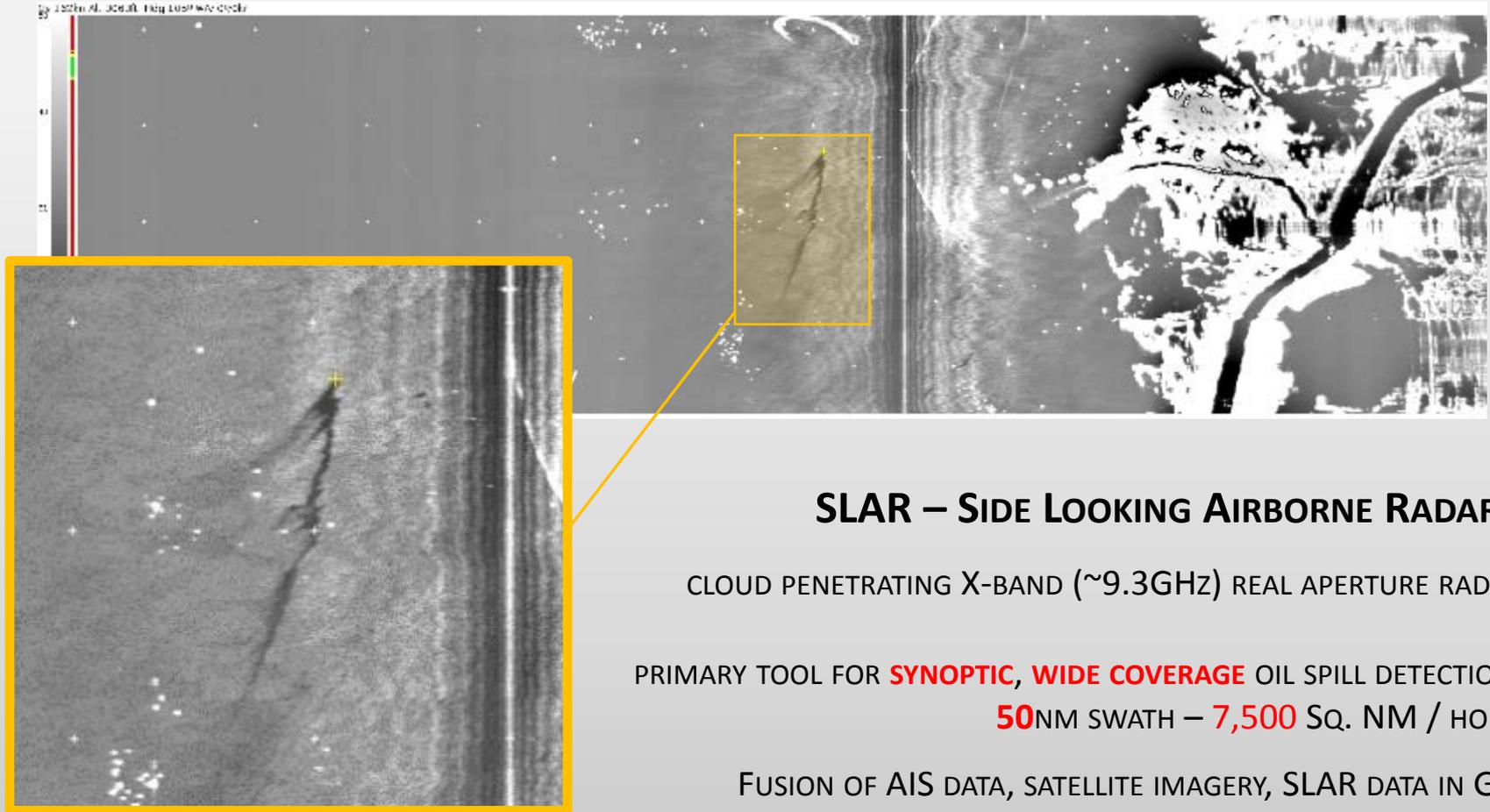
Near Range Analysis

1-3,000 ft

STEP 3

Data Processing





SLAR – SIDE LOOKING AIRBORNE RADAR

CLOUD PENETRATING X-BAND (~9.3GHz) REAL APERTURE RADAR

PRIMARY TOOL FOR **SYNOPTIC, WIDE COVERAGE** OIL SPILL DETECTION.

50NM SWATH – 7,500 SQ. NM / HOUR

FUSION OF AIS DATA, SATELLITE IMAGERY, SLAR DATA IN GIS ENVIRONMENT



Intelligence on the Scene

STEP 1 - Far Range Detection

EO/IR – ELECTRO-OPTICAL INFRARED

- HIGH DEFINITION AND THERMAL IMAGING
- VISUAL ASSESSMENT OF THE SPILL
- NAVIGATION
- SAR SUPPORT
- NATURAL RESOURCE DAMAGE ASSESSMENT



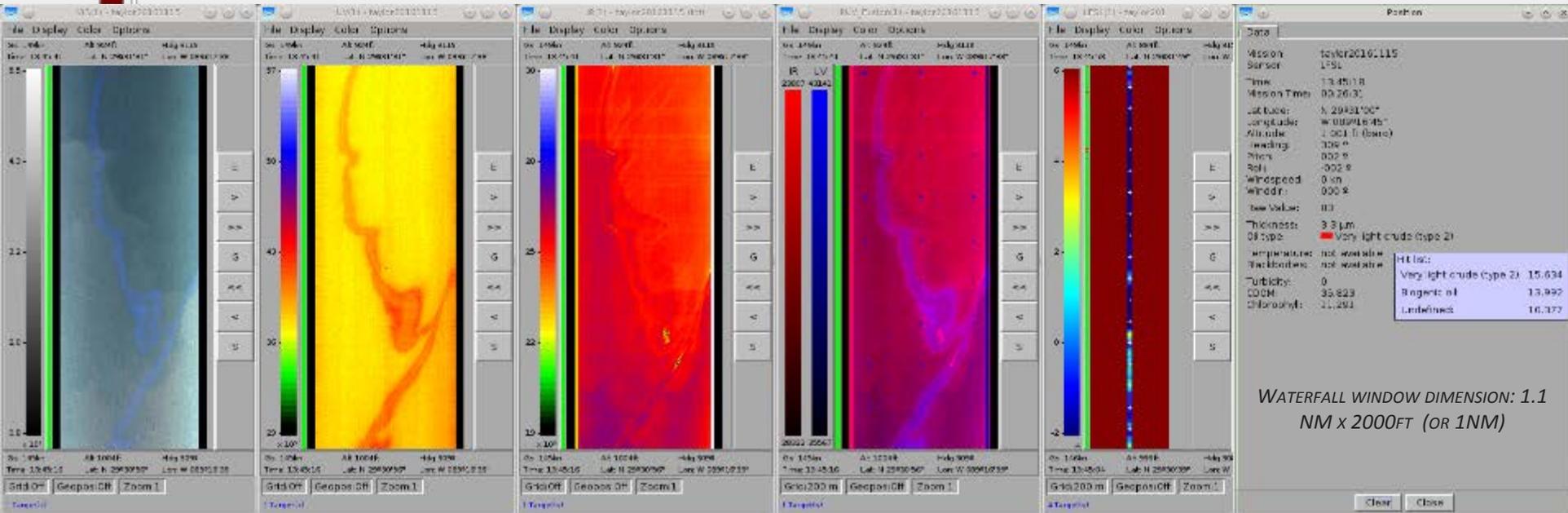
Intelligence on the Scene

STEP 2 - Near Range Analysis

ACCURATE ANALYSIS OF THE OIL SPILL

- EACH SENSOR DETECTS SPECIFIC FEATURES OF THE SPILL FOR A PRECISE TARGET DEFINITION.
- NIGHT AND DAY SPILL DETECTION

- THICKNESS DISTRIBUTION [μm]
- VOLUME [gal]
- HOT SPOTS
- OIL CLASSIFICATION
- AREA
- POSITION
- COVERAGE
- DRIFT
- SPREADING



WATERFALL WINDOW DIMENSION: 1.1 NM x 2000FT (OR 1NM)

VIS

UV

IR

Fusion IR/UV

MWR

LFS

OIL APPEARANCE

SENSITIVE ABOVE **0.01 μm** LAYERS (UV) AND **2 μm** LAYERS (IR).
 AREA / POSITION / COVERAGE % / DIMENSION / RELATIVE THICKNESS
 DRIFT / SPREADING / VOLUME ESTIMATE

ABSOLUTE THICKNESS
 MEASUREMENT

OIL CLASSIFICATION
 ABSOLUTE THICKNESS MEASUREMENT
0.1 to 20 μm
 VOLUME ESTIMATION



WEB BASED GIS DATA DISTRIBUTION

REAL TIME INFORMATION

Polygon	Area [km ²]	Center Coordinates	Coverage. [%]	Orientation. [°]	Dimension. [NM]
P4	2.639	N 29°30'36" W 089°16'35"	31	299	0.615 / 4.044

Thickness: 7.6 μ m
Oil Type: Very Light Crude (Type 2).

SLAR

- Sensor - IR
 - ir01
 - ir02
 - ir03
- Sensor - UV
 - uv01
 - uv02
 - uv03
- Sensor - VIS
 - vis01
 - vis02
 - vis03
- Sensor - Slar
 - slar01
 - slar02
- Thickness
 - thickness
 - raster thickness
 - shape thickness



COMMON OPERATING PICTURE

UNDERSTAND

THE SCENARIO

DECIDE

THE ACTIONS

CONTROL

THE RESULTS



WEB BASED GIS DATA DISTRIBUTION

The screenshot displays a web-based GIS application interface. At the top, there is a toolbar with various icons for navigation and measurement. Below the toolbar, a map shows a large body of water with a red outline indicating a specific area of interest. A yellow label 'IR' is placed over the map. On the left side, a red banner reads 'REAL TIME INFORMATION' above a list of data points. On the right side, a panel lists various sensor and thickness data layers.

REAL TIME INFORMATION

- ✓ Area (NM²)
- ✓ Position (Lat, Lon)
- ✓ Coverage (%)
- ✓ Thickness Distribution (μm)
- ✓ Volume (Gal)
- ✓ Hot Spots
- ✓ Drift, Spreading (NM/h, NM²/h)
- ✓ Oil Classification
- ✓ Georeferencing
- ✓ AIS data fusion

Sensor - IR

- ir01
- ir02
- ir03

Sensor - UV

- uv01
- uv02
- uv03

Sensor - VIS

- vis01
- vis02
- vis03

Sensor - Slar

- slar01
- slar02

Thickness

- thickness
- raster thickness
- shape thickness



COMMON OPERATING PICTURE

UNDERSTAND

THE SCENARIO

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WEB BASED GIS DATA DISTRIBUTION

REAL TIME INFORMATION

- ✓ Area (NM²)
- ✓ Position (Lat, Lon)
- ✓ Coverage (%)
- ✓ Thickness Distribution (μm)
- ✓ Volume (Gal)
- ✓ Hot Spots
- ✓ Drift, Spreading (NM/h, NM²/h)
- ✓ Oil Classification
- ✓ Georeferencing
- ✓ AIS data fusion

UV

Sensor - IR

- ir01
- ir02
- ir03

Sensor - UV

- uv01
- uv02
- uv03

Sensor - VIS

- vis01
- vis02
- vis03

Sensor - Slar

- slar01
- slar02

Thickness

- thickness
- raster thickness
- shape thickness



COMMON OPERATING PICTURE

UNDERSTAND

THE SCENARIO

DECIDE

THE ACTIONS

CONTROL

THE RESULTS



WEB BASED GIS DATA DISTRIBUTION

The screenshot displays a web-based GIS application interface. At the top, there is a toolbar with various icons for navigation and editing, including a 'Measure type' dropdown set to 'Length'. The main area shows a satellite map of a coastal region with a red outline. A yellow callout box labeled 'VIS' points to a specific sensor in the legend. On the left, a 'REAL TIME INFORMATION' panel lists various data points with green checkmarks. On the right, a legend panel shows a tree view of sensor and thickness layers.

REAL TIME INFORMATION

- ✓ Area (NM²)
- ✓ Position (Lat, Lon)
- ✓ Coverage (%)
- ✓ Thickness Distribution (μm)
- ✓ Volume (Gal)
- ✓ Hot Spots
- ✓ Drift, Spreading (NM/h, NM²/h)
- ✓ Oil Classification
- ✓ Georeferencing
- ✓ AIS data fusion

Legend:

- ▼ Sensor - IR
 - ir01
 - ir02
 - ir03
- ▼ Sensor - UV
 - uv01
 - uv02
 - uv03
- ▼ Sensor - VIS
 - vis01
 - vis02
 - vis03
- ▼ Sensor - Slar
 - slar01
 - slar02
- ▼ Thickness
 - thickness
 - raster thickness
 - shape thickness



COMMON OPERATING PICTURE

UNDERSTAND

THE SCENARIO

DECIDE

THE ACTIONS

CONTROL

THE RESULTS



WEB BASED GIS DATA DISTRIBUTION

REAL TIME INFORMATION

✓	Area (NM ²)
✓	Position (Lat, Lon)
✓	Coverage (%)
✓	Thickness Distribution (µm)
✓	Volume (Gal)
✓	Hot Spots
✓	Drift, Spreading (NM/h, NM ² /h)
✓	Oil Classification
✓	Georeferencing
✓	AIS data fusion

shape thickness

- 8 - 10 µm
- 6 - 8 µm
- 4 - 6 µm
- 2 - 4 µm
- 0 - 2 µm

THK

- Sensor - IR
 - ir01
 - ir02
 - ir03
- Sensor - UV
 - uv01
 - uv02
 - uv03
- Sensor - VIS
 - vis01
 - vis02
 - vis03
- Sensor - Slar
 - slar01
 - slar02
- Thickness
 - thickness
 - raster thickness
 - shape thickness

- THE THICKNESS MAP IS ORIGINATED WITH DATA ACQUIRED WITH IR/UV, MWR (20HZ SCAN FREQUENCY) AND LFS (10HZ REPETITION RATE) THAT MEASURED THE ABSOLUTE THICKNESS.
- THICKNESS DATA POINT ARE ACQUIRED EVERY 4-9M (12-30FT).



COMMON OPERATING PICTURE

UNDERSTAND

THE SCENARIO

DECIDE

THE ACTIONS

CONTROL

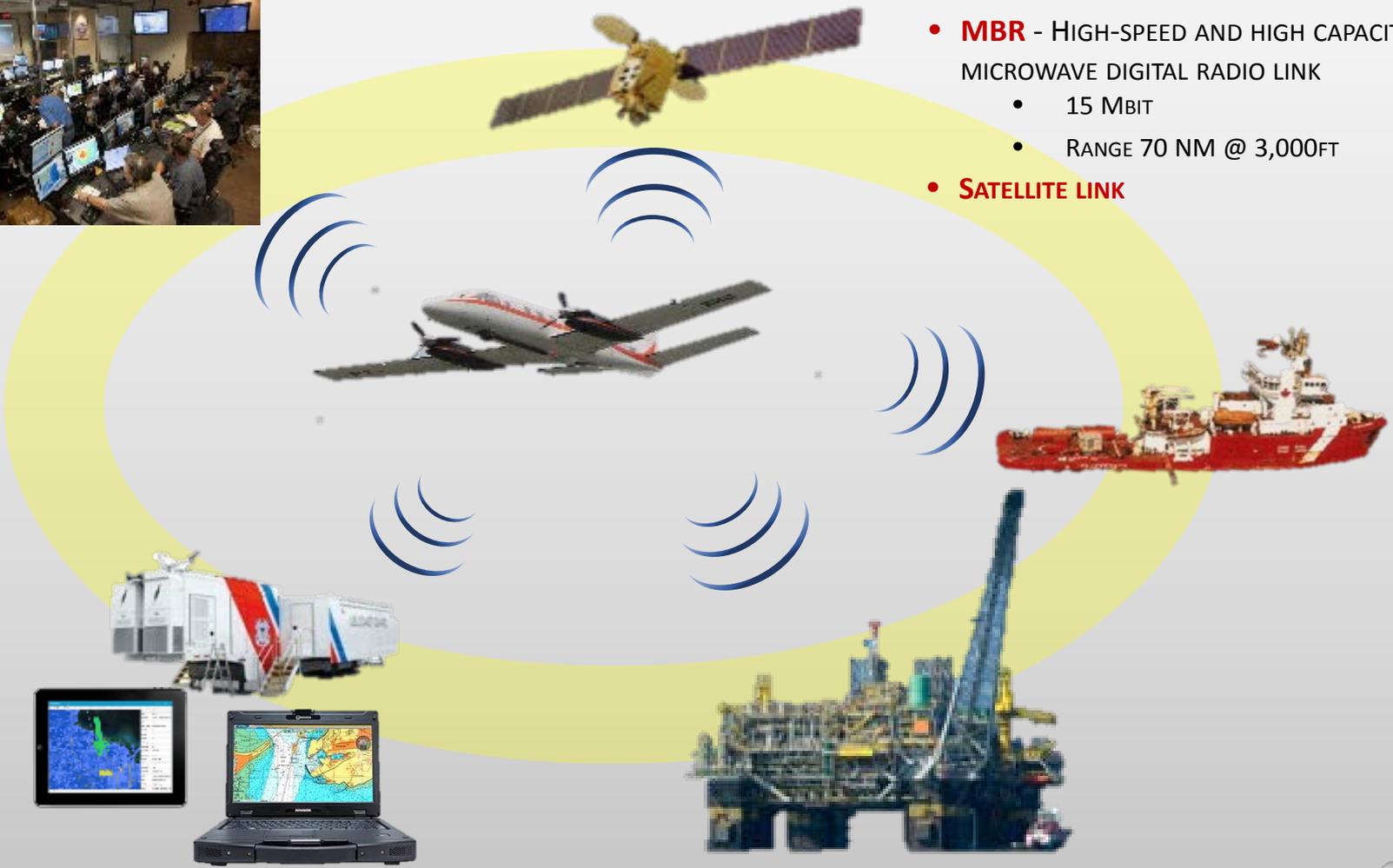
THE RESULTS





Intelligence on the Scene

STEP 4 – Information Delivery



COMMUNICATION NETWORK

- **MBR** - HIGH-SPEED AND HIGH CAPACITY MICROWAVE DIGITAL RADIO LINK
 - 15 MBIT
 - RANGE 70 NM @ 3,000FT
- **SATELLITE LINK**



- SPOTTER PLANE VISUAL ASSESSMENT

INFORMATION?



- SPOTTER PLANE VISUAL ASSESSMENT



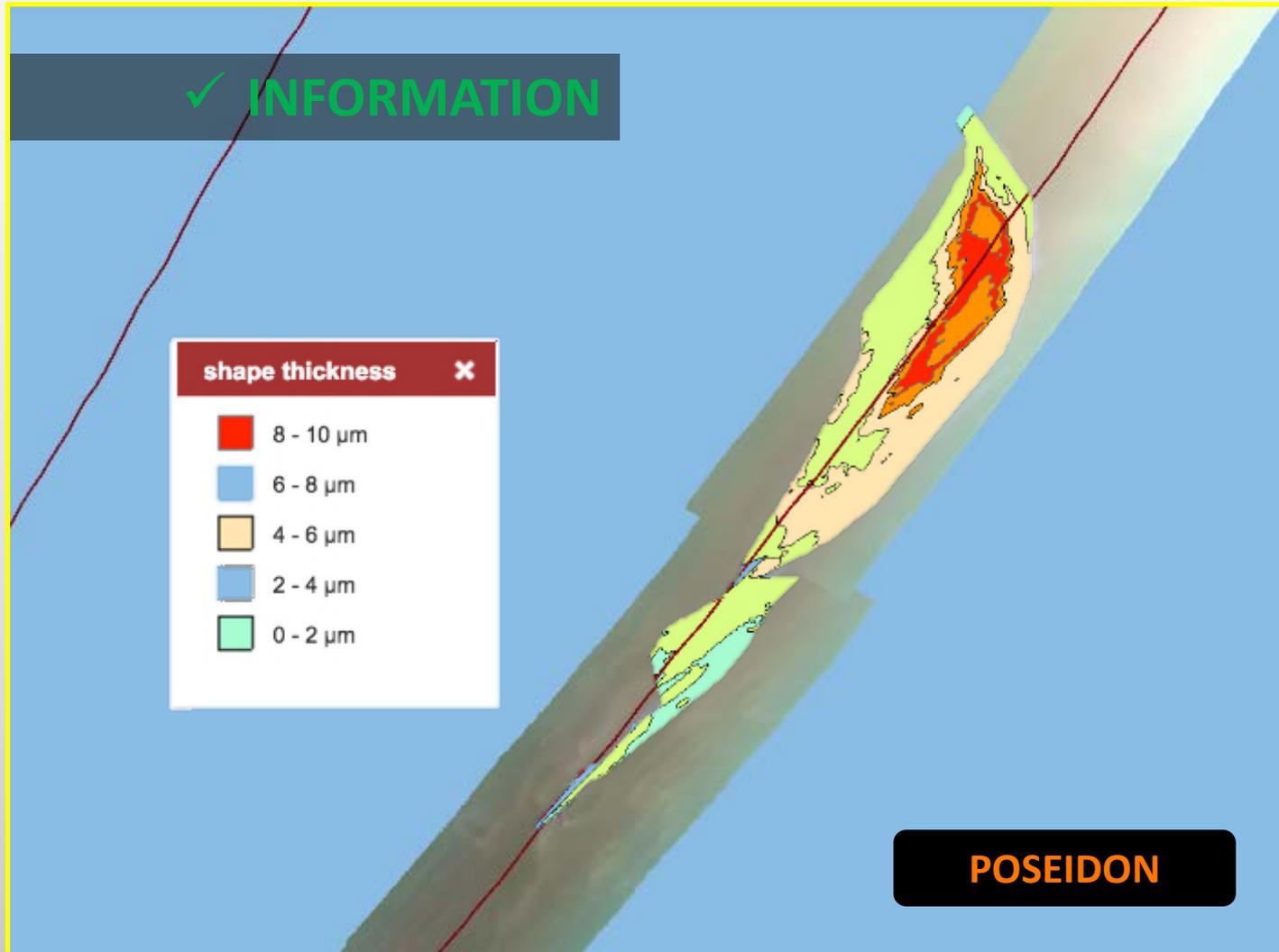
- Naked Eye (2 NM?);
- Digital Still & Video Camera;
- Expert Observer;
- Often Vessels are deployed and stand-by (tens of thousand dollars per day);
- Spotter plane, fixed or rotary wing, can be a \$15,000/h asset, but the final result is the one here below:

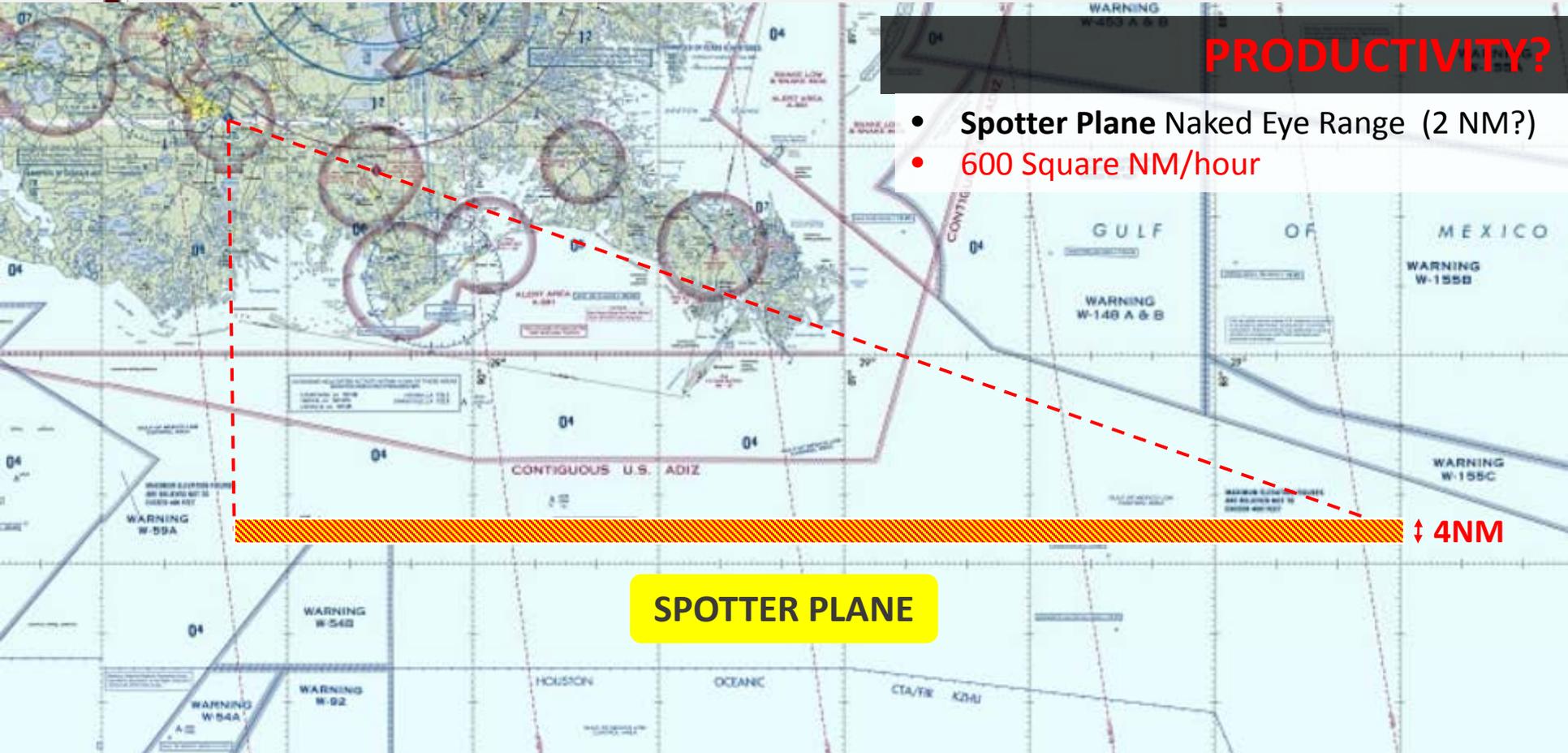


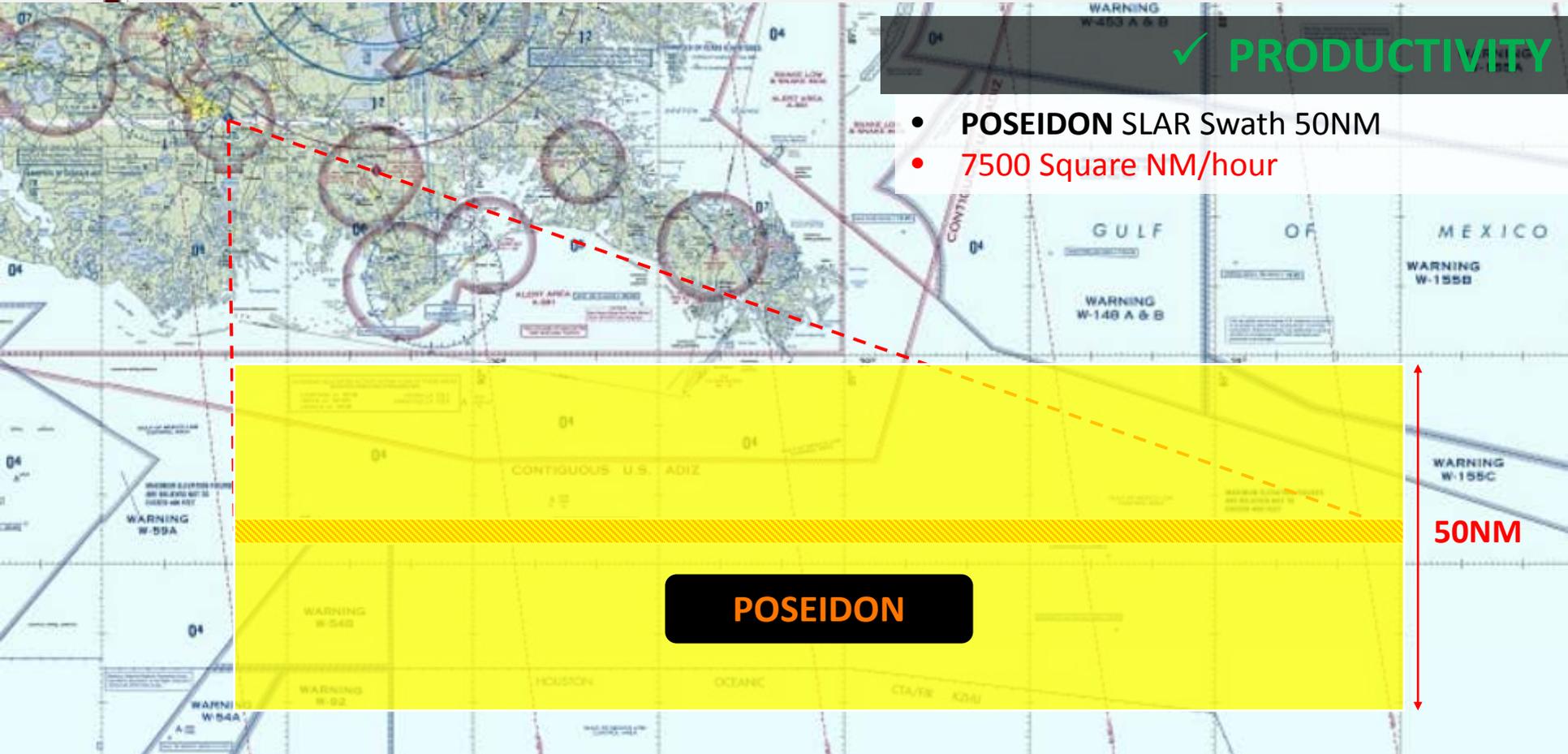
- **INFORMATION?**
- **PRODUCTIVITY?**
- **WEATHER?**
- **CONSISTENCY OF DATA?**
- **DEFENSIBLE DATA?**
- **DATA TRANSMISSION**
- **GIS? COP?**





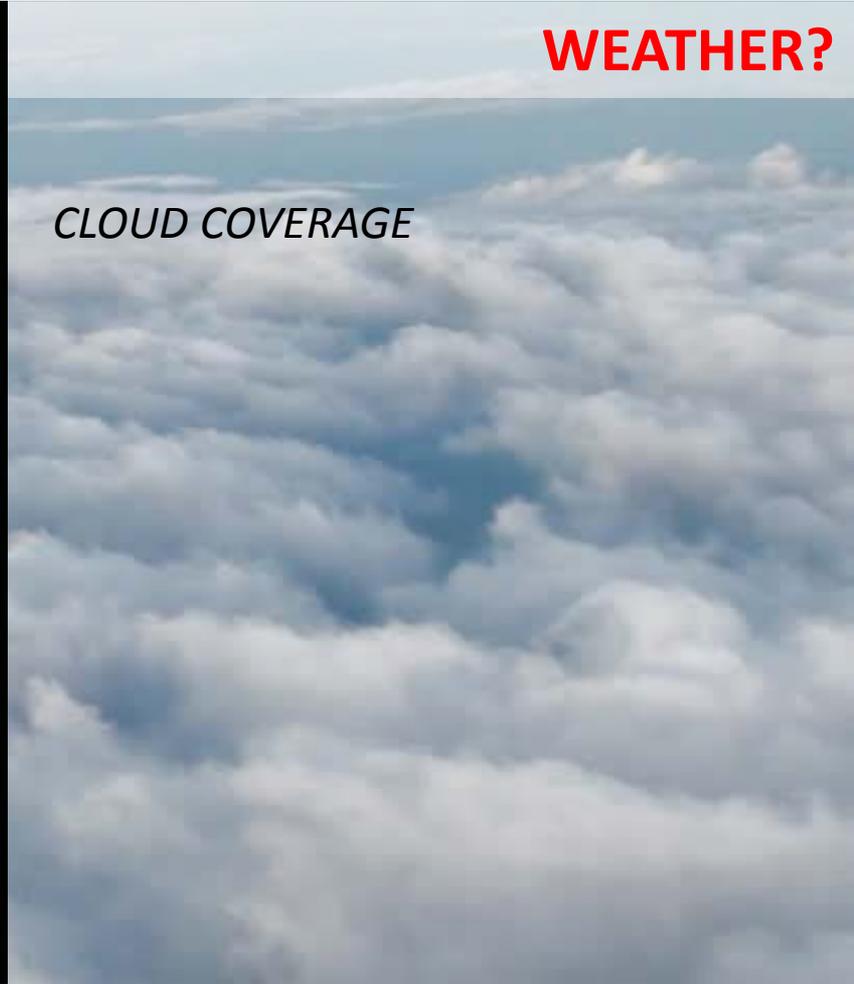






- More than **12 times more productive**
- Increases dramatically **efficiency** and **cost saving**

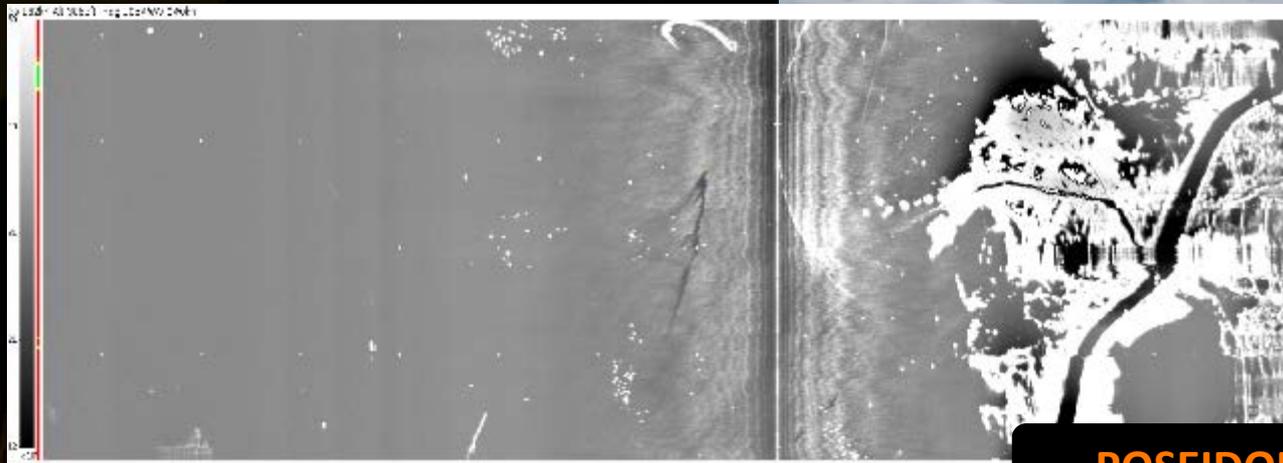




✓ WEATHER

NIGHT CONDITION

CLOUD COVERAGE



POSEIDON



- All-weather/coverage operations
- Night Operations
- SLAR / IR / EO/IR / MWR / LFS

DATA TRANSMISSION / GIS / COP ?



FLASHDRIVE ?



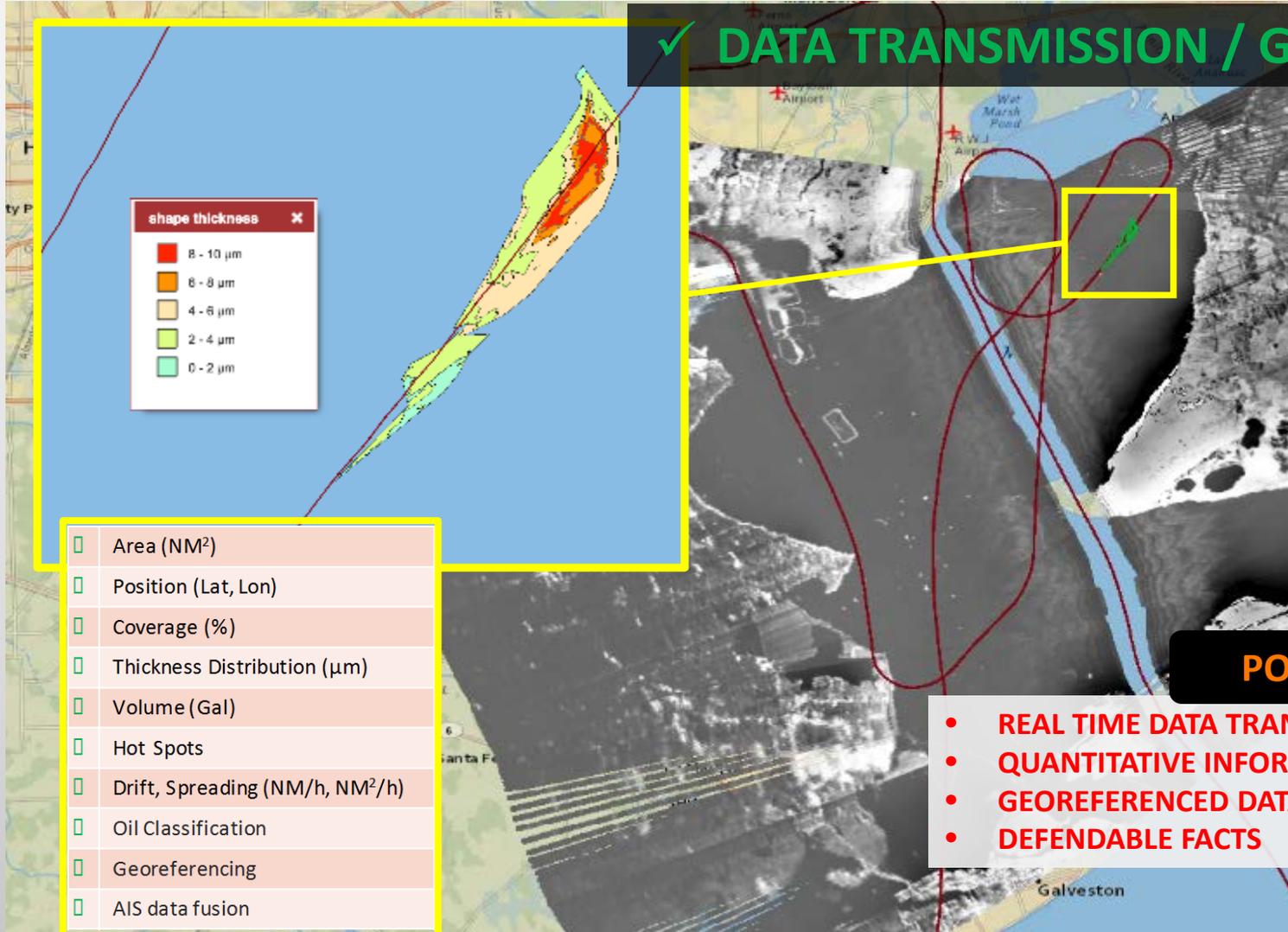
POSEIDON

MICROWAVE DATA LINK



Key Advantages

✓ DATA TRANSMISSION / GIS / COP



- Area (NM²)
- Position (Lat, Lon)
- Coverage (%)
- Thickness Distribution (μm)
- Volume (Gal)
- Hot Spots
- Drift, Spreading (NM/h, NM²/h)
- Oil Classification
- Georeferencing
- AIS data fusion

POSEIDON

- REAL TIME DATA TRANSMISSION
- QUANTITATIVE INFORMATION
- GEOREFERENCED DATA / COP
- DEFENDABLE FACTS





The Gulf Coast is extremely exposed to pollution due to either accidental or illegal discharge.



Gulf of Mexico Oil Production: **1.5 – 1.6 millions of barrels per day , more than half billion of barrels per year.**

About **2 billions of barrels** per year are transported by vessels in the Gulf of Mexico area.

- Possible oil discharges can cause significant damages to local coastal economies and to the energy industry (BP 40B\$, public image) and impacts to natural wildlife.
- The current approach to fighting oil spills in our Country is focused on reaction at the expense of early detection and proactive action. DWH showed that didn't work. We look for pro-action, readiness.
- Protect Texas coast against oil discharges is one of the tasks of Texas GLO.
- Texas response infrastructures and Industry and Government Response team need to guarantee 24/7 readiness

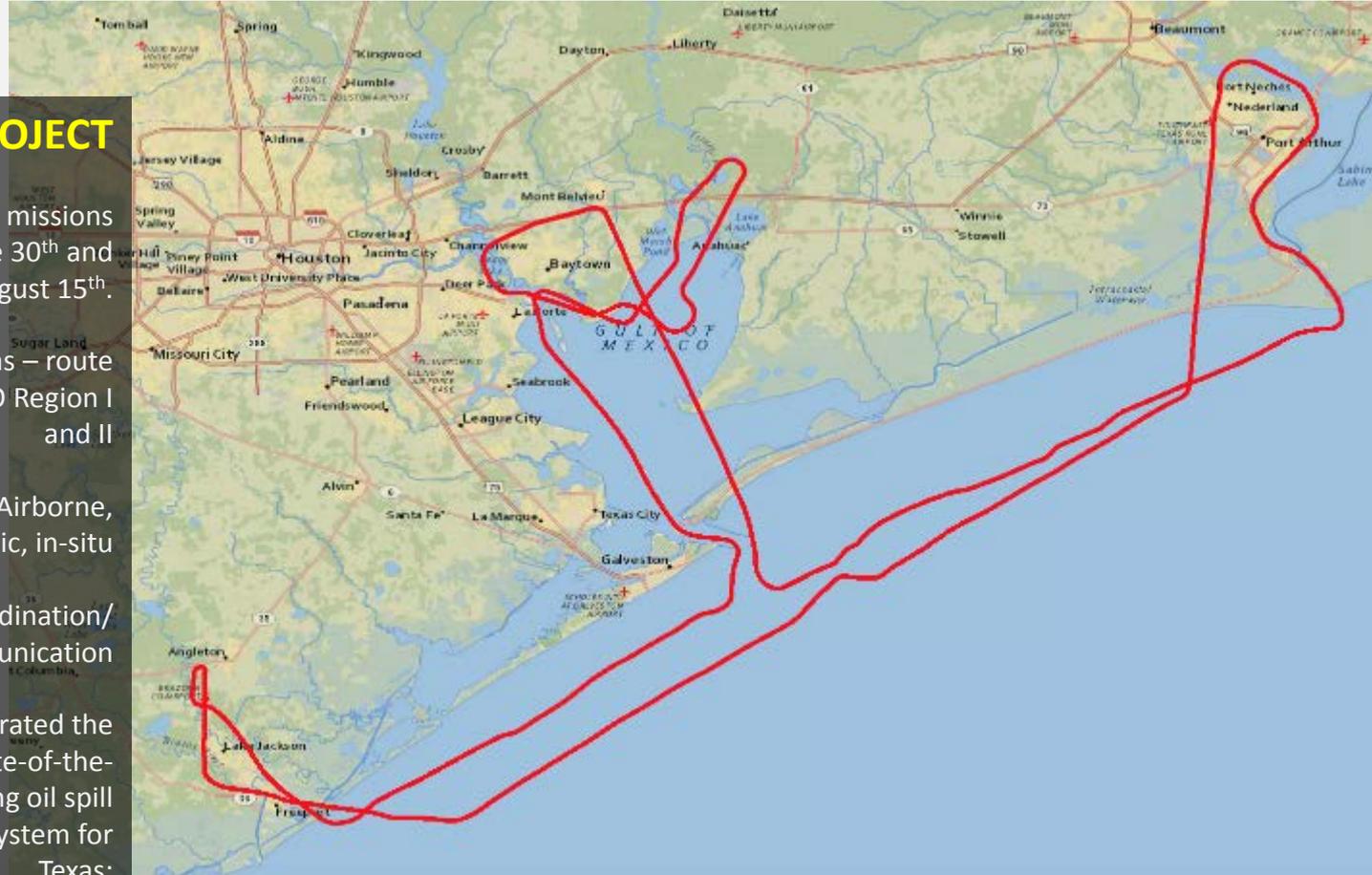




APPROACH

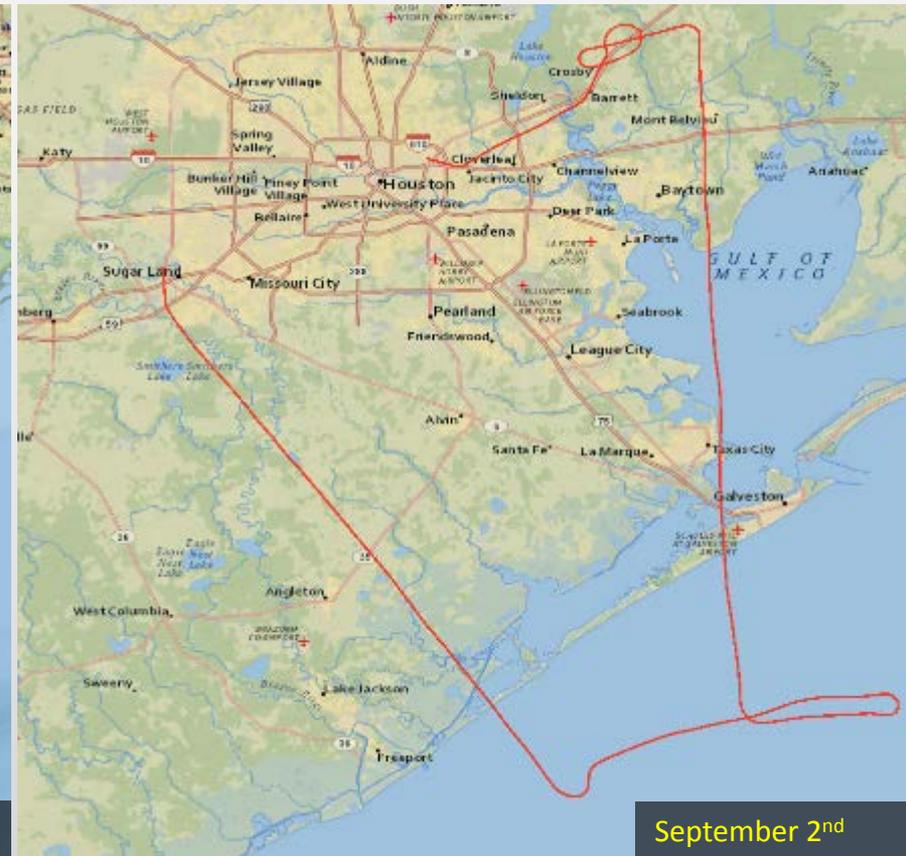
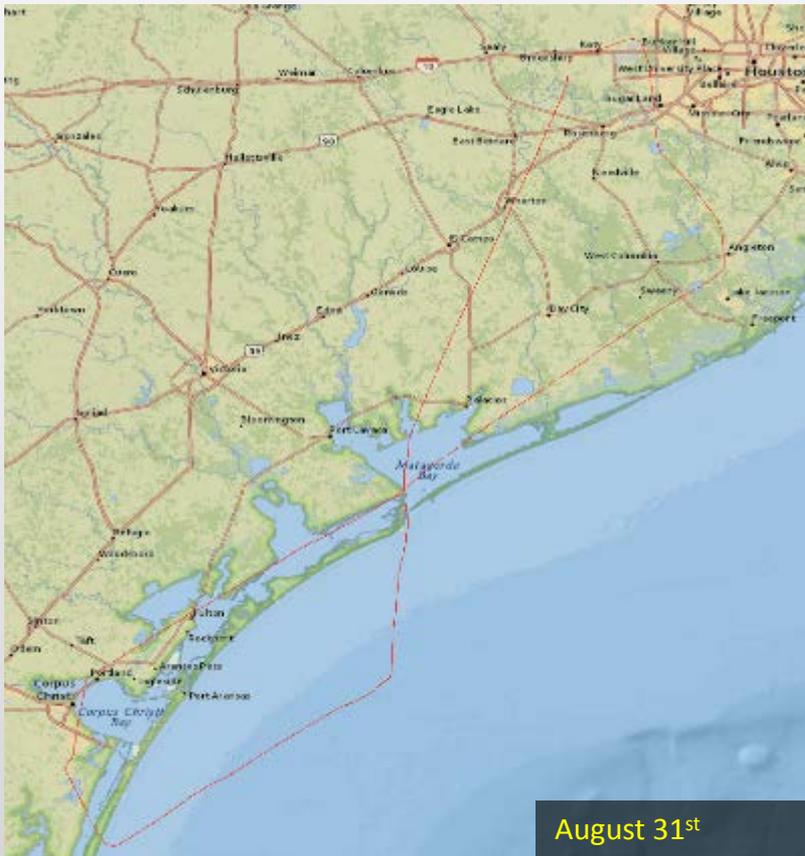
PILOT PROJECT

- Total of 5 missions between June 30th and August 15th.
- Focus on East Texas – route of 300 NM – GLO Region I and II
 - Teams: Airborne, oceanographic, in-situ
- Teams Coordination/Communication
- Demonstrated the feasibility of state-of-the-art early warning oil spill remote sensing system for Texas;



Current Projects

Harvey Damage Assessment



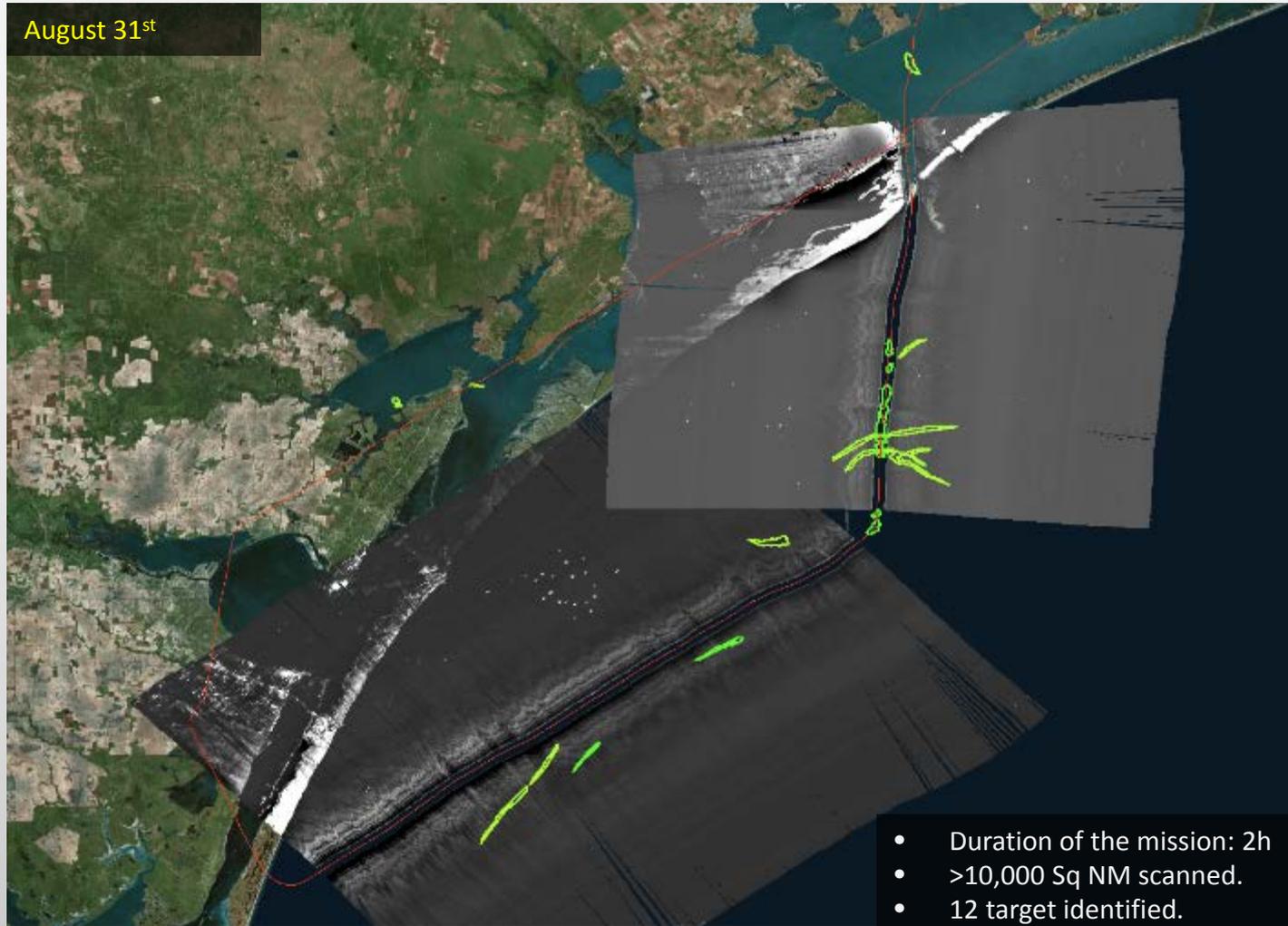
- 2 missions flown in the aftermath of Hurricane Harvey.
- Several findings reported to GLO and NOAA
- Coordination/ Communication
- Specialized Asset





Current Projects

Harvey Damage Assessment



- Duration of the mission: 2h
- >10,000 Sq NM scanned.
- 12 target identified.
- 4 targets analyzed and confirmed as oil spill.
- HD Video of flooded area.

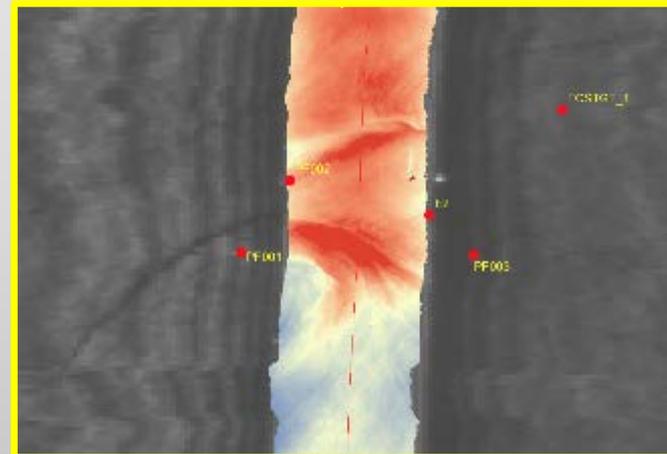
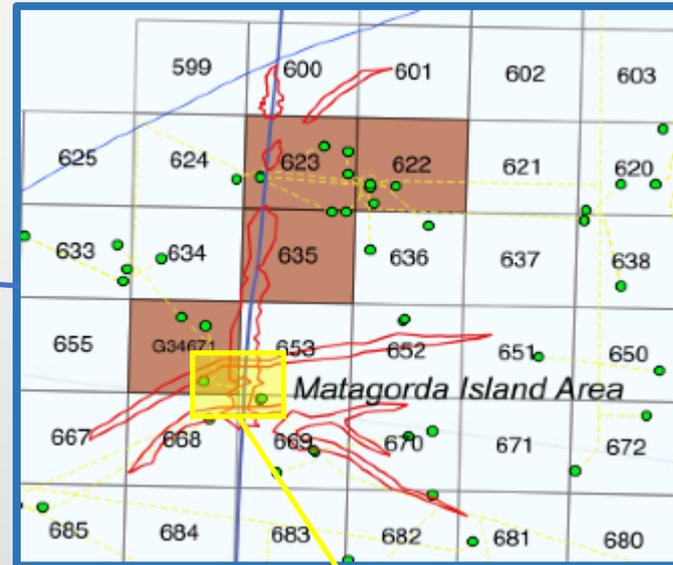




Current Projects

Harvey Damage Assessment

- Matagorda Area

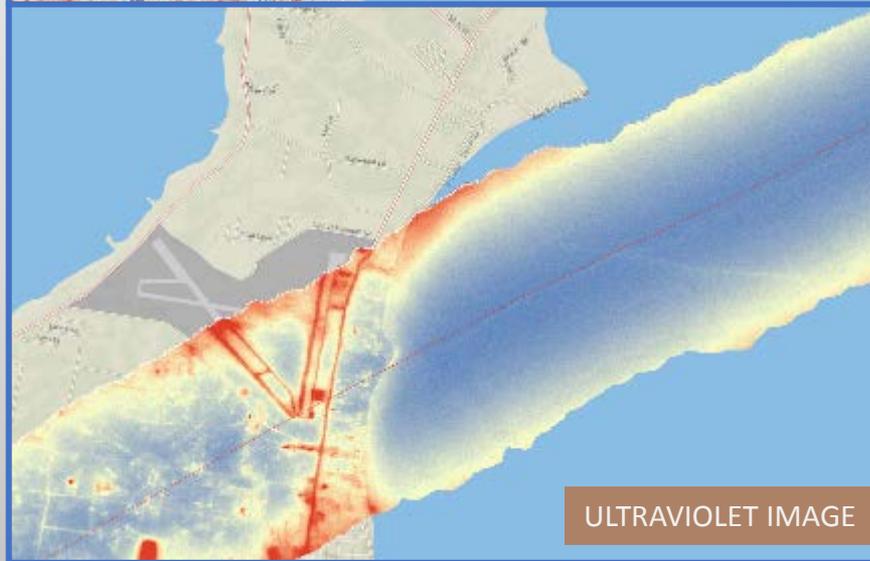




Current Projects

Harvey Damage Assessment

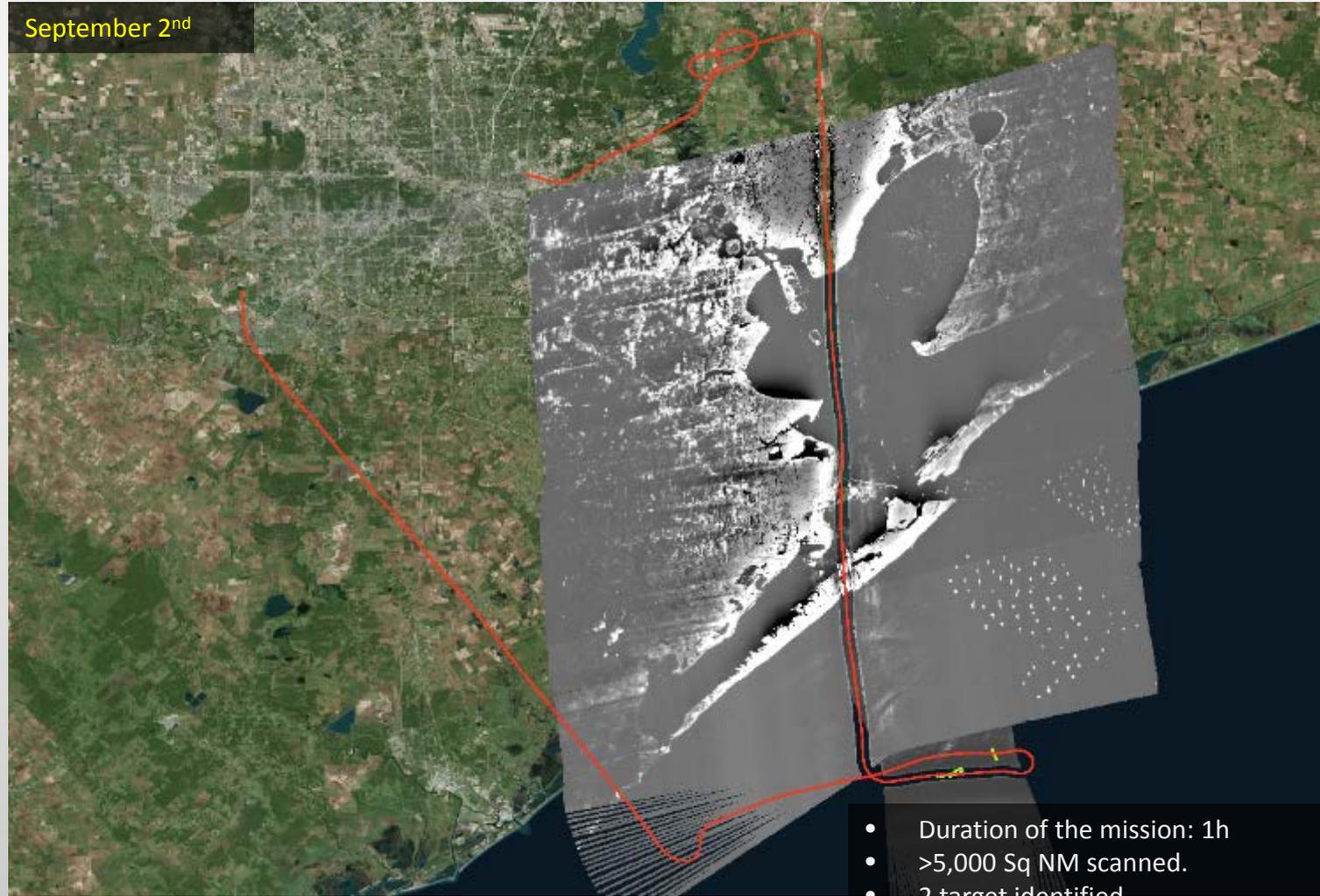
- Condensate spill – Aransas Bay





Current Projects

Harvey Damage Assessment



- Duration of the mission: 1h
- >5,000 Sq NM scanned.
- 2 target identified.
- 1 targets analyzed and confirmed as oil spill.
- HD Video of flooded area and Crosby Facility

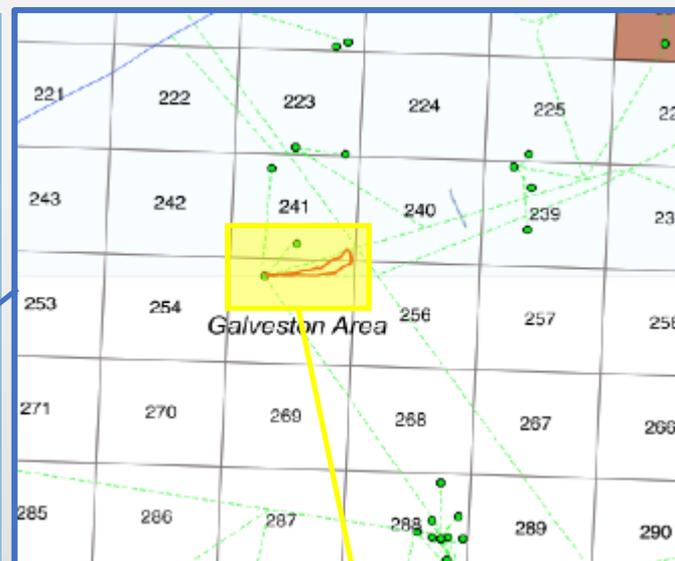




Current Projects

Harvey Damage Assessment

- Galveston Area



An aerial photograph of a coastline with a prominent river delta system. In the foreground, the propeller and wing of a dark blue and red aircraft are visible, suggesting the photo was taken from the plane. The sky is clear and blue, and the sun is low on the horizon, creating a bright glow over the water.

THANK YOU !

Alessandro Vagata | *Director of Operations – Fototerra Aerial Survey LLC*
alessandro@fototerra-survey.com | +1 (832) 318-3314





June 20, 2017



Stafford Act & Mission Assignment Orientation

Or "The Road to Mission Assignments is Paved with Good Intentions"





So Let's Start with the
Authorities which lead us
down the Mission
Assignment road

Presidential Policy Directive 8: National Preparedness

National Preparedness Goal
-- Core Capabilities for 5 Mission Areas --

National Planning Frameworks

Prevention

Protection

Response

Recovery

Mitigation

ESF Annexes

Support Annexes

RSF Annexes

Federal Interagency Operational Plans (FIOPs)

Prevention

Protection

Response

Recovery

Mitigation

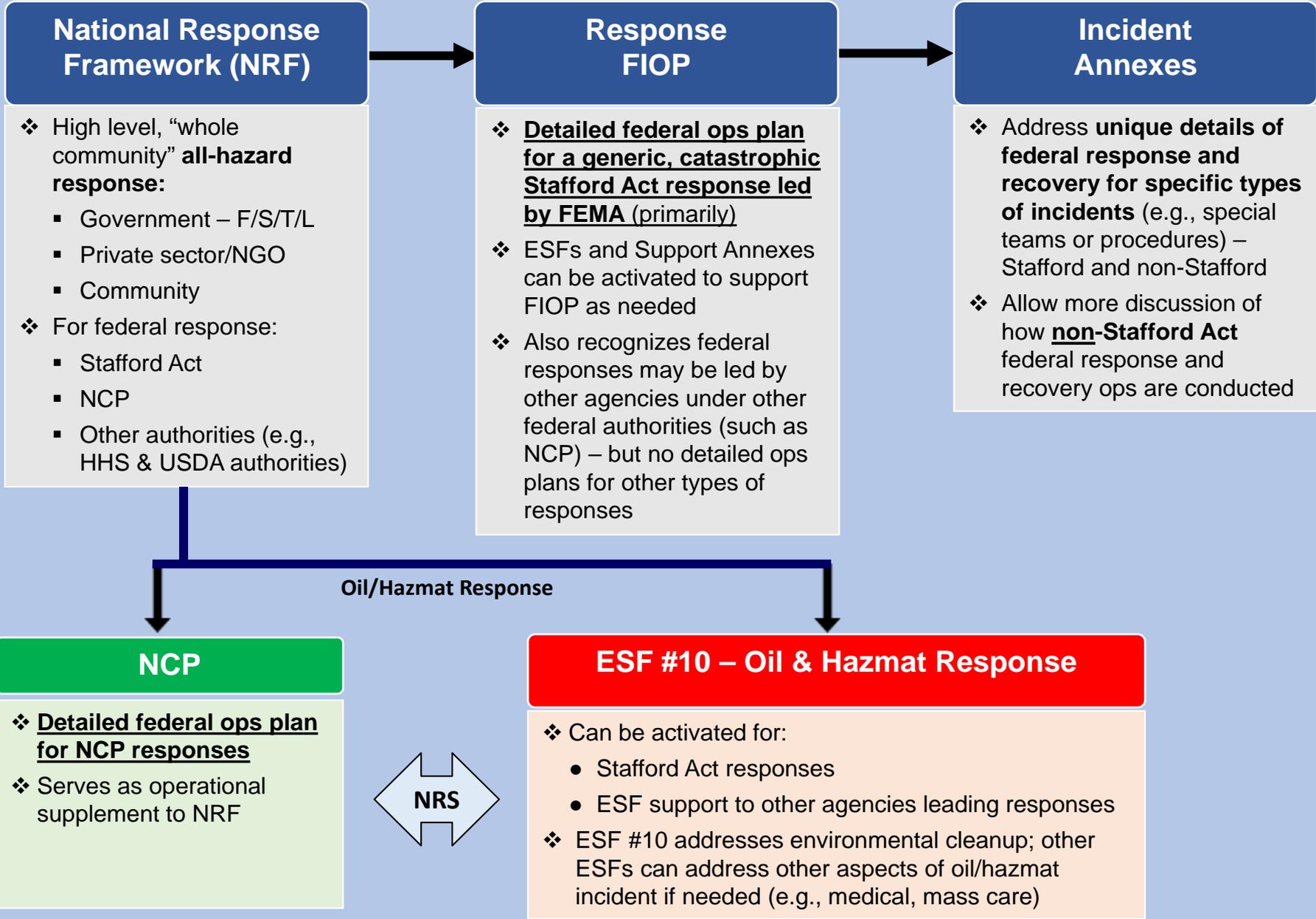
Incident Annexes

Oil/Chemical

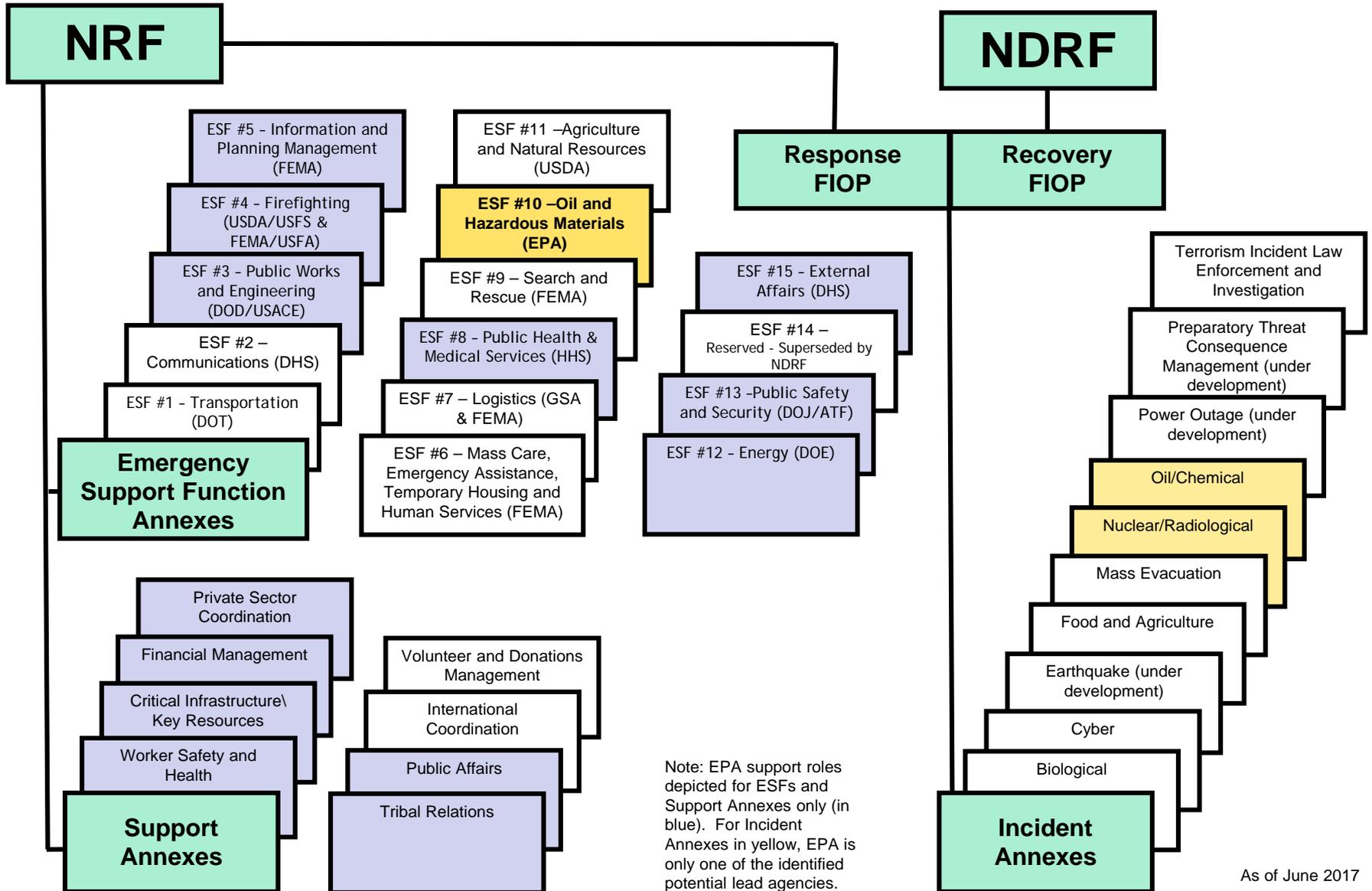
Nuclear/
Radiological

Biological

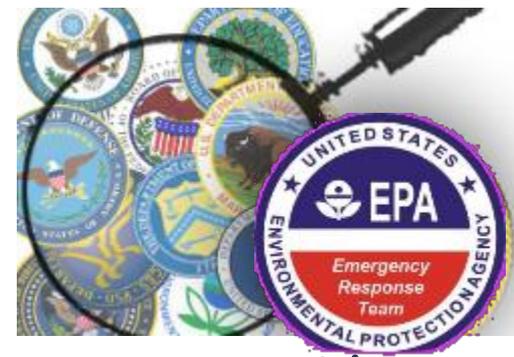
Others



NRF/NDRF Annexes



Emergency Support Functions (ESFs)



What is an ESF?

- An organization of multiple agencies that coordinate to provide a specific type of emergency response support
- Originally created as a way to organize federal support for Stafford Act responses led by FEMA
- Under NRF, can also be activated to assist lead federal agency for non-Stafford Act responses, but different funding source would be needed

How are ESFs used during Stafford Act responses?

- FEMA tasks an ESF lead agency (usually) to provide support under its ESF through issuing "Mission Assignments" and usually provides reimbursement
- ESF lead agency can tap any of its support agencies for assistance



Intro to ESF #10 - Oil & Hazmat Response

ESF #10 - Oil and Hazardous Materials Response Annex

Coordinator: EPA

Primary Agencies:
EPA & USCG

Support Agencies:
NRT agencies &
DHS CBP & DHS IP

ESF #10 brings together capabilities of NCP National Response System to provide assessment and cleanup of oil and hazmat releases to environment

During Stafford Act response, can be tasked to conduct activities under Stafford Act that are outside of NCP authorities - but still within general realm of oil/hazmat response

During Stafford Act response, OSCs still maintain right to exercise independent NCP authorities if needed - but unlikely to receive Stafford funding

The Robert T. Stafford Disaster Relief and Emergency Assistance Act - the Law



Authorizes President to declare major disaster or emergency based on request of Governor of State or Territory, or Tribal Chief Executive

-President declares-

-FEMA implements-



Stafford Act Authorities

The President "may ... **direct any Federal agency, with or without reimbursement, to utilize its authorities and the resources granted to it under Federal law**...in support of State and local assistance response or recovery efforts ..." for major disasters and emergencies



The President may also provide **other types of federal assistance** specifically defined in the law

Scope and amount of assistance available differs between "major disasters" and "emergencies"



Disaster Assistance Programs



Public Assistance	Individual Assistance	Hazard Mitigation
Provides temporary or permanent repairs or restoration to roads, bridges, and other public infrastructure	Repair homes, replace possessions, and provide services	Fund projects to minimize future damage

FEMA - State/Tribal Agreement

- Disaster assistance programs to be delivered
- Incident type and period
- Cost-share agreements
- State's signatory authorities
- State/tribal assurances

U.S. Department of Homeland Security
FEMA Region I
99 High Street
Boston, MA 02110



FEMA

FEMA-STATE AGREEMENT FEMA-4026-DR-NH

On September 3, 2011, the President declared that a major disaster exists in the State of New Hampshire. This declaration was based on damage resulting from Tropical Storm Irene beginning on August 26, 2011, and continuing. This is the FEMA-State Agreement for this major disaster, designated FEMA-4026-DR, under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, Pub. L. No. 93-288 (1974) (codified as amended at 42 U.S.C. §§ 5121-5207) (Stafford Act), in accordance with 44 C.F.R. § 206.44.

1. No Federal assistance under the Stafford Act shall be approved unless the damage or hardship to be alleviated resulted from the major disaster that took place beginning on August 26, 2011, and continuing; except that reasonable expenses that were incurred in anticipation of and immediately preceding such event may be eligible.

2. Federal assistance under the Stafford Act and this Agreement shall be limited to the following areas of the State and such additional areas as may be subsequently designated by FEMA:

Carroll, Coos, Grafton, and Merrimack Counties for Public Assistance. Direct federal assistance is authorized.

All counties in the State of New Hampshire are eligible to apply for assistance under the Hazard Mitigation Grant Program.

3. Any Federal funds provided under the Stafford Act for Public Assistance will be limited to 75 percent of total eligible costs in the designated area.

4. Funds are available on a 75 percent Federal cost share basis for hazard mitigation measures that could substantially reduce the risk of future damage, hardship, loss or suffering in any areas designated for hazard mitigation within the State, subject to meeting the local mitigation plan requirement at 44 C.F.R. 201.6 and 206.434(b)(1). Total Federal contributions are based on the estimated aggregate grant amount to be made under the Stafford Act for this disaster (less any associated administrative costs), and shall be: 15 percent for the first \$2,000,000,000 or less of such amounts; 10 percent of the portion of such amounts over \$2,000,000,000 and not more than \$10,000,000,000; and 7.5 percent of the portion of such amounts over \$10,000,000,000 and not more than \$35,333,000,000.

5. Pursuant to 44 C.F.R. § 206.208, if direct Federal Assistance is requested by the State, the Governor certifies that the State will: 1) provide without cost to the United States all lands, easements, and rights-of-ways necessary to accomplish the approved work; 2) hold and save the



Title 44, CFR



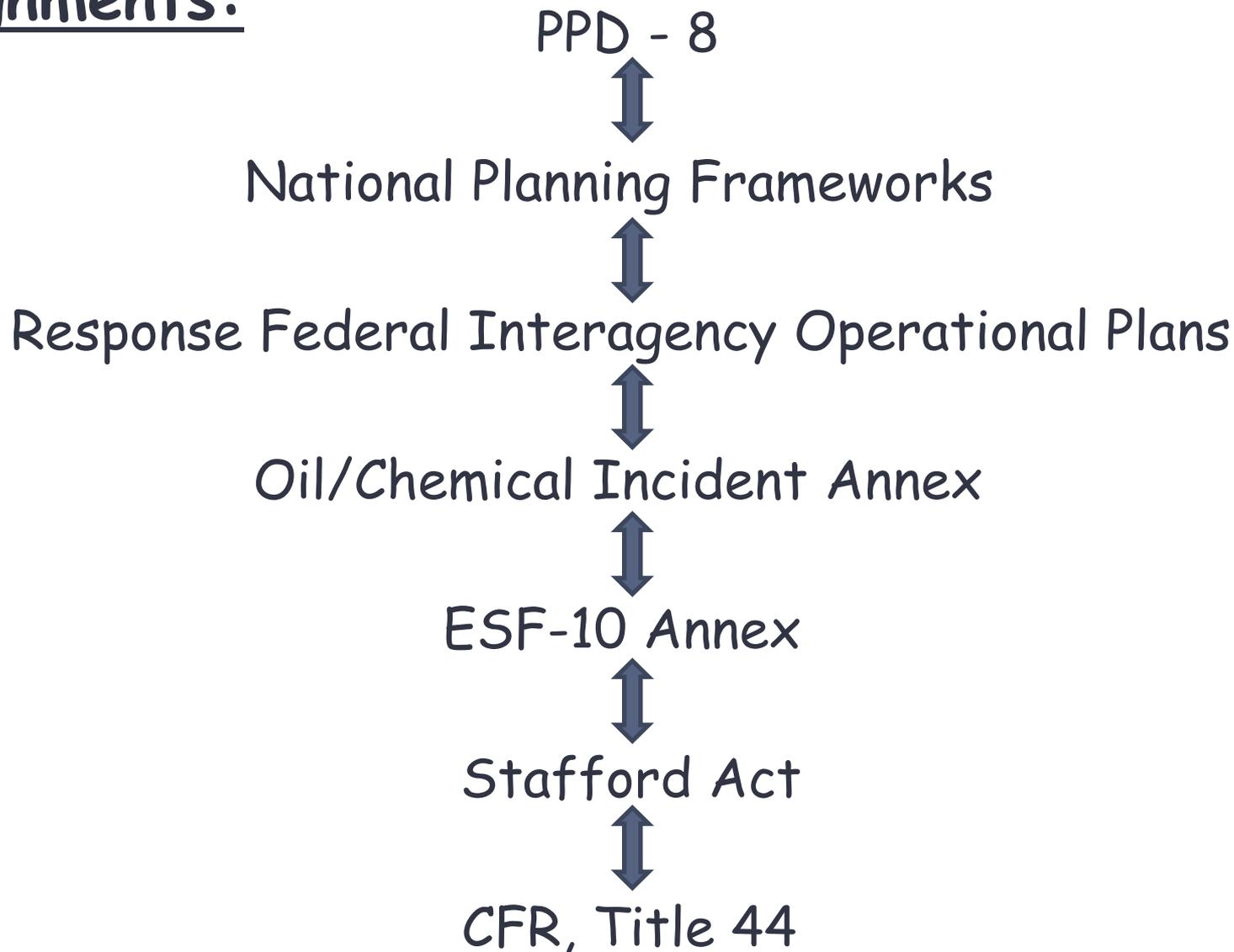
Provides:

- Regulations to implement Stafford Act
- Definition of Mission Assignments (MAs)
- Time Limits



So they all work together to get us to Mission

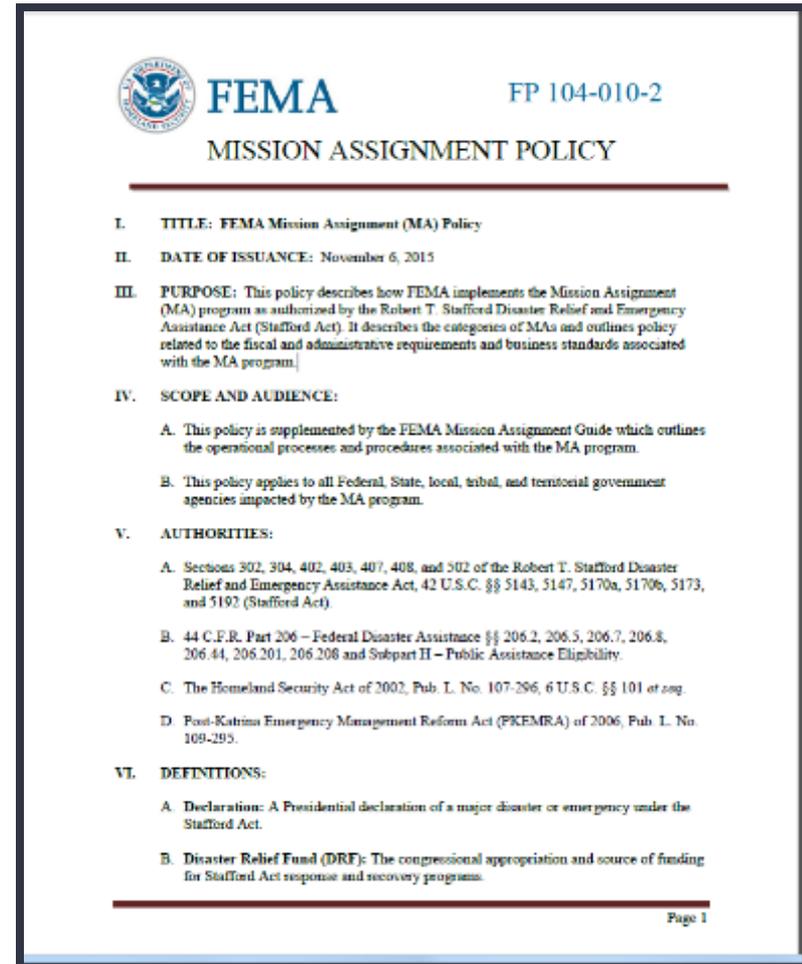
Assignments:



Mission Assignment Policy

Policy describes how FEMA implements MA program as authorized by Stafford Act

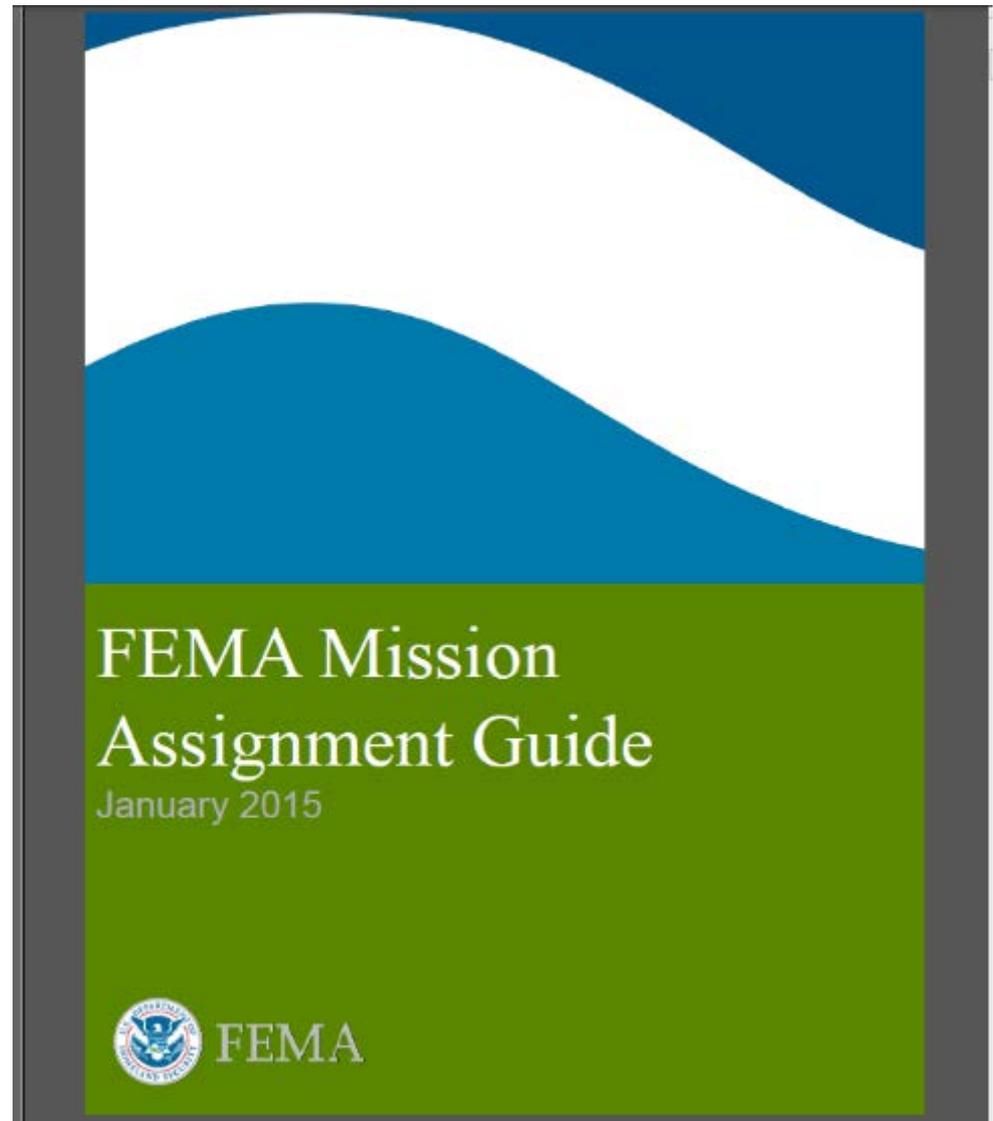
It describes categories of MAs and outlines fiscal and administrative requirements and business standards associated with MA program





Mission Assignment Guidance

To transition
from authorities
to process:





"...Or, in layman's terms,
Ay caramba!"

**So, Let's cover a couple
of terms before we move
into the process**

Emergency



"Any occasion or instance for which Federal assistance is needed to supplement State and local efforts and capabilities to save lives and to protect property and public health and safety, or to lessen or avert threat of catastrophe in any part of U.S."



Characteristics of an Emergency

- Is beyond State and local abilities
- Supplementary emergency assistance
- Not to exceed \$5 million
- Must submit request within 5 days





Major Disaster



“Any natural catastrophe... or, regardless of cause, any fire, flood, or explosion in any part of the U.S. which causes damage of sufficient severity and magnitude to warrant major disaster assistance to supplement efforts and available resources of States, local governments, and disaster relief organizations”



Characteristics of a Major Disaster:



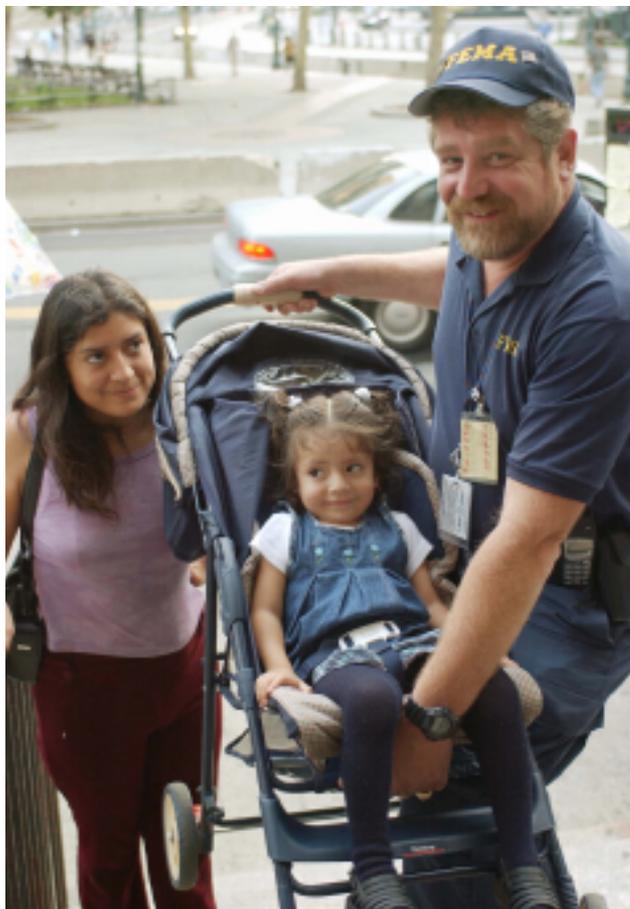
Major Disaster:

- Is beyond State and local capabilities
- Supplements available resources of State/local governments, disaster relief organizations, and insurance
- Must be requested within 30 days of incident



Incident Period

- Time span during which incident occurs
- Specified at time of declaration
- May be open-ended
- May be closed/reopened
- Determined by info provided by NWS, State, and Region





Disaster Assistance Programs under a Declaration

Mission Assignments



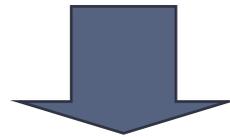
Support response capability

Public Assistance



Provide temporary or permanent repairs or restoration to roads, bridges, and other public infrastructure

Individual Assistance



Repair homes, replace possessions, and other services.

Hazard Mitigation



Fund projects to minimize future damage



So When President Makes a Declaration:

It can be for:

- Individual Assistance
- Public Assistance
- Hazard Mitigation

Public Assistance Categories:

- Category A: Debris removal
- Category B: Emergency protective measures
- Category C: Road systems and bridges
- Category D: Water control facilities
- Category E: Public buildings and contents
- Category F: Public utilities
- Category G: Parks, recreational, and other

Declaration can be for State and locals to do work for reimbursement, or it can include Direct Federal Assistance

Sample Declarations

There have been 3,376 EM declarations since 1974, and 4,275 DR (Major Disaster) declarations since 1952

Sample Emergency Declaration (EM-3347) declared on August 27, 2012

The parishes of Acadia, Allen, Avoyelles, Cameron, East Baton Rouge... for emergency protective measures (Category B), limited to direct federal assistance, under the Public Assistance program.

Sample Disaster Declaration (DR-4080) declared on August 29, 2012

Individual Assistance

Federal funding is available to affected individuals in Ascension, Assumption, Jefferson, Lafourche... parishes. Assistance can include grants for temporary housing and home repairs, and uninsured property losses, and other programs to help individuals and households recover from the effects of the disaster.

Public Assistance

The parishes of Acadia, Allen, Ascension, Assumption, Avoyelles, Cameron, East Baton Rouge... for debris removal and emergency protective measures (Categories A and B), including direct federal assistance, under the Public Assistance program at 75 percent federal funding.

All parishes within the State of Louisiana are eligible to apply for assistance under the Hazard Mitigation Grant Program.

How the Process Works





What is a Mission Assignment (MA)?

Definition

Work order issued by FEMA to another Federal agency directing completion of specific task, and citing funding, other managerial controls, and guidance

Given in anticipation of, or response to Presidential declaration of emergency or major disaster





An MA is NOT:

- Interagency Agreement
 - Can be used by any Agency under the Economy Act
- Memorandum of Understanding/Agreement
 - Non-binding agreement on responsibilities and procedures
 - No funding involved
- Contract
- Grant





Why Are MAs Issued ?



To fulfill:

- State's request for Federal assistance to meet unmet emergency needs
- Federal request to support disaster operations

Common Terms in MA Process

Forms

- Resource Request Form (RRF)
- MA Form
- MA Task Order Form
- MA Subtasking Form

DEPARTMENT OF HOMELAND SECURITY Federal Emergency Management Agency RESOURCE REQUEST FORM (RRF)			O.M.B. No. 1680-0002 Expires May 31, 2017	
PAPERWORK BURDEN DISCLOSURE NOTICE				
<small>Public reporting burden for this form is estimated to average 20 minutes per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and reviewing this form. This collection of information is required to obtain or retain benefits. You are not required to respond to this collection of information unless it displays a valid data control number. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collection Management, Department of Homeland Security, Federal Emergency Management Agency, 500 C Street, SW, Washington, DC 20472-3100, Paperwork Reduction Project (1680-0002). NOTE: Do not send your completed form to this address.</small>				
I. REQUESTING ASSISTANCE (To be completed by Requestor)				
1. Requestor's Name (Please print)		2. Title		3. Phone No.
4. Requestor's Organization		5. Fax No.	6. E-Mail Address	
II. REQUESTING ASSISTANCE (To be completed by Requestor)				
1. Description of Requested Assistance:				
2. Quantity	3. Priority	<input type="checkbox"/> Life-saving <input type="checkbox"/> Life Sustaining <input type="checkbox"/> Normal <input type="checkbox"/> High	4. Date and Time Needed	
5. Delivery Site Location			6. Site Point of Contact (POC)	
			7. 24 Hour Phone No.	8. Fax No.
9. State Approving Official Signature				10. Date and Time
III. SOURCING THE REQUEST - REVIEW/COORDINATION (Operations Section Only)				
1. <input type="checkbox"/> OPS Review by: _____ <input type="checkbox"/> LDC Review by: _____ <input type="checkbox"/> Other Coordination: _____ <input type="checkbox"/> Other Coordination: _____		2. Source: <input type="checkbox"/> Donations <input type="checkbox"/> Other (Explain) _____ <input type="checkbox"/> Requisitions <input type="checkbox"/> Procurement <input type="checkbox"/> Interagency Agreement <input type="checkbox"/> Mission Assignment		3. Assigned to: ES/IOFA: _____ RS/IOFA: _____ Other: _____ Date/Time: _____
4. Immediate Action Required <input type="checkbox"/> Yes <input type="checkbox"/> No				
IV. STATEMENT OF WORK (Operations Section Only)				
1. OFA Action Officer		2. 24 Hour Phone #	3. Fax #	
4. FEMA Project Manager		5. 24 Hour Phone #	6. Fax #	
7. Statement of Work <input type="checkbox"/> See Attached				
8. Estimated Completion Date			9. Estimated Cost	
V. ACTION TAKEN (Operations Section Only)				
<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected <input type="checkbox"/> Requestor Notified				
Reason / Disposition				



Criteria for MA Issuance

- Issued during Emergency Response Phase
- Involves **ONLY** non-permanent work in area
- Involves utilizing a Federal Agency's unique resources
- Other existing authority
- Beyond State/local capabilities





Identify Need

States, Territories, or Tribes may seek Federal assistance:

- After Presidential Emergency or Major Disaster Declaration
- When they cannot meet needs

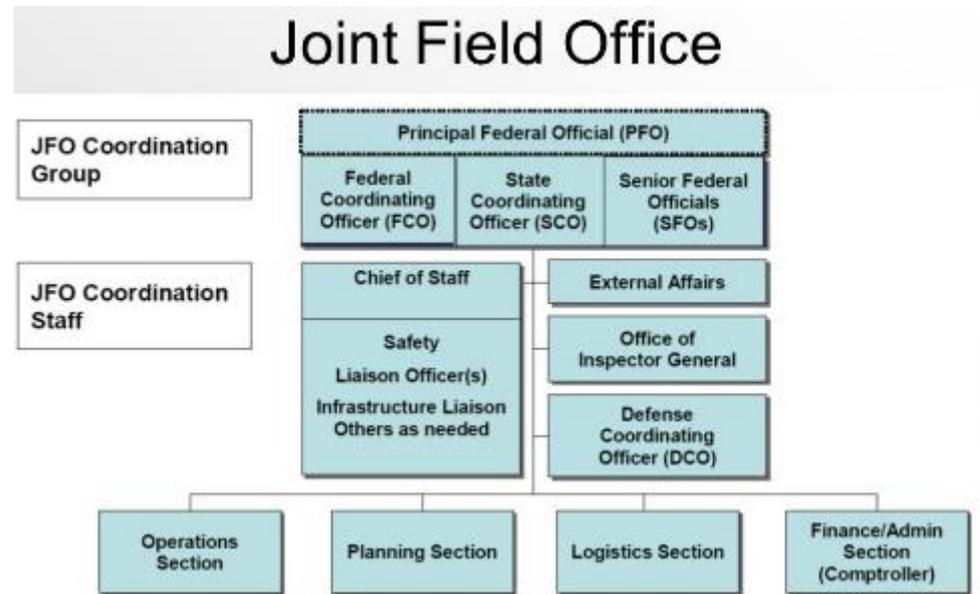


Needs are also identified through deliberate planning

2 Categories of Mission Assignments

1. Federal Operations Support (FOS):
 - Eligible before or after a declaration
 - Support to Federal responders
 - Requested by Federal Government
 - 100% Federally funded

"FED to FED"
EXAMPLE: Activate
ESF-10 to RRCC and/or
JFO.





2 Categories of Mission Assignments

2. Direct Federal Assistance (DFA)

- Eligible after declaration
- For goods or services beyond State or Tribe's capability to provide
- Subject to cost share
- Requests signed by State or Tribe
- Actual work done for State or Tribe

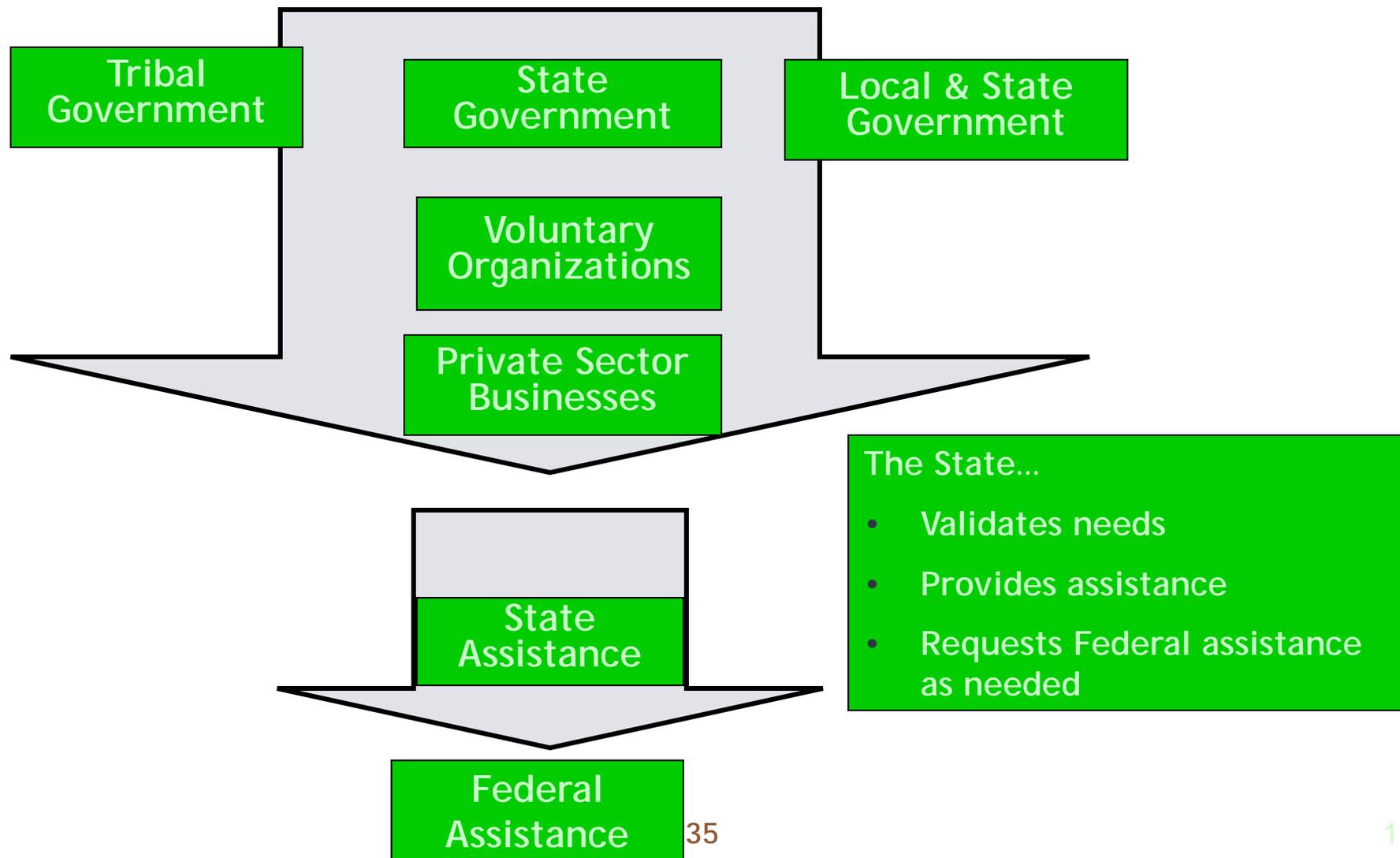


"Dirty Hands =
We do Work"
EXAMPLE:
Sampling, air
monitoring



Who Can Request Federal Assistance?

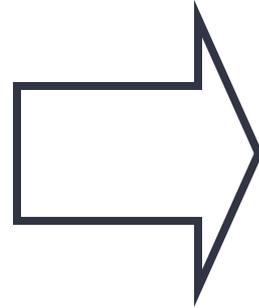
Variety sources can identify needs for assistance





Request Process

Requestor
Submits RRF to
Operations
Section through
State EOC



Action Tracker/ MA
Specialist

1. Logs RRF
2. Forwards to Operations
Section Chief for review





Resource Request Form

The Resource Request Form (RRF) 010-0-7 is used to request Federal assistance

All official requests should be made to FEMA via RRF

DEPARTMENT OF HOMELAND SECURITY Federal Emergency Management Agency RESOURCE REQUEST FORM (RRF)		O.M.B. No. 1660-0002 Expires May 31, 2017
PAPERWORK BURDEN DISCLOSURE NOTICE		
<small>Public reporting burden for this form is estimated to average 20 minutes per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and submitting this form. This collection of information is required to obtain or retain benefits. You are not required to respond to this collection of information unless it displays a valid OMB control number. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Department of Homeland Security, Federal Emergency Management Agency, 500 C Street, SW, Washington, DC 20472-3100, Paperwork Reduction Project (1660-0047). NOTE: Do not send your completed form to this address.</small>		
I. REQUESTING ASSISTANCE (To be completed by Requestor)		
1. Requestor's Name (Please print)	2. Title	3. Phone No.
4. Requestor's Organization	5. Fax No.	6. E-Mail Address
II. REQUESTING ASSISTANCE (To be completed by Requestor)		
1. Description of Requested Assistance:		
2. Quantity	3. Priority <input type="checkbox"/> Lifesaving <input type="checkbox"/> Life Sustaining <input type="checkbox"/> Normal <input type="checkbox"/> High	4. Date and Time Needed
5. Delivery Site Location	8. Site Point of Contact (POC)	
	7. 24 Hour Phone No.	8. Fax No.
9. State Approving Official Signature	10. Date and Time	
III. SOURCING THE REQUEST - REVIEW/COORDINATION (Operations Section Only)		
1. <input type="checkbox"/> OPS Review by: _____ <input type="checkbox"/> LOG Review by: _____ <input type="checkbox"/> Other Coordination: _____ <input type="checkbox"/> Other Coordination: _____ <input type="checkbox"/> Other Coordination: _____	2. Source: <input type="checkbox"/> Donations <input type="checkbox"/> Other (Explain) _____ <input type="checkbox"/> Requisitions <input type="checkbox"/> Procurement <input type="checkbox"/> Interagency Agreement <input type="checkbox"/> Mission Assignment	3. Assigned to: ESF/IOFA: _____ RSF/IOFA: _____ Other: _____ Date/Time: _____
4. Immediate Action Required <input type="checkbox"/> Yes <input type="checkbox"/> No		
IV. STATEMENT OF WORK (Operations Section Only)		
1. OFA Action Officer	2. 24 Hour Phone #	3. Fax #
4. FEMA Project Manager	5. 24 Hour Phone #	6. Fax #
7. Statement of Work		<input type="checkbox"/> See Attached
8. Estimated Completion Date		9. Estimated Cost
V. ACTION TAKEN (Operations Section Only)		
<input type="checkbox"/> Accepted <input type="checkbox"/> Rejected <input type="checkbox"/> Requestor Notified		
Reason / Disposition		
FEMA FORM 010-0-7		
PREVIOUSLY FF 90-138		Page 1 of 2



RRF Eligibility Review

- Operations Section Chief
 - Eligible under Stafford Act?
 - Beyond State/Tribe and local capabilities?

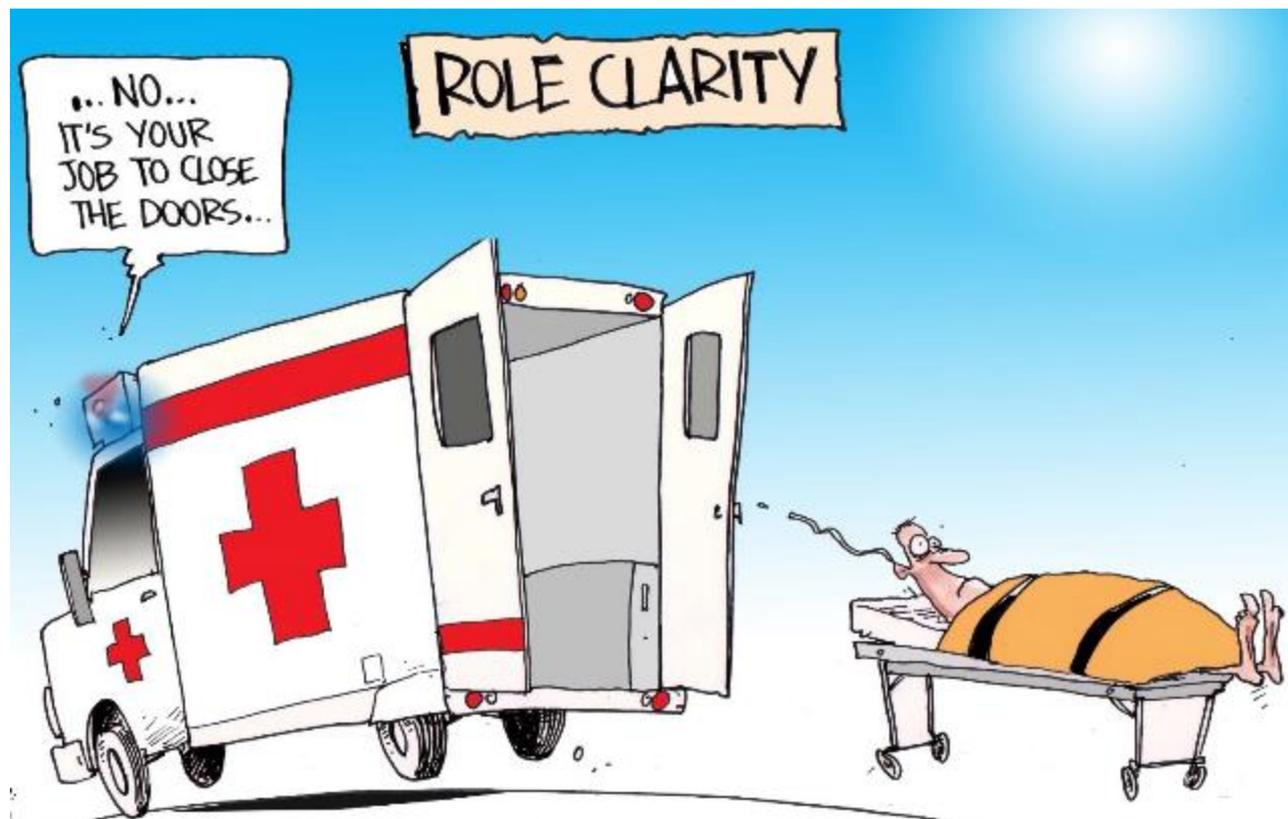


RRF Eligibility Review

- Operations Section Chief
 - Permanent restorative work?
 - Existing other Federal agency authority?

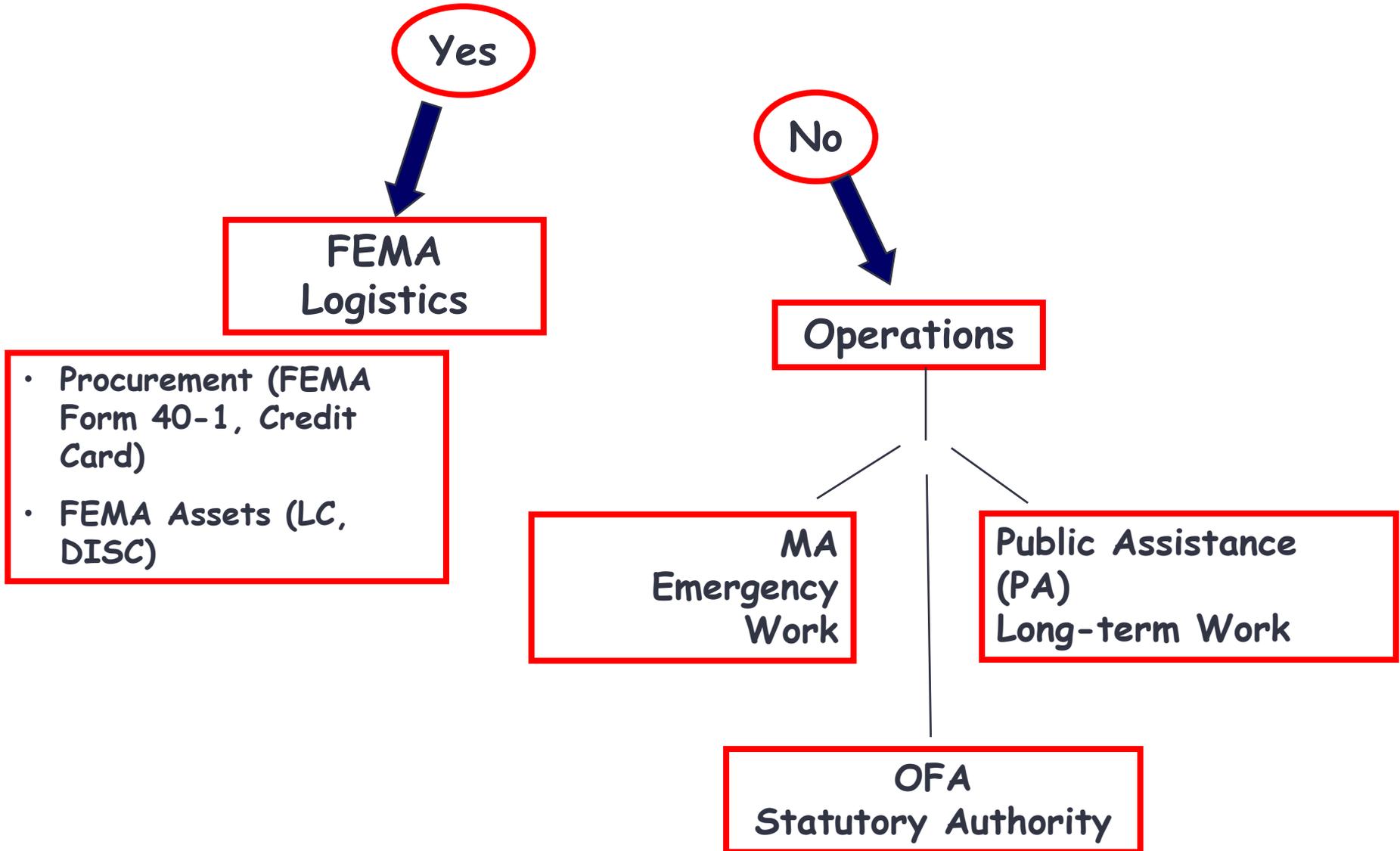


RRF Eligibility Review



- Operations Section Chief
 - Appropriate requestor?
 - Clarity of request?
 - Signed by State Approving Official (SCO)

Can the Request Be Met By FEMA In-House?





Phase I—MA Issuance



MA reviewed by Operations Chief for content

MA is signed by:

MAC, PO, & SCO or Tribal approving official (DFA)

Federal Approving Official

Comptroller

Certifies, obligates funds, forwards MA to DFC

MAC provides copy to Other Federal Agency (ESF)

SOW Criteria

- Who will perform work?
- What type of work is to be done?
- Where is work performed?
- How will work be done?





Broad or Specific SOW?

Broad
SOW

If work is likely to be
requested more
than once

Specific
SOW

If work is likely a one-
time undertaking





Pre-Scripted Mission Assignments (PSMAs)

- Facilitate rapid response and standardize MAs
- Provide standard SOWs and cost estimates
- Are templates, not MAs
- Should be tailored to incident
- Require approval
- EPA and USCG have several ESF #10 PSMAs
- Focus:
 - Natural disasters
 - Activate to RRCC/JFO and NRCC
 - Initial assessment and response

DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY
MISSION ASSIGNMENT (MA)

See Reverse for Paperwork
Burden Disclosure Notice

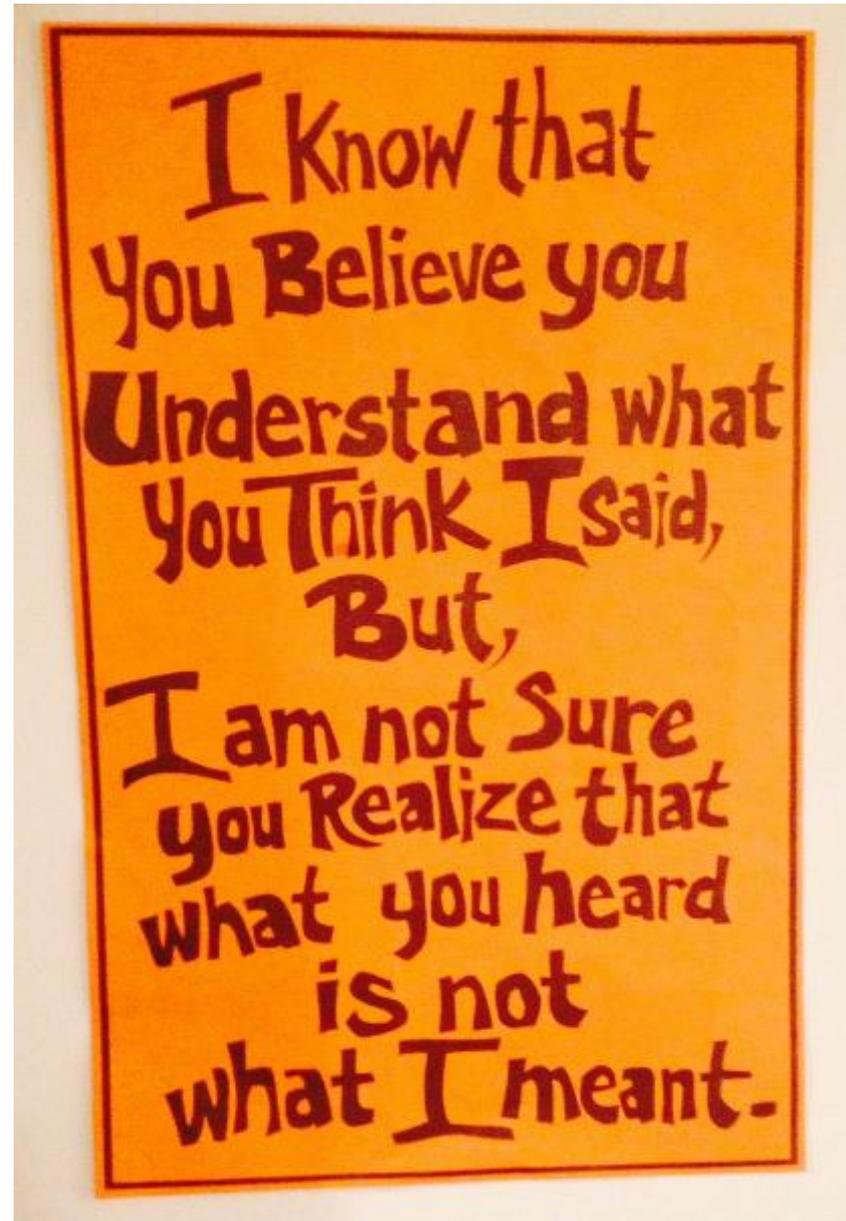
O.M.B. NO. 1680-0047
Expires March 31, 2014

I. TRACKING INFORMATION (FEMA Use Only)	
State WA (Washington) Incident: 2014032201-Flooding and Mudslides	NEMIS Number 1509-175805
Program Code/Event Number 3370EM-WA: FLOODING AND MUDSLIDES	Date/Time Received 03/25/2014 22:16
II. ASSISTANCE REQUIRED <input type="checkbox"/> See Attached	
Assistance Requested Activate the U.S. Army Corps of Engineers (USACE) to the FEMA Region 10 Regional Response Coordination Center (RRCC) IMATS, IOF, JFO or other locations as assigned to perform duties of Emergency Support Function (ESF) #3 in support of Post-Declaration disaster operations in response to the landslide in Oso, WA.	
Delivery Location Region 10 RRCC, 130 228th Street SW Bothell, WA 98021	Internal Control Number -5137
Date/Time Required 03/25/2014	
Initiator/Requester Name Laurie Miller	24 Hour Phone Number (425) 931-6612
Email Address laurie.miller@fema.dhs.gov	Date 03/25/2014
Site POC Name MILLER, LAURIE K	24 Hour Phone Number (425) 487-4716
Email Address laurie.miller@fema.dhs.gov	Date 03/25/2014
* State Approving Official (Required for DFA and TA)	Date
III. INITIAL FEDERAL COORDINATION (Operations Section)	
Action to: <input checked="" type="checkbox"/> ESF #: 3 <input type="checkbox"/> Other: _____	Date/Time 03/25/2014 21:28
Priority <input type="checkbox"/> 1. Lifesaving <input type="checkbox"/> 2. Life-sustaining <input checked="" type="checkbox"/> 3. High <input type="checkbox"/> 4. Medium	
IV. DESCRIPTION (Assigned Agency Action Officer) <input checked="" type="checkbox"/> See Attached	
<u>Statement of Work</u> Activate the USACE to perform functions of Emergency Support Function (ESF) #3 at the direction and coordination of FEMA. This activation may include support to FEMA Region 10 RRCC, IOF, JFO, IMATS, ESF #5, and other teams or locations. This activation also may include contract audit support to ensure costs incurred under USACE MA meet all Stafford Act and regulatory requirements, at the direction and coordination of FEMA. ESF #3 Team Your agency must validate the unliquidated MA balance at least annually as stipulated by FEMA to maintain reimbursable authority. Accrual data must also be provided to FEMA no later than the third business day after fiscal quarter end close. Information can be submitted FEMA-Disaster-MA-ULC@DHS.gov	
Assigned Agency COE-NWD (COE NORTH WESTERN DIVISION)	Projected Start Date 03/25/2014
	Projected End Date 04/11/2014
<input checked="" type="checkbox"/> New or <input type="checkbox"/> Amendment to MA #:	Total Cost Estimate \$50,000.00
ESF/IOFA Action Officer JENNIFER CHANG	Phone No. (503) 808-3907
	Email Jennifer.C.Chang@usace.army.mil
V. COORDINATION (FEMA Use Only)	
Type of MA: <input type="checkbox"/> Direct Federal Assistance State Cost Share (0%, 10%, 25%) <input type="checkbox"/> Technical Assistance State Share (0%) <input checked="" type="checkbox"/> Federal Operations Support State Share (0%)	
State Cost Share Percent 0.0 %	State Cost Share Amount \$ 0.00
Fund Citation: 2014-05-3370EM-9104-XXXX-2501-D	Appropriation code: 70X0702
Mission Assignment Manager (Preparer) COURTNEY KELLER	Date 03/25/2014
** FEMA Project Manager/Branch Director (Program Approval) LAURIE MILLER	Date 03/25/2014
** Comptroller/Funds Control (Funds Review) GEHRLI, ROBERT W	Date 03/25/2014
VI. APPROVAL	
*State Approving Official (required for DFA and TA):	Date
**Federal Approving Official (required for all): MICHAEL HALL	Date 03/25/2014
VII. OBLIGATION (FEMA Use Only)	
Mission Assignment Number 3370EM-WA-COE-NWD-0	Amount This Action \$ 50,000.00
	Date/Time Obligated 03/26/2014
Amendment Number 00	Cumulative Amount \$ 50,000.00
	Initials/FMS
* Signature required for Direct Federal Assistance and Technical Assistance MAs. ** Signature required for all MAs.	



Verbal Mission Assignments

- Used when immediate action is required
- Authorized per 44 CFR 206.7





MA Funding Sources

Disaster Relief Fund

- Surge and Declaration Funding
 - DRF is Congressional Appropriation and source of funding for Stafford Act response

Surge Funding

Surge Account provides funding for response operations

Declaration Funding

Response/recovery operations are funded under

- Major disaster declaration
- Emergency declaration



Surge Account Numbering

State Code

Agency ID

TX - 12100401 - EPA - 01

Incident ID

MA Sequence
ID



Transition from Surge to Declaration Funding

Missions beginning under Surge must be issued new MA under declaration if mission is to continue

Costs incurred prior to declaration are applied to Surge

Costs incurred after declaration are applied to appropriate new MA





Declaration Account Numbering

	State Code		MA Sequence ID
3201DR	- TX	- EPA	- 01
Incident ID		Agency ID	



Mission Assignment Execution

Assigned agencies may only perform activities clearly within SOW

Management begins with execution and continues through closeout



It's not a great statement of work,
But we'll revise it if things get better.



MA Task Orders



- Are issued to provide specifics to broad mission statements provided in MA
- Are used when request falls within SOW of existing MA
- Prevent issuance of multiple MAs for same SOW



Phase II—MA Execution

- Primary ESF agencies may subtask support agencies
- Financial Management Support Annex of NRF contains example form for subtasking support agencies
- When subtasked, support agencies seek reimbursement approval from primary agency, not FEMA





MA Amendments

Mission Assignments are amended for changes in:

- Projected End Date

- Funding

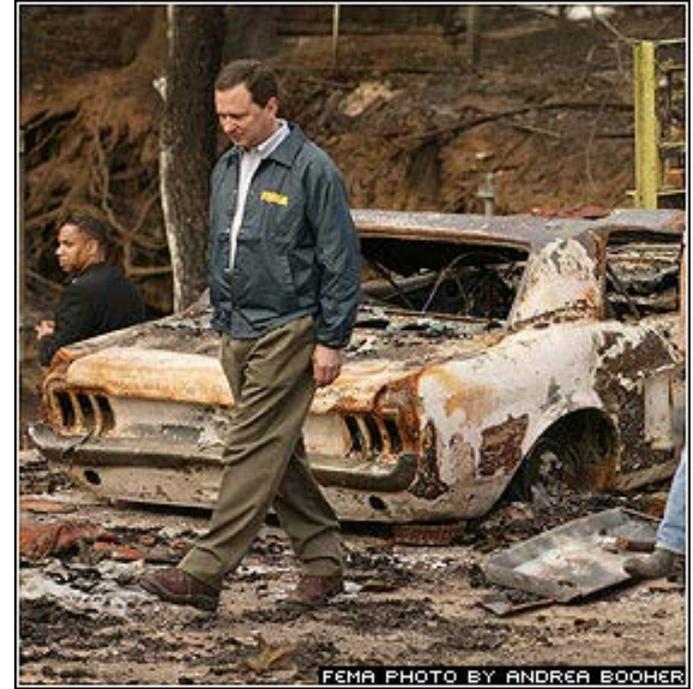
- Project Officer

- Cost Share

Note: Change in SOW requires
NEW Mission Assignment



MA Execution — Accountable Property



- All property purchases **MUST** be coordinated with FEMA Operations and Logistics
- ESFs must account for and maintain property purchased under MAs
- OFA request for reimbursement for property purchased under MAs requires property being returned to FEMA



Reimbursable Personnel Costs



Permanent Federal Employees	Temporary Personnel	Federal Military Personnel
<ul style="list-style-type: none">• Overtime• Travel• Per Diem	<ul style="list-style-type: none">• Wages (only if performing work under MA)• Travel• Per Diem	<ul style="list-style-type: none">• Travel• Per Diem



Other Reimbursable Costs



- Contracts
- Materials, equipment, and supplies from regular stocks
- Trust and revolving funds
- Other justified and approved costs



Reimbursement Criteria

To be eligible for reimbursement, costs must be:

- Necessary and reasonable
- Authorized
- Not funded by another source
- Incurred in accordance with policy, procedures, and regulations
- Adequately documented/supported

All eligible costs noted may be reimbursed if properly documented

Ineligible Costs

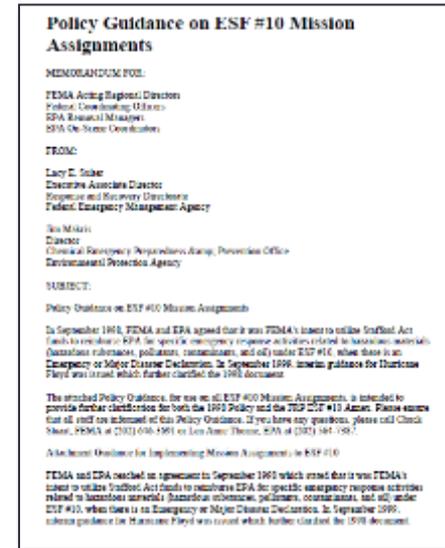
- Appropriated salaries
- Projected costs
- Amounts exceeding funding authority
- Excessive, unreasonable costs
- Unsupported claims





Suiter-Makris Memo

- Signed in 1999
- Formalized in 2001 as FEMA Public Assistance Policy: 9523.8
- FEMA and EPA reached agreement it was FEMA's intent to use Stafford Act funds to reimburse EPA for specific emergency response activities related to oil and hazardous materials under ESF #10, when there is an Emergency or Major Disaster Declaration.



Suiter-Makris ESF #10 Specific Allowances

- Activities **EPA** will fund:
- Use CERCLA funds to pay for emergency response activities related to pre-existing Superfund sites, sites that have ongoing CERCLA response actions or are currently listed on NPL
 - Use Oil Spill Liability Trust Fund funds to pay for all response activities related to pre-existing OPA removal actions



Suiter-Makris ESF #10 Specific Allowances

Activities **FEMA** will fund through Stafford Act:

- Pre-deployment teams;
- Retrieving/disposing of orphan tanks and drums;
- Household hazardous waste program expenditures;
- Technical assistance to states;
- Pumping of water contaminated with hazardous materials or oil from basements when the problem is a widespread threat to public health;
- Initial assessments to determine if immediate health and safety threat exists





Suiter-Makris ESF #10 Specific Allowances

Activities that **FEMA** will fund through Stafford Act (cont):

- Control and stabilization of releases of hazardous materials or oil to deal with immediate threats to public health and safety;
- Clean-up and disposal of hazardous materials that is necessary to mitigate immediate threats to public health and safety;
- Monitoring of immediate health and safety threats resulting from debris removal operations.

"Immediate" applies to threat whenever it may occur, not necessarily be right after disaster event.



Suiter-Makris ESF #10 Specific Allowances

Activities that FEMA **may** fund through Stafford Act:
Clean-up or removal of hazardous materials or oil contamination in buildings or facilities eligible for FEMA assistance (public buildings)
[Example: decontamination of subway system following terrorism incident]





Suiter-Makris ESF #10 Specific Allowances

Activities that FEMA **will not fund** through Stafford Act:

- Testing/assessments of soil, air and water for mold and contaminants to determine long term clean-up;
- Long-term site remediation or restoration;
- Permanent storage of hazardous materials;
- Cleaning/replacement of equipment that is damaged/contaminated during long-term cleanup activities;
- State/local costs for long-term cleanup measures



NCP vs. Stafford Act



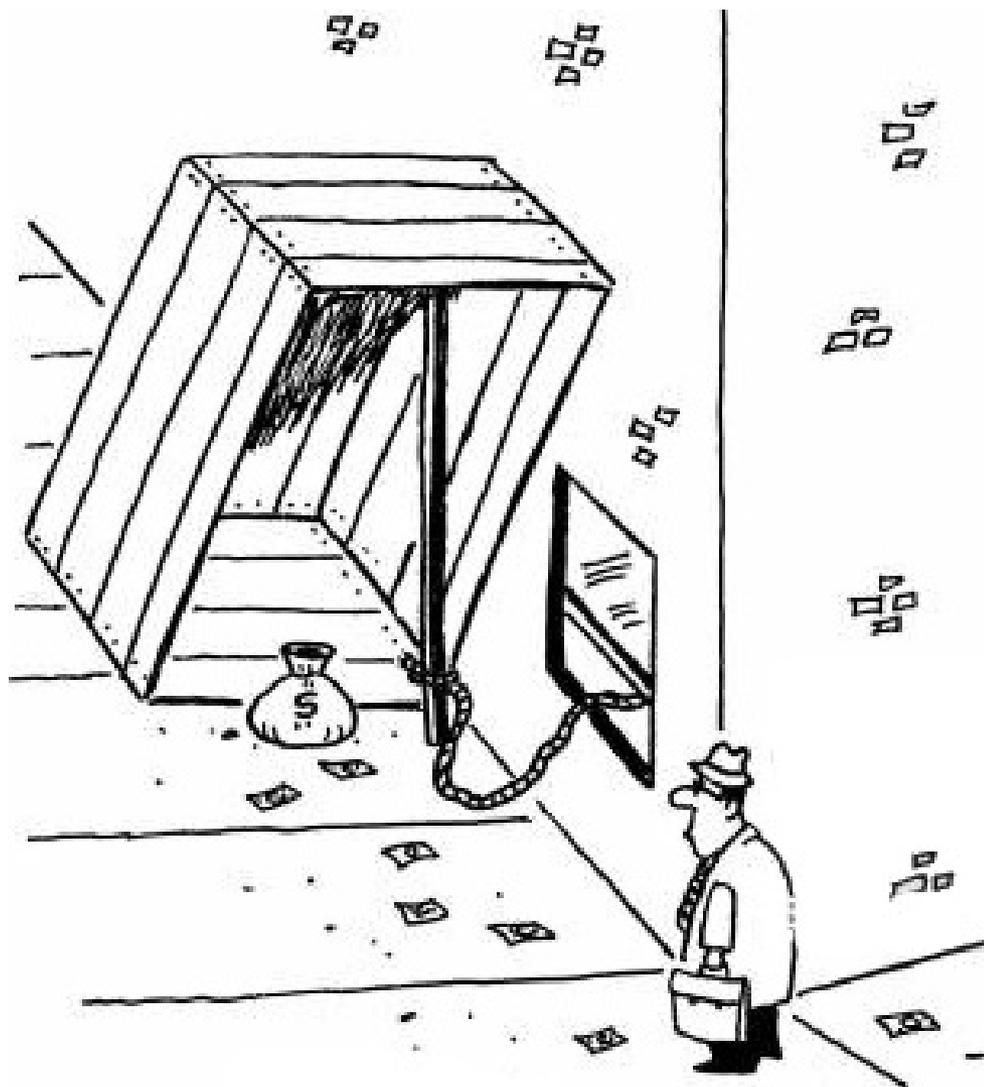


Key Differences

NCP Emergency Response Program		Stafford Act
EPA or USCG	Lead Agency	FEMA
OSC	Field Individual Leading	FCO
Lead, support, or monitor, plus enforcement over responsible parties	Type of Authority	Support
Anyone - States, tribes, locals can request at any level	Who Can Make a Request for Federal Help	Governor or Tribal Chief Executive
No - federal government makes independent evaluation of need for federal response	Federal Response Dependent on Receiving Request?	Yes - except for certain emergencies involving primary federal responsibility
No	State Cost Share	Yes - unless waived
May be less broad than Stafford	Scope of Federal Assistance	Broad

Don't Fall into the Trap:

- Don't compare one incident to a past incident in terms of what FEMA will pay for
- Don't compare an incident in our Region with an incident in another Region in terms of what FEMA will pay for



**Got
Questions?**





BSEE Response Research Program RRT-6 Fall Meeting

Kristi McKinney

Research Program Manager

Oil Spill Preparedness Division

November 8, 2017

“To promote safety, protect the environment and conserve resources offshore through vigorous regulatory oversight and enforcement.”

OSPD RESEARCH PROGRAM GOALS

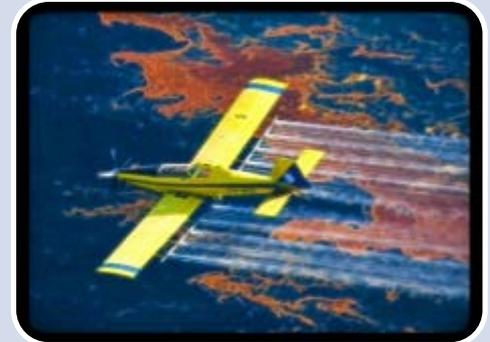
- 
- Conduct and sponsor leading-edge research to address knowledge gaps

- 
- Share research results to inform bureau policies, guidance, and practices in coordination with our regulatory partners

- 
- Conduct research to support the Division in its regulatory decision making

- 
- Promote and enhance Ohmsett

OSPD RESPONSE RESEARCH BRANCH



Project Overview

- Budget:
 - FY16-\$7.5M
 - FY17-\$8.4M
- 9 FTE positions
- 39 on-going projects
- 3 under peer review
- 200+ projects in past 25+ years

Focus Areas

- Detection
- Containment and Recovery
- In Situ Burn
- Treatment
- Decision Making Tools
- Ohmsett Management

Cooperative Effort

- Funding and expertise
- Research partners
 - Government
 - Academia
 - Industry
 - International community

OHMSETT – National Oil Spill Response Research and Renewable Energy Test Facility

- Managed by OSPD Response Research Branch
- 667 ft x 67 ft x 8 ft deep
- Wave making capabilities
- Salinity near open ocean
- Testing and training with refined and crude oils



SELECTED PROJECT OVERVIEW

- Decision Making Strategies
- Mechanical Containment/Recovery
- Combustion/In Situ Burn
- Remote Sensing
- Dispersants/Herders



BSEE OSRR #1077 – Gulf of Mexico Oil Spill Response Viability Analysis

- Nuka Research and Planning Group, LLC
- PI: Sierra Fletcher

Objective: Conduct an oil spill response viability analysis (and develop a model) for the U.S. Outer Continental Shelf GOM.

- Quantify frequency and duration that a specific oil spill response strategy may not be feasible or may be ‘unduly’ impacted
- Wind, sea state and visibility considered using available hindcast environmental data
- Response strategy options including mechanical recovery, in situ burn, and the surface applications of dispersants (aerial and vessel deployed)

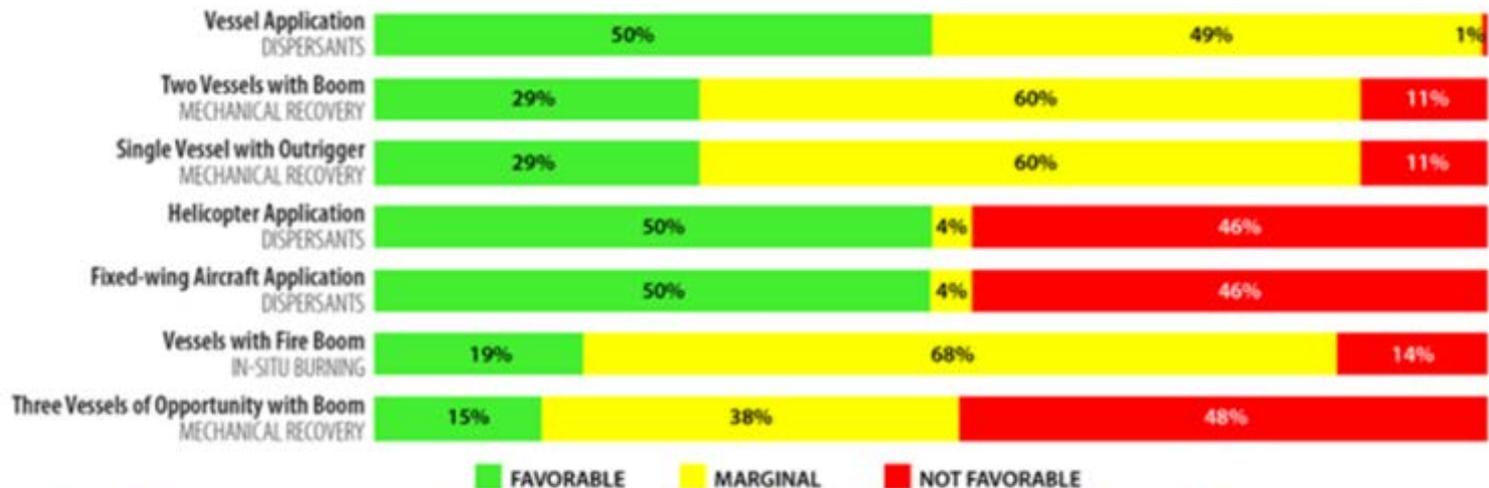


Figure ES-1. Annual percentage of time that conditions are favorable, marginal, or not favorable for response systems studied (averaged for entire study area)

BSEE OSRR #1042 – Technology Readiness Level (TRL) Definitions for Oil Spill Response Technologies and Equipment

- Applied Research Associates
- PI: Dr. Paul Panetta

Objective:
Establish a uniform and objective means to determine the level of maturity of a new technology.

BSEE Oil Spill Response TRL Summary	
BASIC TECHNOLOGY RESEARCH	
TRL 1	Basic principles observed or reported
TRL 2	Concept and speculative application formulated
TRL 3	Proof of concept demonstrated
TECHNOLOGY ADVANCEMENT/DEMONSTRATION	
TRL 4	Prototype demonstrated in lab environment or model scenario
TRL 5	Prototype tested in relevant environment
TRL 6	Full-scale prototype tested in relevant environment
TECHNOLOGY IMPLEMENTATION IN OPERATIONAL ENVIRONMENT	
TRL 7	Integrated technology tested on large scale or in open water
TRL 8	Final integrated system test in real or relevant environment
TECHNOLOGY DEOPOLYMENT IN REAL SPILL ENVIRONMENT	
TRL 9	Final integrated system deployed in real spill environment

BSEE OSRR #1083 – Development of a Recovery Efficiency Sensor

- Battelle Memorial Institute
- PI: Dr. Slawek Winecki

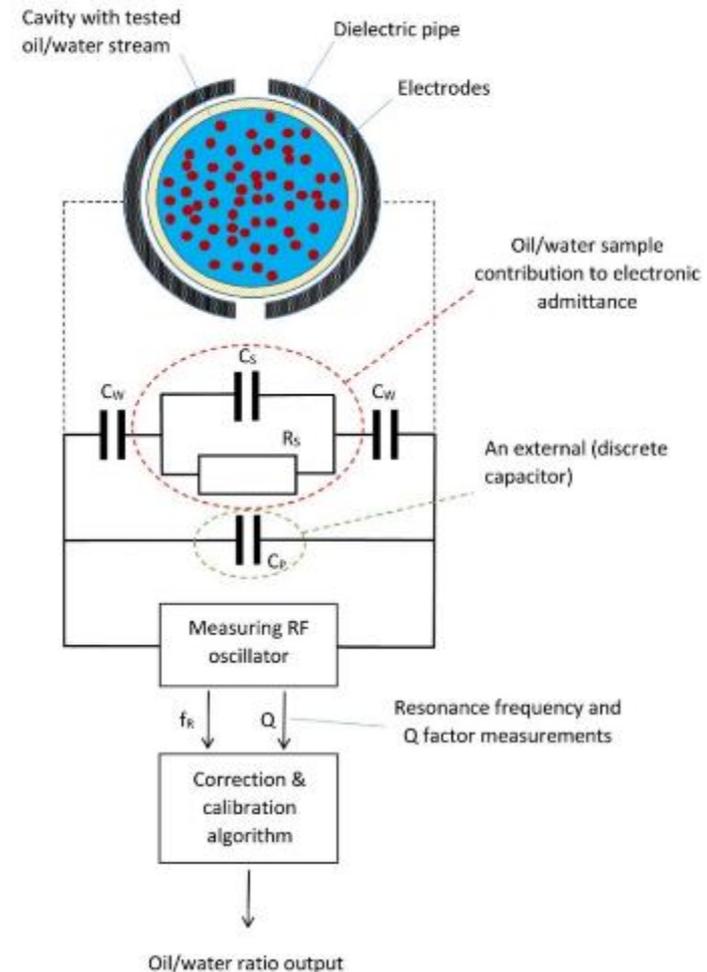
Objective: Develop and test an in-line, flow through Oil Recovery Efficiency Sensor (RE Sensor) to monitor oil recovery efficiency during spill response operations.

Goals:

- Real time measurement of percentage oil/water mixture
- Able to handle oil/water emulsions
- Accurate with multiple oils/salinities
- Low cost
- Attach to standard recovery hose diameters
- Wireless Communication

Tasks:

- Modeling
- Stationary, non flow and flow through mode tests
- Prototype Construction
- Test at Ohmsett May 2018



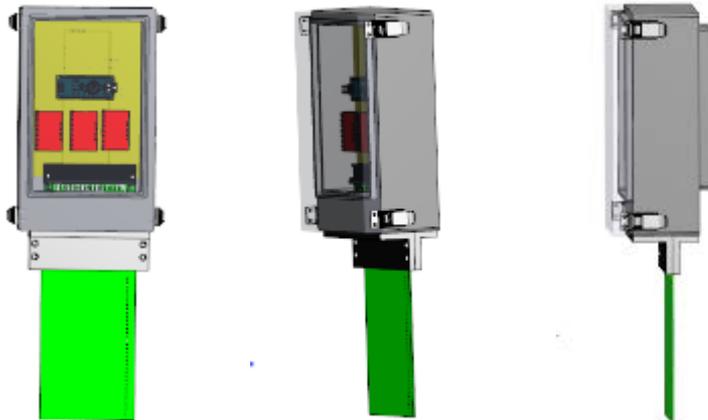
BSEE OSRR #1078 – Development of an Oil Thickness Sensor

- American University of Beirut
- PI: Dr. Imad Elhajj

Objective: Develop and test a sensor capable of measuring oil thickness and wirelessly communicating thickness information in near real time.

Goals:

- Accuracy to 1/8", Low cost
- Wireless communication to 200-300m
- Low Cost
- Mount to a skimmer/boom or deployed easily from a vessel



BSEE OSRR #1061– Development of a Low-Emission Spray Combuster for Emulsified Crude Oil

- Naval Research Laboratory (NRL)
- PI: Dr. Steven Tuttle

Objective:

Development of a low-emission, low pressure atomization and combustion process for emulsified crude oil.

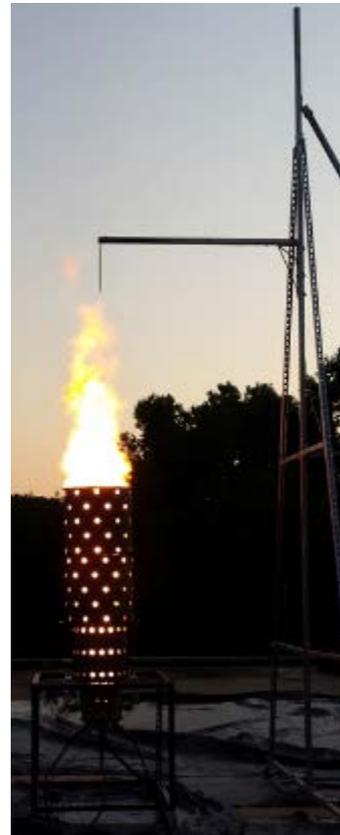
50%
Seawater



25%
Seawater



0%
Seawater



BSEE OSRR #1068– Offshore Oil Burn Enhanced by Floating Immersed Objects

- Worcester Polytechnic Institute
- PI: Dr. Ali Rangwala

Objective: Develop prototype system to directly burn off oil slicks in booms at high efficiencies and with low emissions.

Status: Tested in March in Little Sand Island Burn Pan. Very successful burn. Residue was minimized. 20 kg residue without unit. 5 kg residue with unit.



BSEE OSRR #1098 – System and Algorithm Development to Estimate Oil Thickness and Emulsification through a UAS Platform

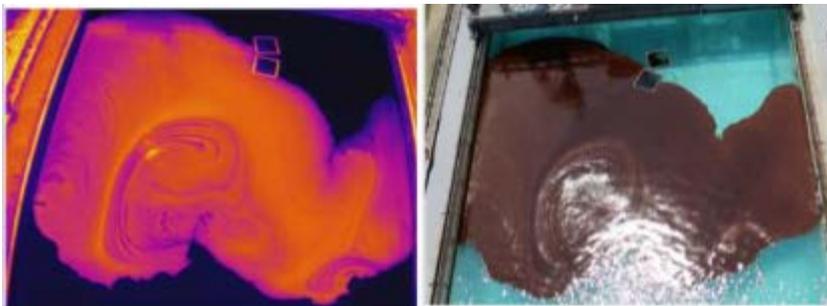
- WaterMapping
- PI: Oscar Garcia

Objectives:

- Design and implement an Unmanned Aircraft System (UAS) for estimating oil thickness and emulsification
- Develop an image processing algorithm that that can be used to process data collected from aerial platforms operating a combination of multispectral and thermal sensors

Bands	Sequoia	Flir Vue Pro	5DMark III	Flir Neutrino	TetraCam Micro-MCA
370 nm					✓
450 nm			✓		✓
550 nm	✓				✓
660 nm	✓				✓
735 nm	✓				
790 nm	✓				
3400-5100 nm				✓	
7500-13500 nm		✓			

UAS system used at Ohmsett



Synoptic view of two UAS cameras (FLIR and HD Optical)

BSEE OSRR #1013– Enhanced Oil Spill Detection Sensors in Low Light Environment

- US Army Research Development and Engineering Command
- PI: Edward Overton

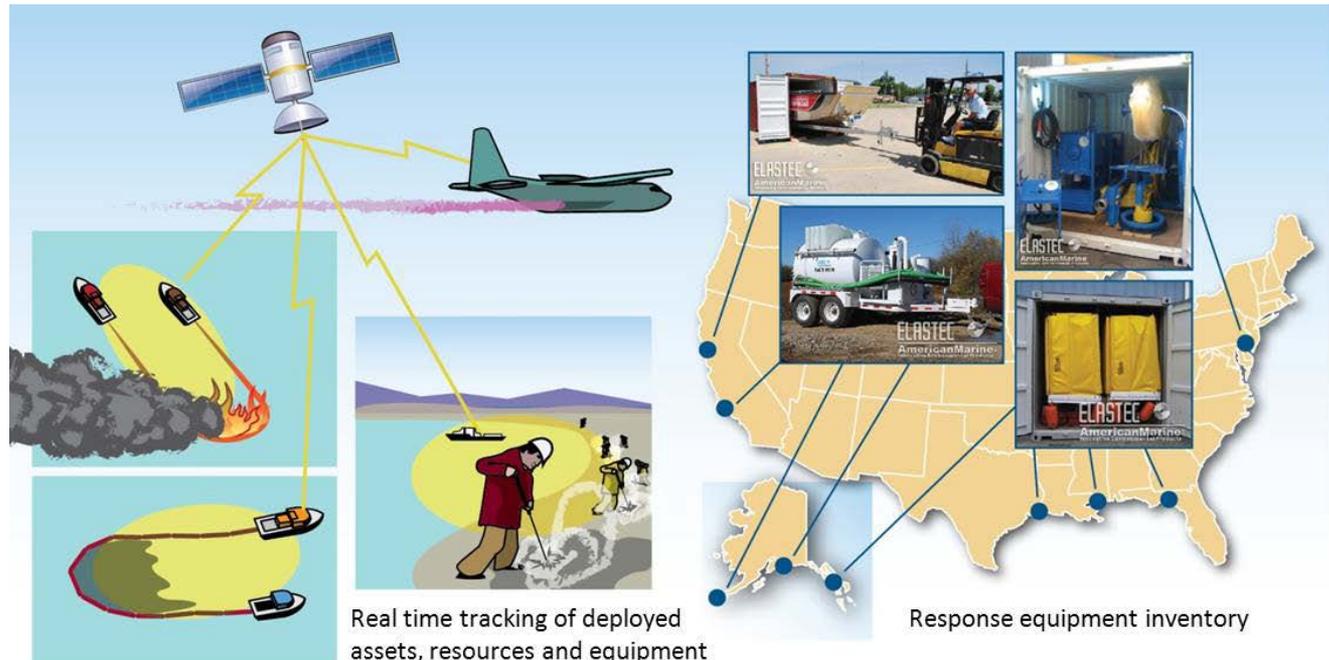
Objective: To enhance the methods currently in place to detect oil in a low-light marine environment. The methods currently in place rely heavily on time-delayed aerial remote sensing technologies, or visual observation. This project will leverage the knowledge and expertise of RDECOM to identify and document existing capability gaps; identify and assess technology gaps; test and evaluate potential new or alternative hardware; and if necessary, support the design, development and demonstration of new technologies to meet identified needs.



BSEE OSRR #1050– Geo-Referencing Identification (GRID) Tag

- URS Group Inc.
- PI: Ben Schreib

Objective: To develop a low cost radio-frequency identification tag that can be used to track and inventory oil spill response equipment on a continuous basis. These tags will be designed to withstand a harsh marine arctic environment.

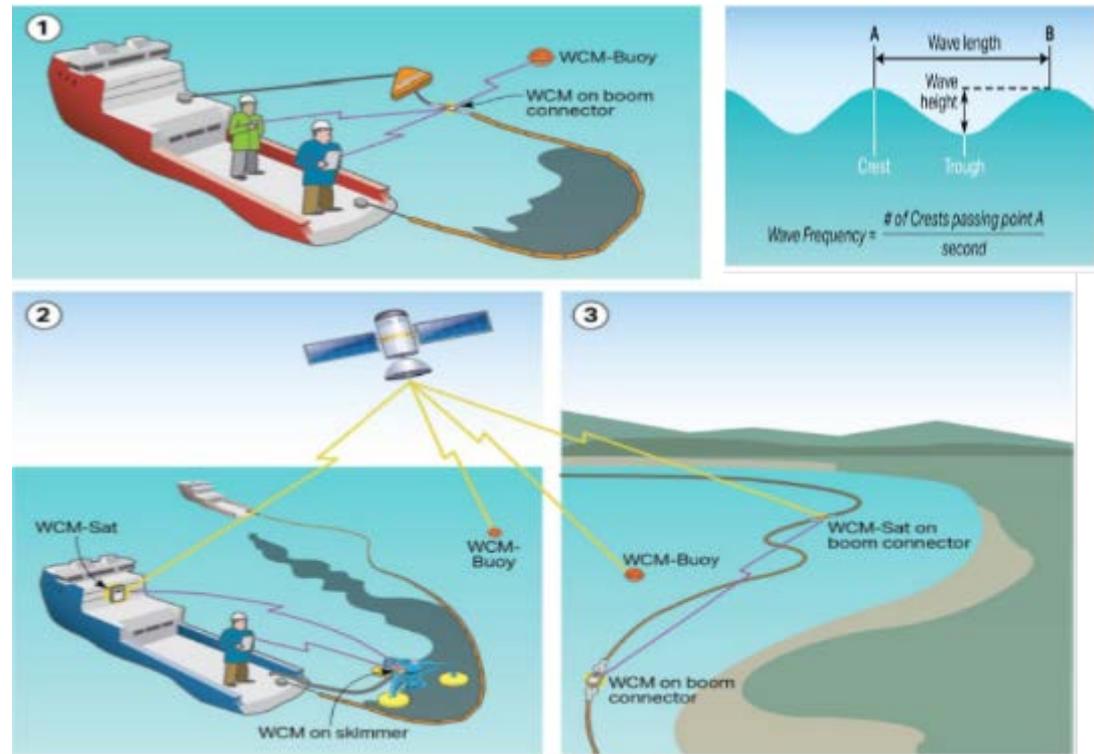


BSEE OSRR #1080 – Equip GRID and GRIDSAT Tags with Accelerometers to Measure Wave Characteristics

- AECOM
- PI: Ben Schreib

Objectives:

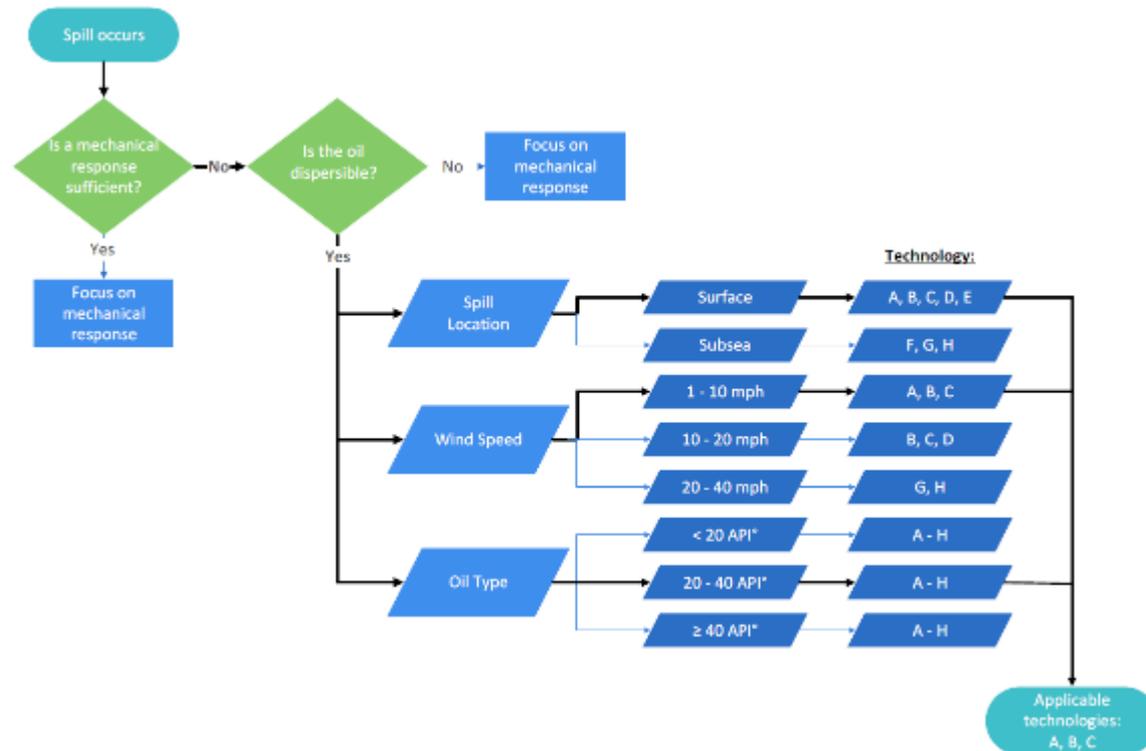
- Equip GRID and tags with 3-axis accelerometers to measure wave height, wave length, wave period
- use enhanced GRID tags to equip and test skimming units for wave characterization
- achieve satellite communication to transmit data for operational awareness
- create a user-friendly operator interface for skimmer operator.



BSEE OSRR #1090 – Operational & Efficiency Assessment of Dispersant Delivery Techniques/Systems

- Southwest Research Institute
- PI: Dr. Amy McCleney

Objective: Determine the operational efficiency of currently available surface dispersant delivery techniques/systems as a function of spill characteristics and delivery system capabilities. The project will consider evaporative processes, oil composition, effective dispersant droplet size range, spray system platforms, swath definition, wind effects, sea state, and wind restrictions.



BSEE OSRR #1091 – Estimating Oil Slick Thickness with LiDAR Remote Sensing Technology

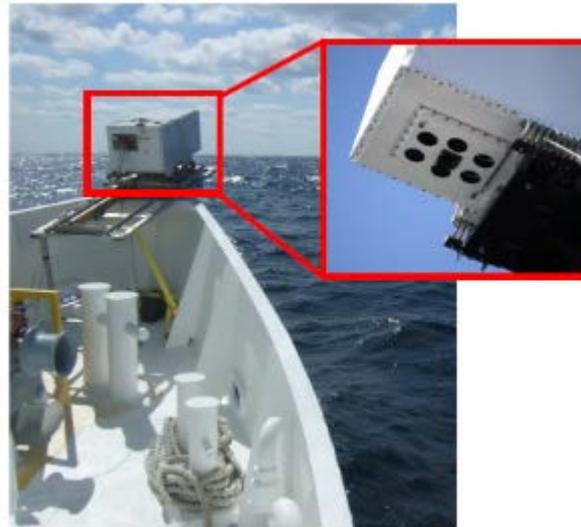
- The U.S. Naval Research Laboratory
- PI: Richard Gould, Ph.D.

Objectives:

- Assess and evaluate the capabilities and limitations of laser systems to detect and characterize oil layers of varying thickness on the surface of the water, in conjunction with an acoustic sensor for in-water detection
- Demonstrate this technology and develop new approaches and algorithms to utilize LiDAR systems to detect and classify oil spills, to aid remediation efforts



TURBOL



SLOP (inset shows view of the instrument bottom, pointing toward the water).

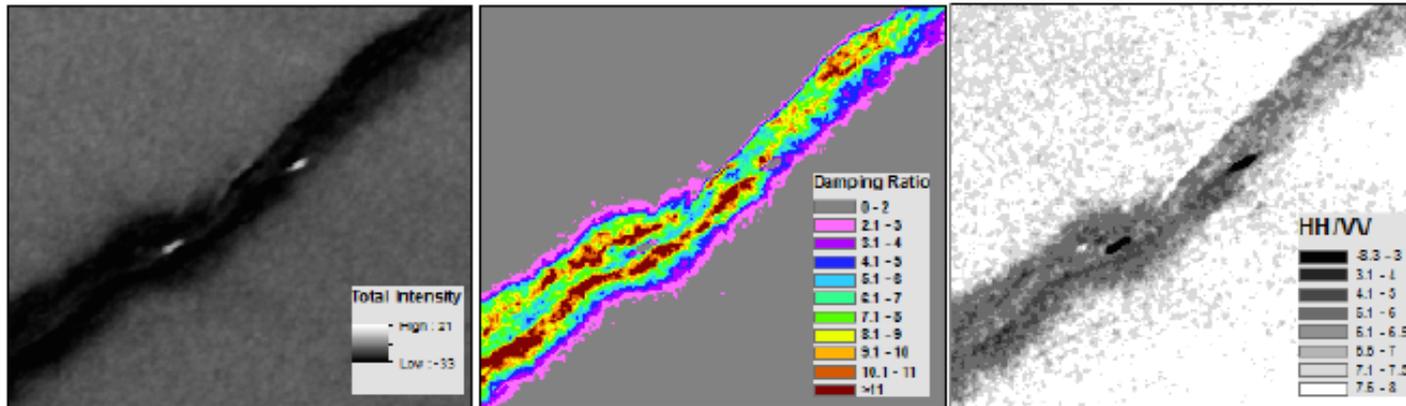
BSEE OSRR #1097 – Slick Thickness Characterization based on Low Noise, Polarized Synthetic Aperture Radar

- Jet Propulsion Laboratory/NASA
- PI: Cathleen Jones, Ph.D.

Objectives: Evaluate the capability of low noise L-band (1.26 GHz) synthetic aperture radar (SAR) imagery to:

- characterize oil slicks by thickness, both relative and quantitative, including the effects of wind and sea state
- Determine the oil:water ratio, i.e. volumetric fraction of surface oil

Data acquired with the UAVSAR sensor under different wind and slick conditions will be used to constrain models and evaluate accuracy.



[left] Bright spots are boats in the slick

[middle] Damping ratio

[right] The damping ratio shows gradients from edge to center of the slick

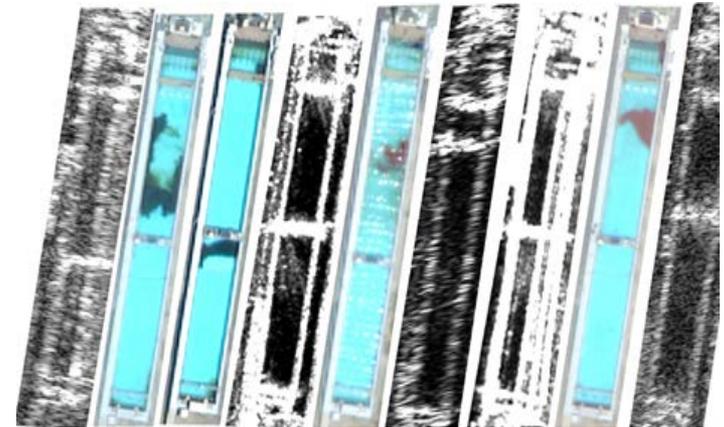
BSEE OSRR #1079– Oil Spill Detection and Slick Thickness Measurement Using Spaceborne and Airborne Sensors

- NOAA
- PI: George Graettinger

Objective: To provide BSEE and NOAA the needed methodology and operational tools to assess future oil spills and the ability to monitor and measure more accurately the thickness of surface oil slicks in the marine environment using a suite of satellite and aerial sensors. Comprehensive analysis of the capabilities and limitations of each sensor will be conducted.

Highlights:

- Initial testing at Ohmsett with various sensors in July 2016
- Offshore testing conducted at MC-20 in November, 2016

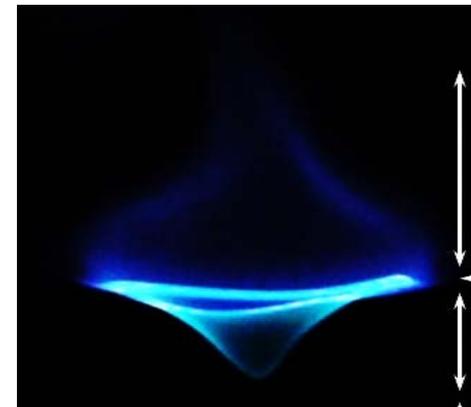


BSEE OSRR #1094 – Fire Whirl Fundamentals

- University of Maryland
- PI: Dr. Michael Gollner

Objectives: Describe and characterize the structure and behavior of fire whirls over open water, and understand the effects and advantages of fire whirls on ISB.

Fire whirls burn extremely hot with minimal sooty emissions. Prescribed in-land burns have proven extremely efficient by manipulating the number of fires as well as the shape of the fuel for the fire. This study will improve our fundamental understanding of fire whirls.



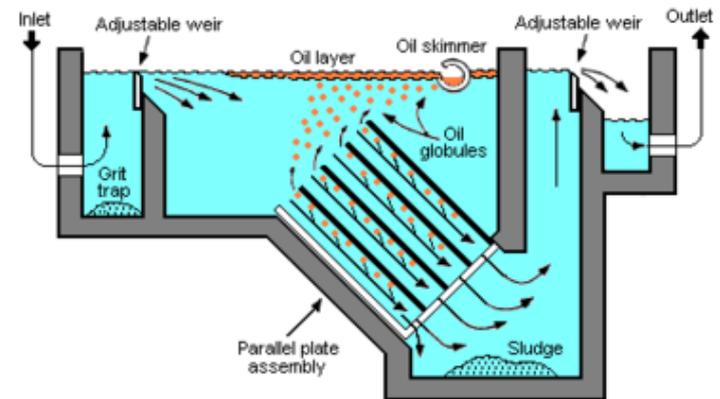
BSEE OSRR #1088 – Assessment of Oil Demulsification and Separation Technologies

- In Procurement

Objective: Compile information on current industry practices, procedures and technologies used for oil demulsification and oil separation, both within the oil spill response industry as well as other related industries.

Outcome: Report summarizing:

- Current technologies/procedures used in oil spill response
- Current technologies used in other industries that might be adaptable
- State of the art systems
- Relevant new research and technology development
- Summary of identified areas where technology development could enhance demulsification and separation



BSEE OSRR #1089 – Investigation of Design Enhancements to Current Boom Technologies

- In Procurement

Objective: Investigate alternative boom designs that will allow booms to collect and contain oil at boom tow speeds above the current standard 0.7 to 1 knot. Alternative boom designs would target tow speeds at a threshold of 5 knots with an objective of 7 knots while preventing loss of oil from within the boom's apex. The project's final deliverable will inform BSEE of possible boom designs that could be considered for use in collecting and containing oil at speeds of 5 to 7 knots tow speed.

Tasks:

- Review and assimilate past R&D of booms to develop understanding of prior boom design and modeling efforts
- Conduct hydrodynamic modeling and other design activities to determine alternative potential boom designs





BSEE Website: www.bsee.gov



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Potential FOSC/UC Resources for Preparedness and Response

RRT 6 Meeting – November 9, 2017 – Addison, TX
Ann Hayward Walker
ahwalker@seaconsulting.com



This Presentation

- Two Issues: (1) strengthen decision making (2) strengthen stakeholder relationships
- Current policy, shortfalls in achieving best response
- Oil Spill Stakeholders – their role in preparedness and response
- Need/problem and solution/value
- This 2014-7 work – funded by, framing principles, description of two new resources (or capabilities)
 - Survey of academic researchers
 - Future work 2018-19
- Related work – August 2017 NAS workshop on community health and well-being
- Oil spill stakeholder collaborative process to strengthen preparedness and response + develop adaptive capacity for community resilience

Policy Guidance

- National Contingency Plan (1994)
 - “RCPs shall, as appropriate, include information on all useful facilities and resources in the region, from government, **commercial, academic, and other sources.**”
 - “The **technical and scientific information generated by the local community**, along with information from federal, state, and local governments, should be used to assist the OSC/RPM in devising response strategies where effective standard techniques are unavailable.”
- USCG Memorandum 3121, Dec.05 2012. Area Contingency Planning Job Aid.
 - “FOSCs are authorized to take response measures deemed necessary to **protect public health, welfare, and the environment.**”
 - “**Discussions and strong partnerships with all stakeholders** during the Area Committee process are necessary to inform a plan that, when implemented, will be adequate to effectively respond “
 - “Area Contingency Plan (ACP) development is a **collaborative process**”
 - “Area Committees are encouraged to **establish forums to obtain advice and guidance from these non-government stakeholders and include them in the decision-making process.**”

Can we “get ahead” when spills capture the public interest?

- ICS has its limitations when events become politicized Buck, Dick A. et al., 2006
- Large, controversial, and/or politicized oil spills, benefit from collaborative decision making that moves beyond operational decision making in ICS. Tierney, K., 2009
 - Collaborative decision-making involves both horizontal and vertical integration
 - ICS weakness = cultural interoperability. Critical strategic decisions can fall to elected or appointed leaders who are outside the ICS Waugh and Tierney, 2007
- There’s no structural or systematic reason why ICS can not be implemented in a open, cooperative, and distributive way that would meet the needs of responding to a complex event. (Walker et al, 1994) This openness could be facilitated during pre-spill planning by:
 - Specifically identifying the stakeholder concerns ... and identifying a mechanism to address those stakeholder concerns; and
 - **Designing a contingency to accommodate unanticipated issues** during significant and/or catastrophic events... ensure feedback to the response organization, both on how well they are doing (effectiveness) and how well others think they are doing (success).

Best Response & Critical Success Factors

- These are a set of things that must go right if an operation is to succeed and have stakeholders and the public believe that the response was a success
 - Based on the collective knowledge of over 100 experienced responders post-Exxon Valdez
1. Minimize spillage and do not interfere with response operations while controlling the source.
 2. The immediate response by industry and government must mobilize enough appropriate response resources (people and equipment) to contain most of oil at /near source to protect resources at risk.
 3. The response organization must be capable of sustaining effective operations until the emergency and the **threat(s) to human health and the environment** have been resolved.
 4. The response organization must be able to **communicate and manage information internally and externally (the media and public)**.
 5. Coordination between government and industry must be pre-planned, **account for stakeholder interests** and ensure a response organization that will be cohesive and effective.
 6. The response organization **must meet the public's realistic and achievable expectations for response to the hazard**.

Oil Spill Stakeholders

Stakeholder Group	Examples
Decision makers: those with jurisdiction / legal authority to make preparedness and response decisions and those with regulatory oversight	Formal governmental authorities (international, national, regional, state, local, parish): Incident/Unified Command; other regulatory agencies with jurisdiction Spiller (private or public) Resource trustees Compensation providers
Knowledge sources and advisors: those who have knowledge to contribute to the decision making process	Oil spill practitioners and technical specialists (government and industry) Resource managers Energy and marine operators Academic researchers Public health agencies – maybe yes, maybe no Others with traditional knowledge (i.e., fishers and marine pilots)
Stakeholders who can be affected by decisions	Local communities, vulnerable populations Fishers and seafood industry Tourist industry, other businesses in the spill area Oiled property owners Indigenous people Designated resource managers Energy/oil, marine, and shipping industries
Communicators, influencers, and opinion leaders: those who communicate and influence others with their opinions about oil spills	Media (print, broadcast, and electronic) Elected officials and community leaders Academia Trade associations, e.g., Association of State and Territorial Health Officials Non-governmental Organizations (NGOs) – maybe yes, maybe no Community health workers Social media bloggers/communicators

Need/Problem and Value/Solution

- Need/problem is infrequent = low priority, remains unaddressed
 - Results in a preparedness/response stakeholder gap
 - Need for horizontal collaboration
- Delay in being proactive hinders achieving a best response
- Solution: Develop *something* to prompt institutional consciousness and proactive consideration during preparedness and response
- Value: To strengthen “best response”
 - Strengthen relevant decision making information
 - Situation or location-specific decisions during preparedness and/or response
 - Strengthen preparedness with a means to enable collaboration with stakeholder groups
 - Groups not typically involved in oil or hazmat pollution-related activities, e.g., academia, NGOs, seafood industry, and others

This Work

- **Funded by Coastal Waters Consortium II (CWC II): *The Effects of the Macondo Oil Spill on Coastal Ecosystems (2014-17)***
 - Led by: Dr. Nancy Rabalais and Dr. Gene Turner, LSU, Louisiana Universities Marine Consortium et al.
 - Team Members: 23 Principal Investigators, 14 Institutions, 40 + 20+ publications, 17 post-docs, 45 researchers, 20 PhD students, 11 master students, many undergraduates
- **Walker work under CWC II – build connections between researchers and the oil spill community; opportunities to share science with responders to inform oil spill decisions**
 - Worked with Sector New Orleans AC, Response Technologies Subcommittee (2014-16) to develop draft means to connect researchers and apply research in oil spill preparedness and response, i.e., draft document for ACP annex
 - Two resources: Science & Technology Advisors; Seafood Industry Liaison Specialist
 - Survey to assess academic interest in oil spill preparedness and response (2017)



Framing Principles for New Resources

- Beneficial to FOSC and Unified Command
 - Minimize management challenges
- Ready-to-implement approach on case-by-case basis, adaptable and scalable for situation needs
 - ***General scope and expectation language; most spills are local***
- Identify resources during preparedness, consistent with national response system, ***or as needs emerge during a spill***
 - “Rolodex” of names, institutions or more robust
- FOSC would activate during response
 - If RP unidentified or unable, NPFC will pay if the FOSC requests (NAS Oceania spill in Sector Hampton Roads, spring 2017)



Science and Technology Advisors

- Access to specialized knowledge (decision support) outside the traditional response community
- Includes, but not limited to, academic researchers
- Could include agency reps, e.g., ATSDR, to address dispersant/human health questions
- Identify individuals or organizations pre-spill, or incident-specific
- Other potential knowledge sources:
 - Traditional local knowledge, e.g., seasonal currents, convergence zones
 - Community networks
- Flexible assignment, e.g., Environmental Unit
- Supervisor
 - If a science resource – the SSC
 - If not – other as appropriate

Seafood Industry Liaison Specialist

- Gap in oil spill regulatory framework
 - Fishery closures and seafood safety testing following some oil spills significantly impact seafood industry (fishers, wholesale, retail, restaurants, customer confidence)
 - NMFS and state Depts. Of Health have jurisdiction
- Seafood industry impacts can be long-term and more complex than economic damage
 - Some impacts, but not all, mitigated by OPA 90 and other claims process
 - Inadequate means to mitigate full range of impacts on affected stakeholders
- Dilemma: Unified Command/ICP has best spill information
 - FOSC is responsible for mitigating spill impacts and acting in the public trust
 - Share spill information with seafood industry to help address questions and concerns
- Ready to implement, easy solution – connect with SEA Grant Fishery Extension Agents
 - Network is nationwide



Format of document

(generally guided by Sector NOLA ACP Appendix L: Volunteers)

- Intended purpose
- Introduction
- **Background (rationale for use during a pollution incident)**
- Development
- Description of Resource
- Activation, tasking
- Preferred skills, training
- Information sharing
- Response funding

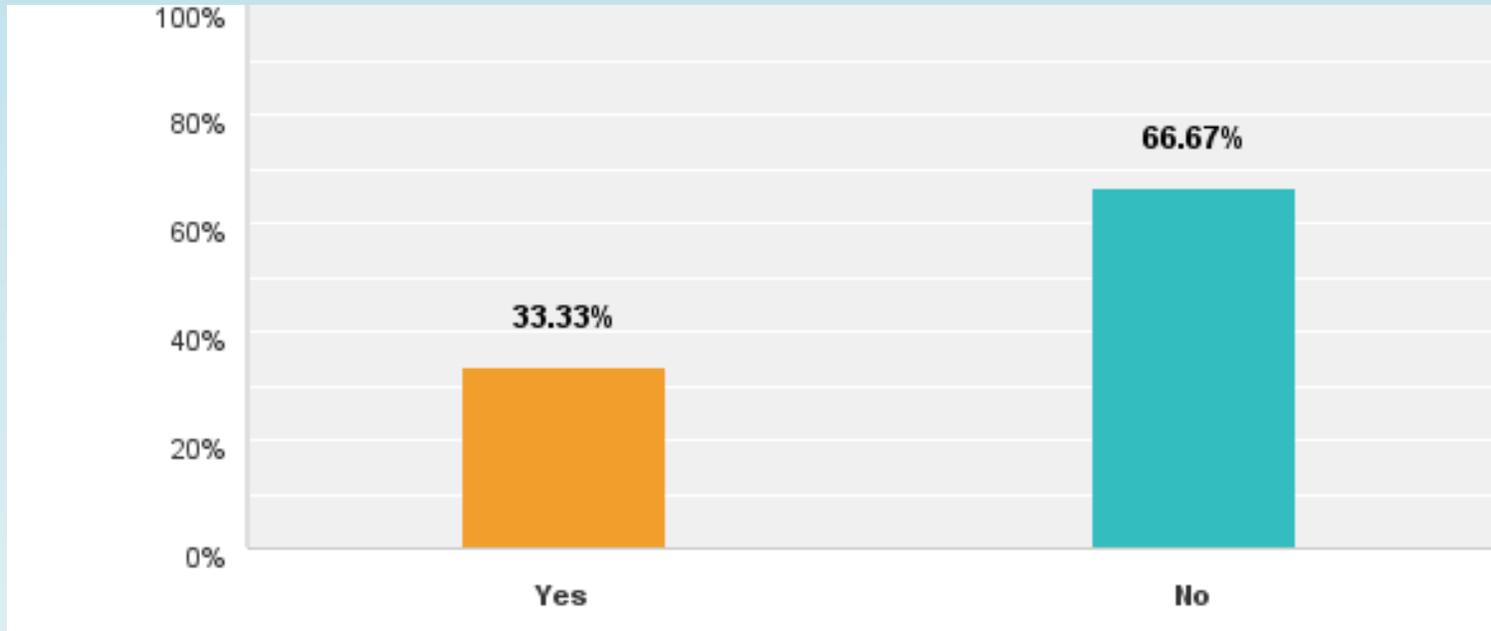
Survey of CWC Researchers

(27 Responses)

*Assessing academia interests in contributing
to response vs. research*

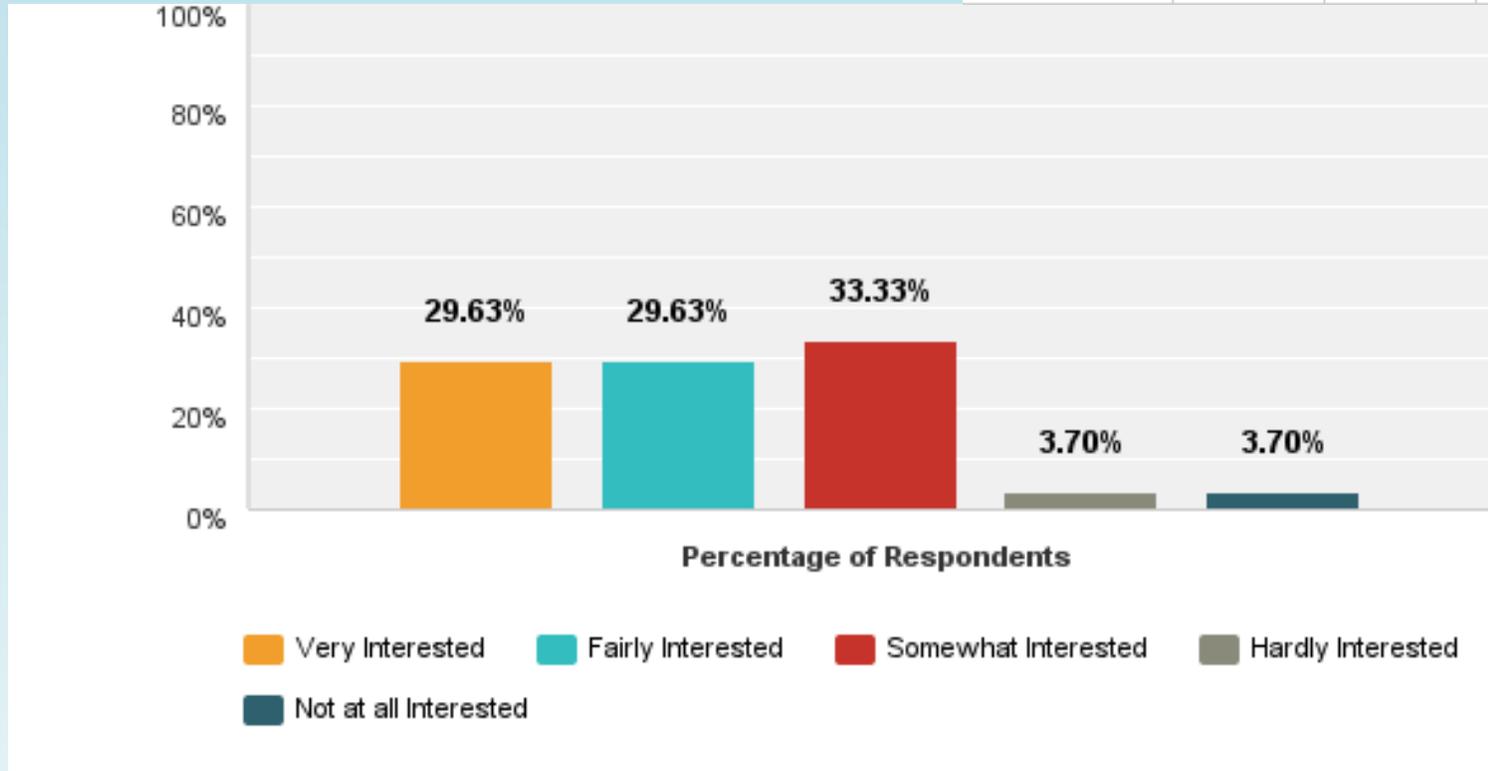
Q1: Have you participated in responding to an oil spill before?

Answer Choices	Responses
Yes	33.33% 9
No	66.67% 18
Total	27



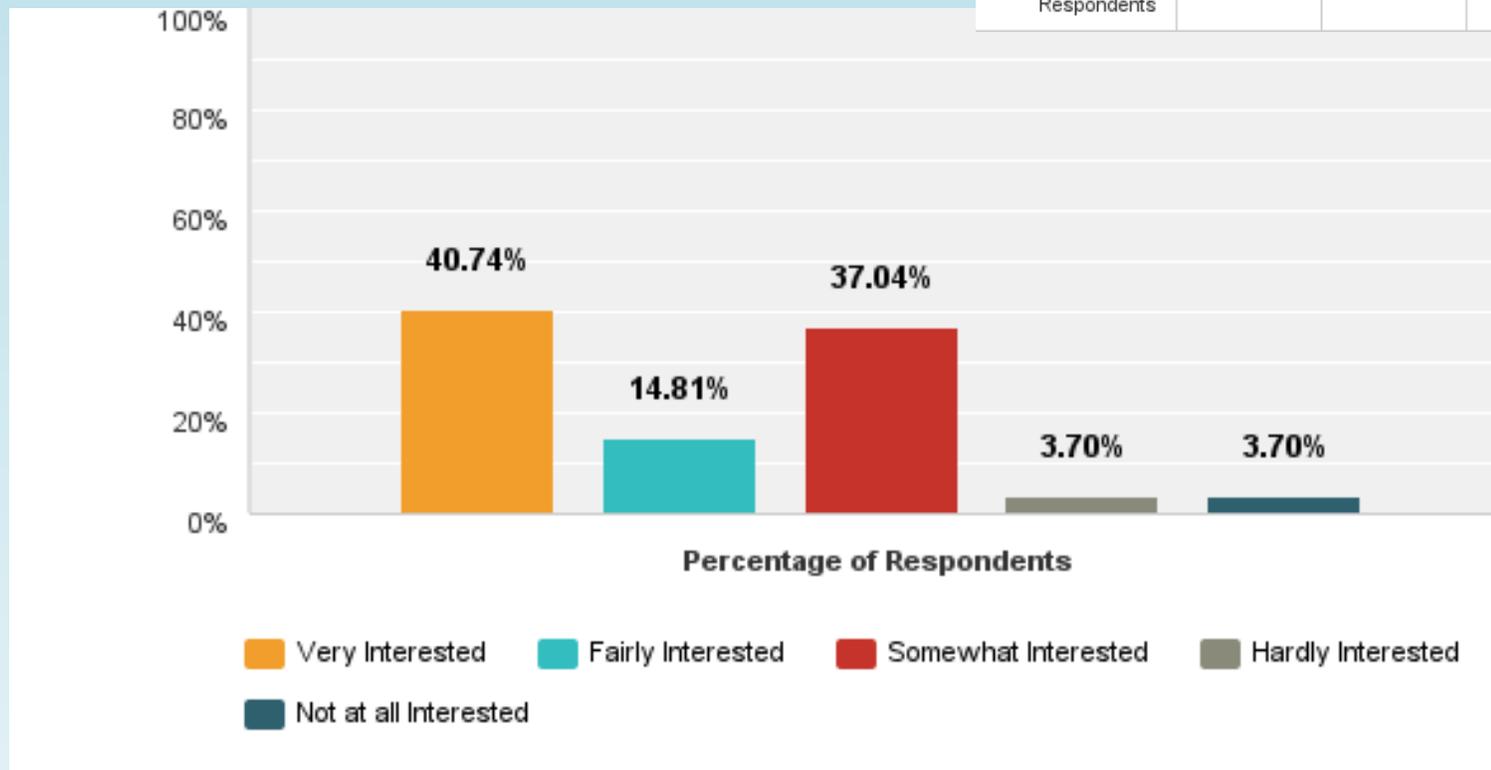
Q2: How interested would you be in participating in a network of oil spill subject matter experts?

	Very Interested	Fairly Interested	Somewhat Interested	Hardly Interested	Not at all Interested	Total	Weighted Average
Percentage of Respondents	29.63% 8	29.63% 8	33.33% 9	3.70% 1	3.70% 1	27	2.22

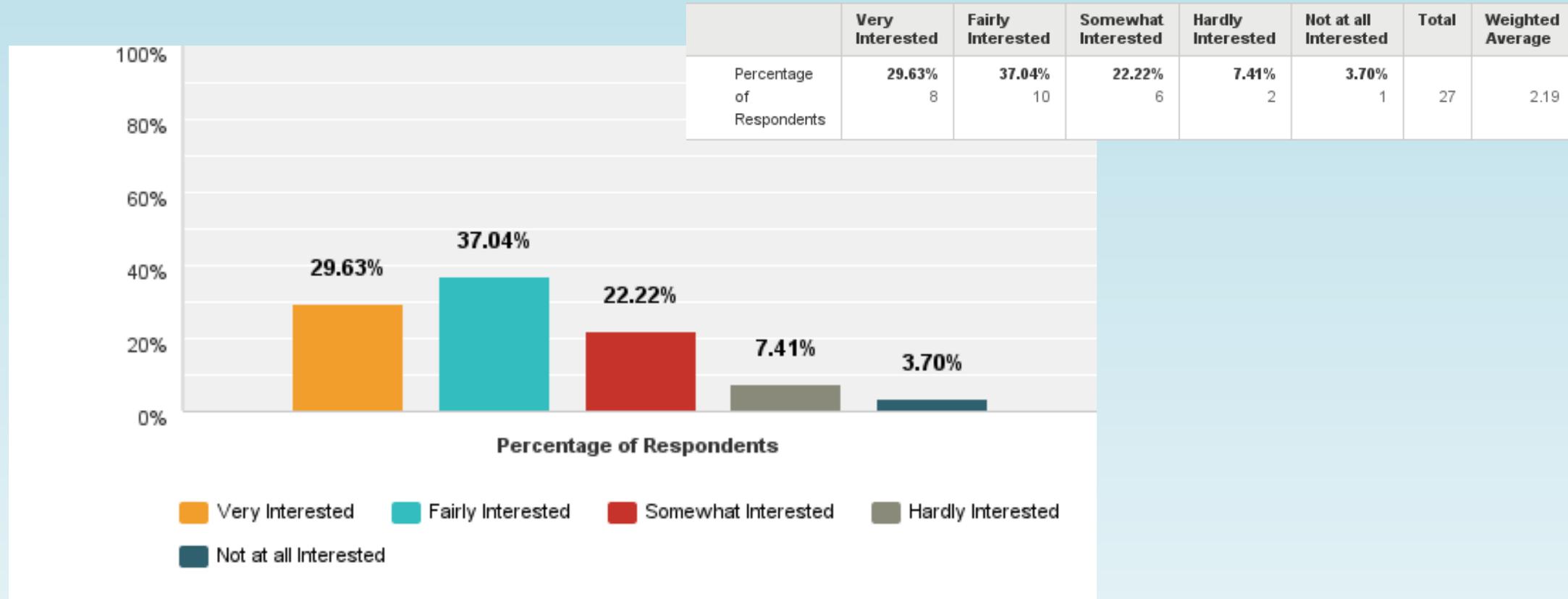


Q3: How interested are you in learning more about spill preparedness and response activities?

	Very Interested	Fairly Interested	Somewhat Interested	Hardly Interested	Not at all Interested	Total	Weighted Average
Percentage of Respondents	40.74% 11	14.81% 4	37.04% 10	3.70% 1	3.70% 1	27	2.15

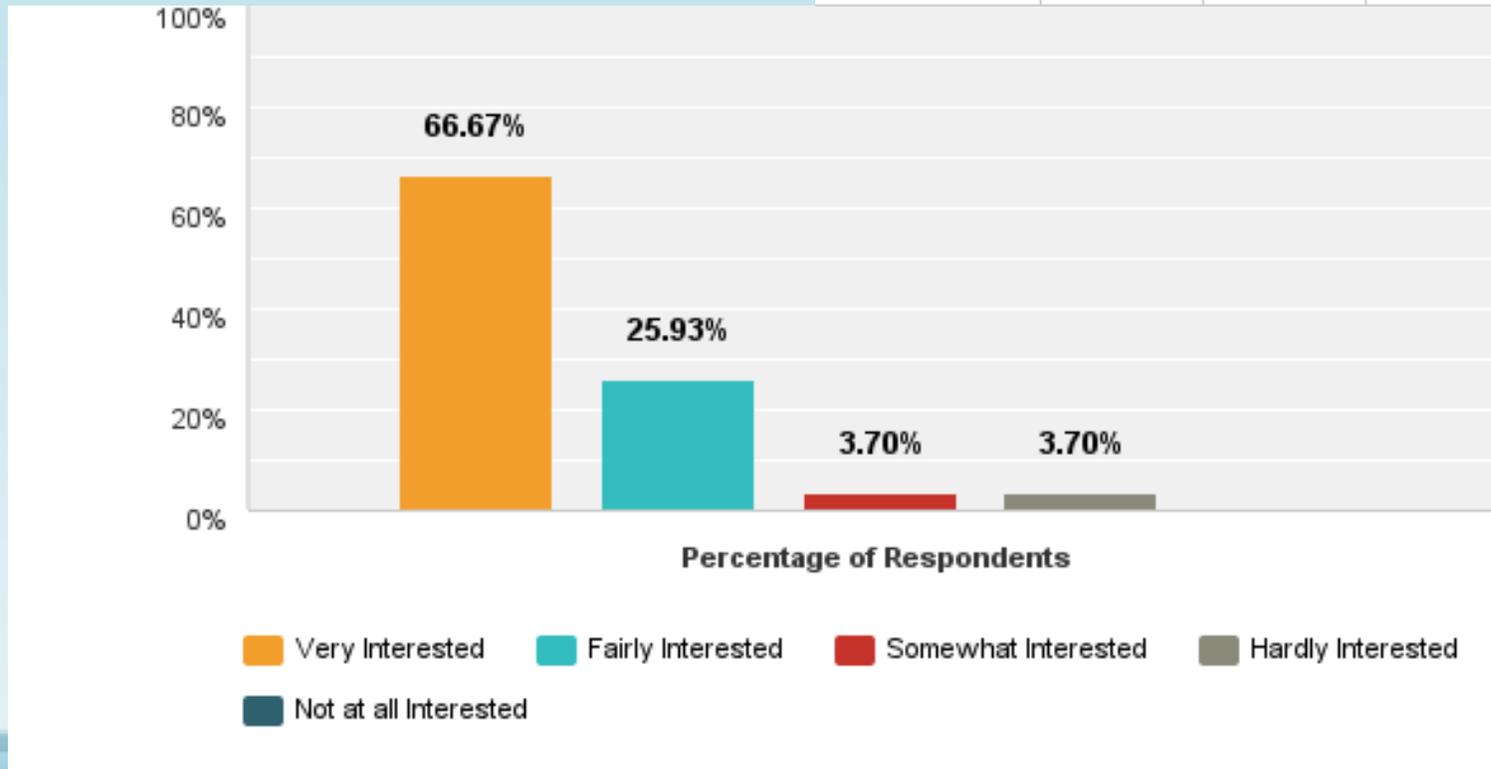


Q4: How interested would you be in participating in research related activities to address incident-specific operational questions and choices?



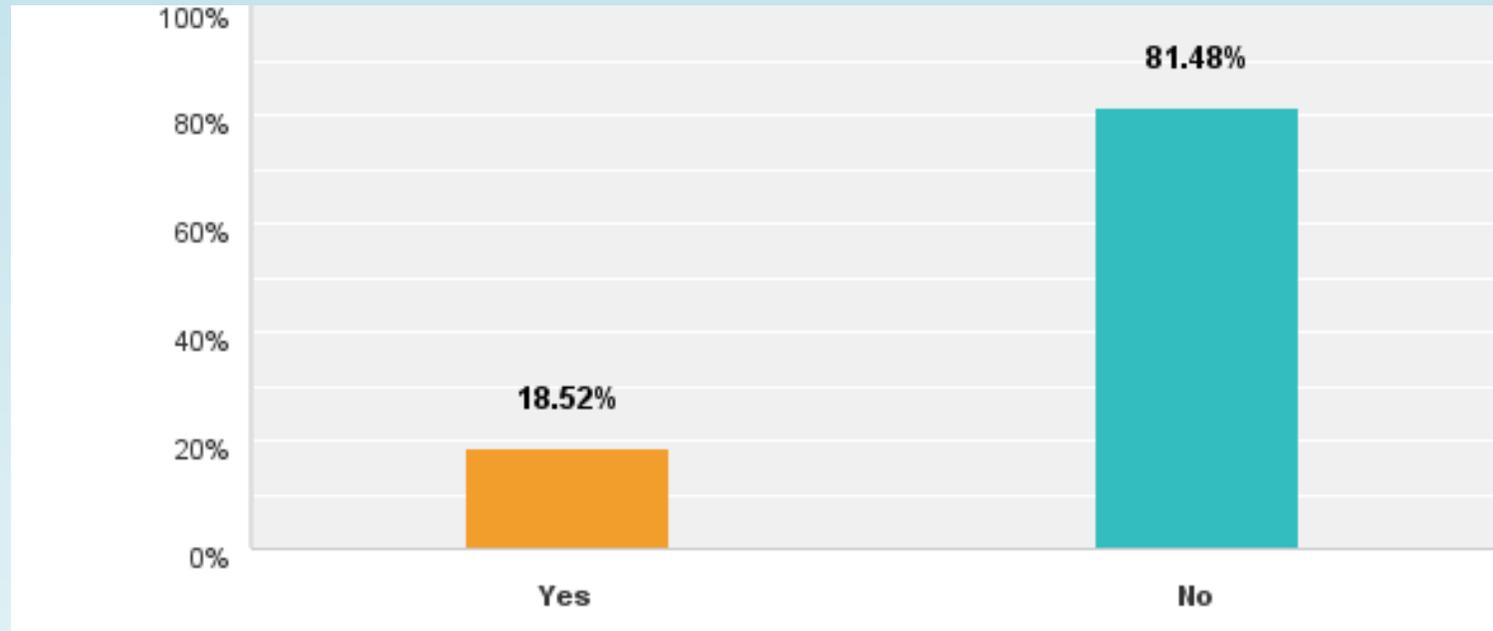
Q8: How interested would you be in participating in or conducting research to document injury to natural resources after a spill?

	Very Interested	Fairly Interested	Somewhat Interested	Hardly Interested	Not at all Interested	Total	Weighted Average
Percentage of Respondents	66.67% 18	25.93% 7	3.70% 1	3.70% 1	0.00% 0	27	1.44



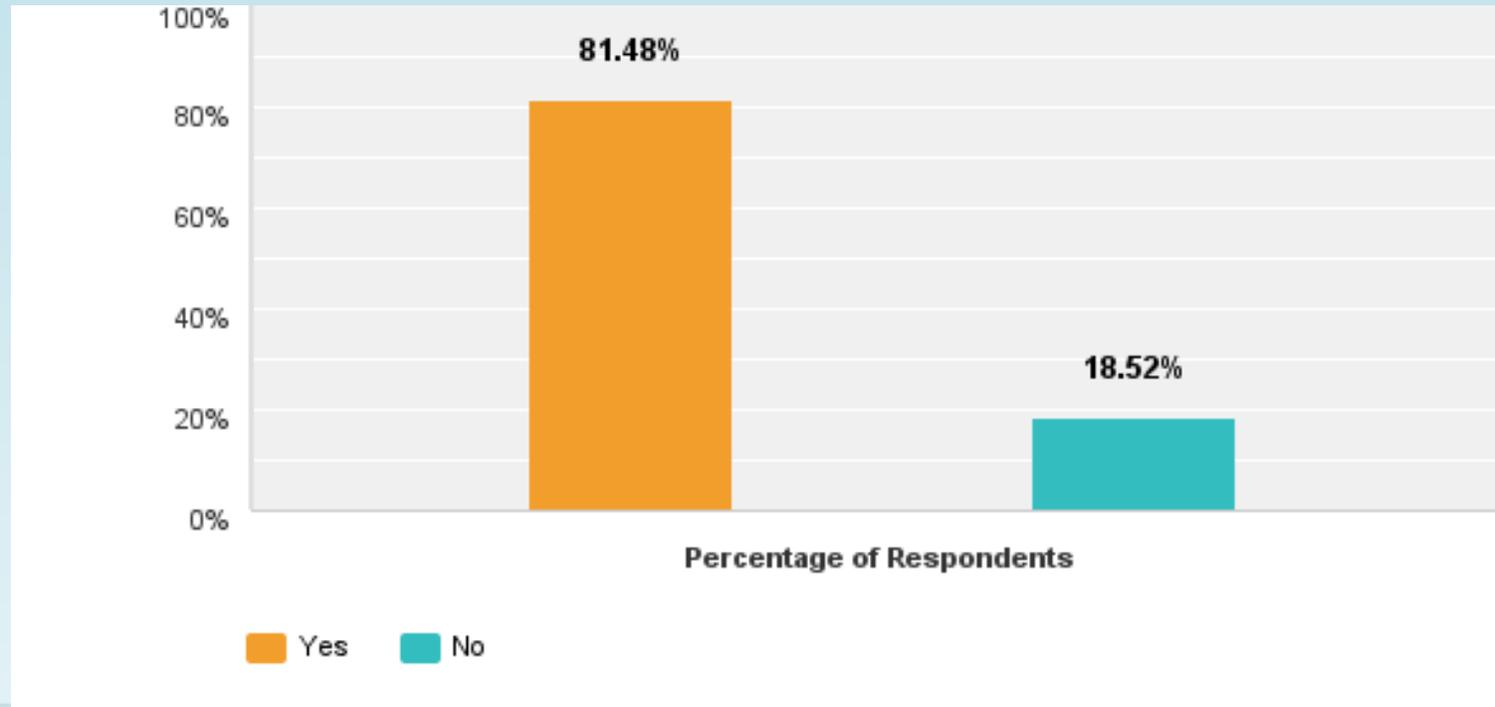
Q9: I am only interested in research activities; I do not wish to provide input to spill decision making.

Answer Choices	Responses	
Yes	18.52%	5
No	81.48%	22
Total		27



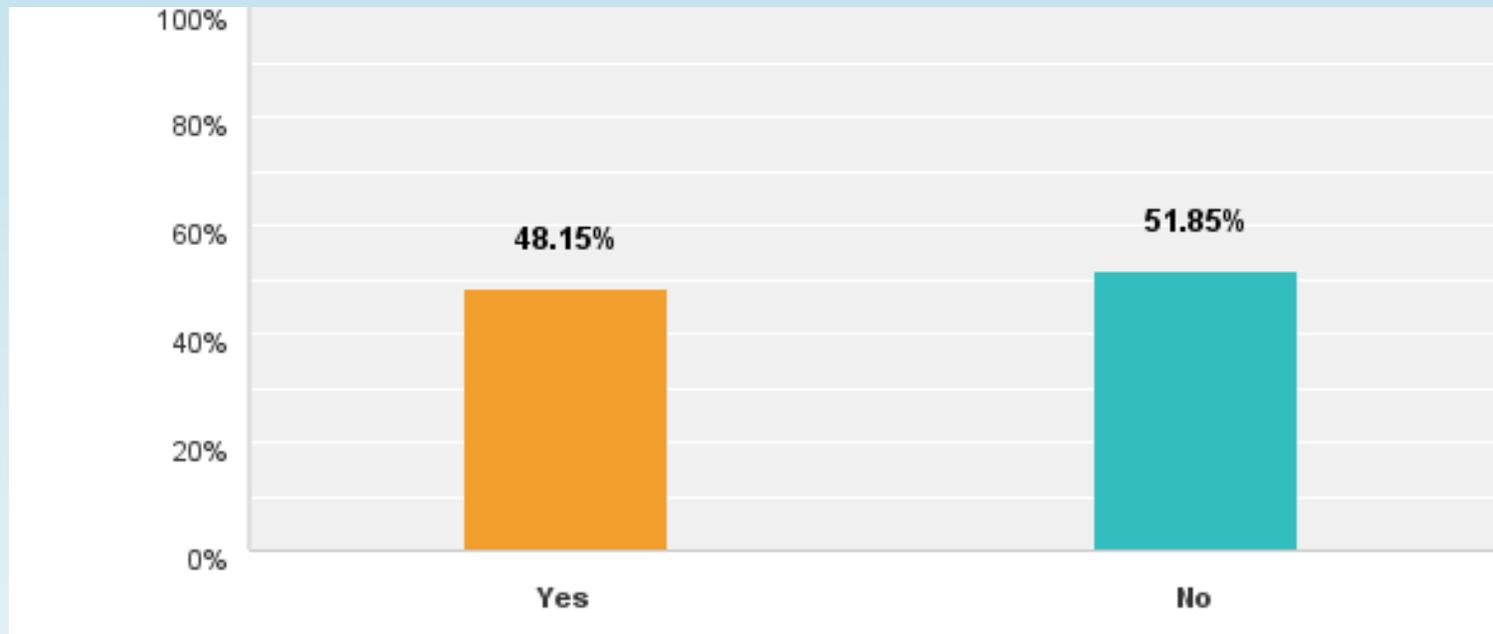
Q10: I can provide information about baseline conditions for organisms and/or habitats in the Gulf of Mexico.

	Yes	No	Total	Weighted Average
Percentage of Respondents	81.48% 22	18.52% 5	27	1.19



Q12: I would require compensation for my time and expenses in order to participate during a response.

Answer Choices	Responses	
Yes	48.15%	13
No	51.85%	14
Total		27



Future Walker work under CWC III (2 year research synthesis 1/2018 -12/2019)

- Review of API-funded project by GOMRI Consortia –
 - *“Consortia Review of a Comparative Risk Assessment of Response Options for an Uncontrolled Subsea Oil Spill Blowout in the Gulf of Mexico with an Emphasis on Coastal Marshes.”*
 - Scope: Does the pre- and post- DWHOS research (e.g., GOMRI-funded and others) help inform decision makers about the overall relative advantages (reduction of risks/potential impacts) and disadvantages (increase in risks/potential impacts) associated with the spill response strategies, i.e., dispersants, that are allowed under the NCP?
- Potential value
 - Meaningful, relevant collaborative engagement between “practitioners” and academic researchers
 - Research synthesis to inform response oil spill response decision making, especially for a blowout in GOM

**Related Activity:
Preparing for a Rapid Response
to Major Marine Oil Spills:
*A Workshop on Research Needs to Protect the Health and
Well-Being of Communities***

- National Academy of Sciences, Engineering and Medicine (NAMSEM)
Washington, DC - August 2, 2017
- Sponsors: NASEM Health and Medicine Division and The Gulf
Research Program (30 yr. research program funded by BP fines)
- Planning Committee and Participants:
 - Practitioners, Researchers, Communities
 - Expertise: Oil spills, policy, public health, social science

Workshop Objectives

1. Explore key research needs *and other opportunities for improving preparedness and public health response and protection during and after oil spills*
2. Discuss opportunities to *work within the existing oil spill response framework to improve protection of the health and well-being of communities impacted by spills*
 - *And other approaches that could complement official response activities before and during spills.*
3. Inform discussions about how the Gulf Research Program and other units of the National Academies of Sciences, Engineering, and Medicine can *support these efforts before, during, and after an oil spill response.*
4. *Foster improved connections between oil spill practitioners, public health, and disaster research communities and leaders from communities impacted by oil spills.*

Workshop Topics

Download Proceedings at https://www.nap.edu/login.php?record_id=24924

- OIL SPILLS AND THE COMMUNITY
- GROUNDING PRESENTATIONS (public health, community impacts from spills, disasters and disaster science, spills vs. disasters)
- HUMAN DIMENSIONS
- STRATEGIES FOR COMMUNICATION AND CITIZEN ENGAGEMENT
- COMMUNITY, DECISION MAKING, AND DATA
- SUSTAINING A COMMITMENT TO COMMUNITIES AS PART OF RESPONSE
- NEXT STEPS



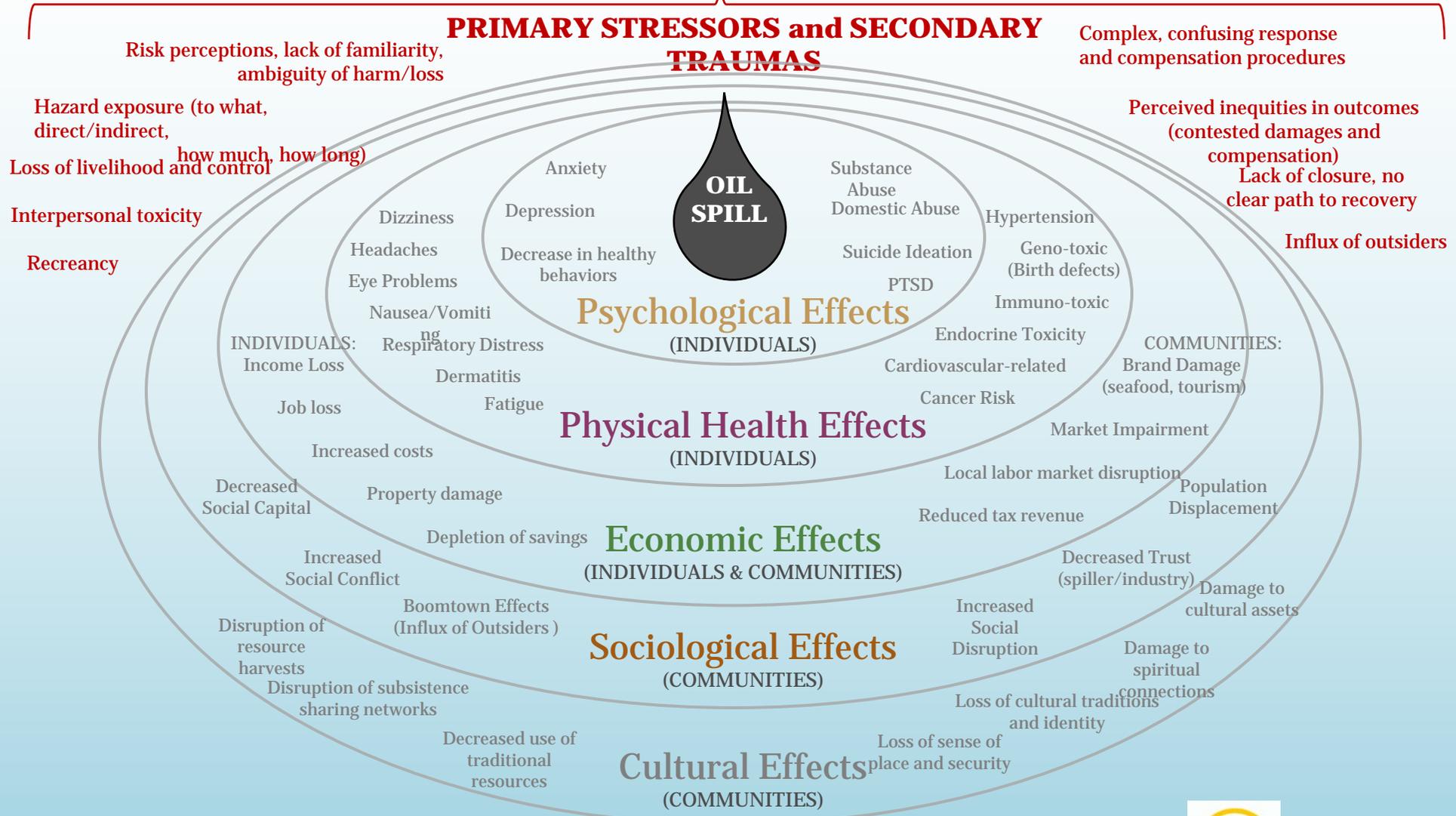
Marine Oil Spills: Array of POTENTIAL Human Effects*

- Spill-specific conditions determine occurrence, type, scale

Figure by Keith Nicholls, Steve Picou, Selena McCord (University of South Alabama); Ann Hayward Walker (SEA Consulting Group); and Duane Gill (Oklahoma State University). 2017

Increased vulnerability or effects due to:

- Natural or other technological disasters
- Economic recession
- General life stressors (health, family, job)



POPULATIONS LIKELY TO BE AFFECTED



Natural Resource Dependent Communities



Response and Clean-up Workers



Vulnerable subgroups (e.g., children, elderly, pregnant women)



“Place-based” (e.g., coastal, close to hazards, low social capital, poverty, unemployment)

Figure development based on discussion at a 2017 workshop supported by the Gulf Research Program and a review of the literature.

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Human Impacts of Oil Spills - Selected Bibliography (cont.)

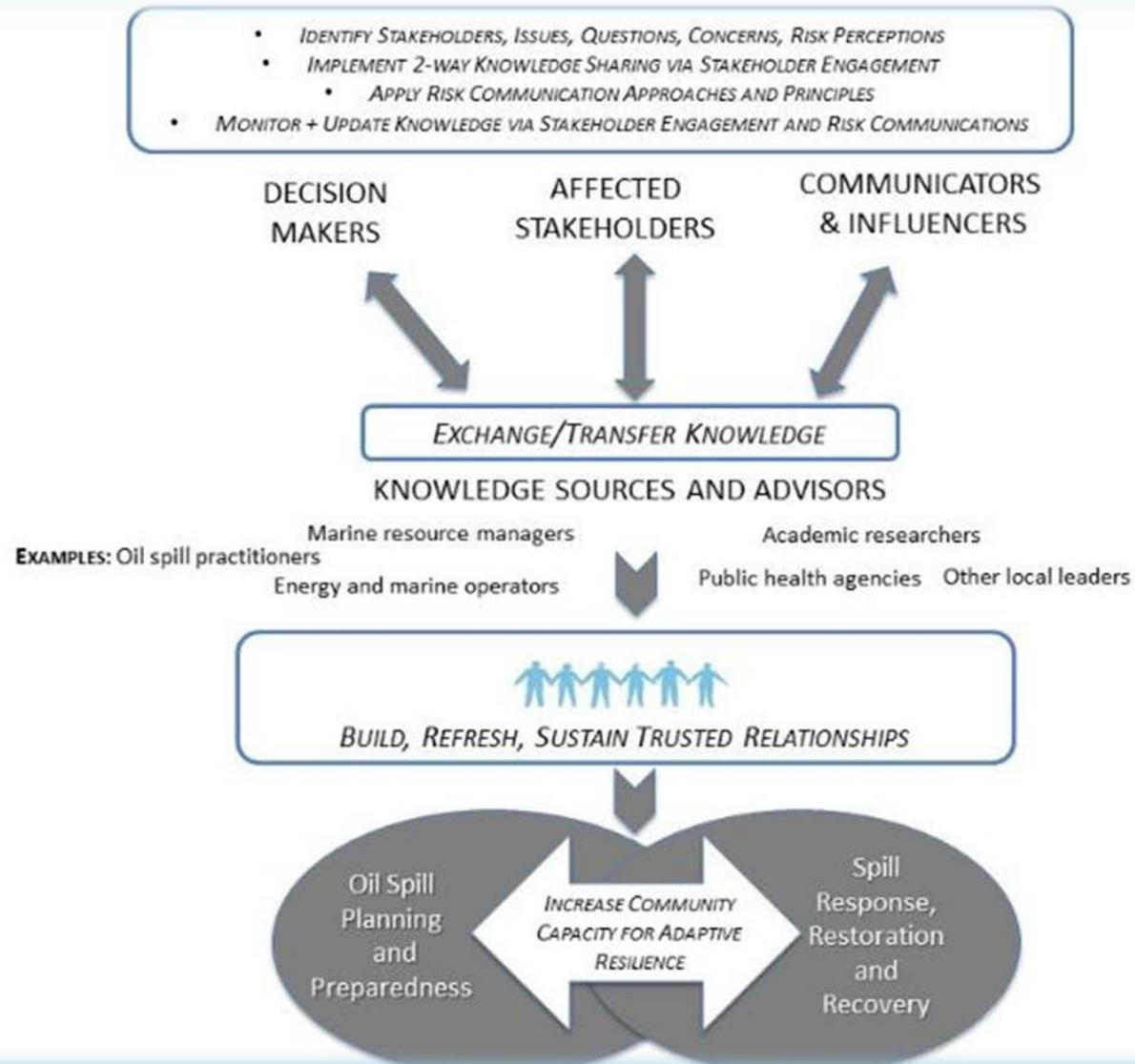
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Oil Spills and Resilience

Oil spill responders are familiar with *ecological resilience* from past spill experience

- Resilience is about adapting to stresses; resilient capacity enhances the speed of recovery
- Need for **organizational resilience** – to adapt and manage emerging issues and organizations
- **Community resilience** following an oil spill can be enhanced by (Cheong, 2012):
 - Access to and a transfer of knowledge from oil spill authorities and experts to the community over time (pre-spill),
 - Knowledge about oil spill resources, and
 - Building connections between local communities and oil spill experts to promote adaptation and resilience.
- This shifts the emphasis from strict self-reliance and encourages *collaboration with oil spill experts* as a key component of adaptive resilience.

Collaborative Engagement Process for Oil Spill Stakeholders



Source: Ann Hayward Walker (2017). Strengthening Preparedness and Response Decision-Making At the Local Level: Adaptations to Manage Better and Suffer Less. International Oil Spill Conference Proceedings: May 2017, Vol. 2017, No. 1, pp. 2489-2509.

Integrating Oceanographic Data to Forecast Health Risks from Oil Spill Compounds

Helena Solo-Gabriele, Ph.D.

University of Miami

Department of Civil, Architectural, and Environmental Engineering



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Integration & Research Practice

(Proposed)

Helena Solo-Gabriele

Alesia Ferguson

Ann Hayward Walker

Samir Elmir



Children's Beach Behavior

(Funded – GoMRI)

Helena Solo-Gabriele

Maribeth Gidley

Naresh Kumar

Alesia Ferguson

Kristina Mena

Rosalia Guerrero

Patrick Tarwater



Integrating Oceanographic Data to Forecast Health Risks from Oil Spill Compounds

Helena Solo-Gabriele, Ph.D.

University of Miami

Department of Civil, Architectural, and Environmental Engineering



*Image from
Reuters*



*Image from
The Positive*

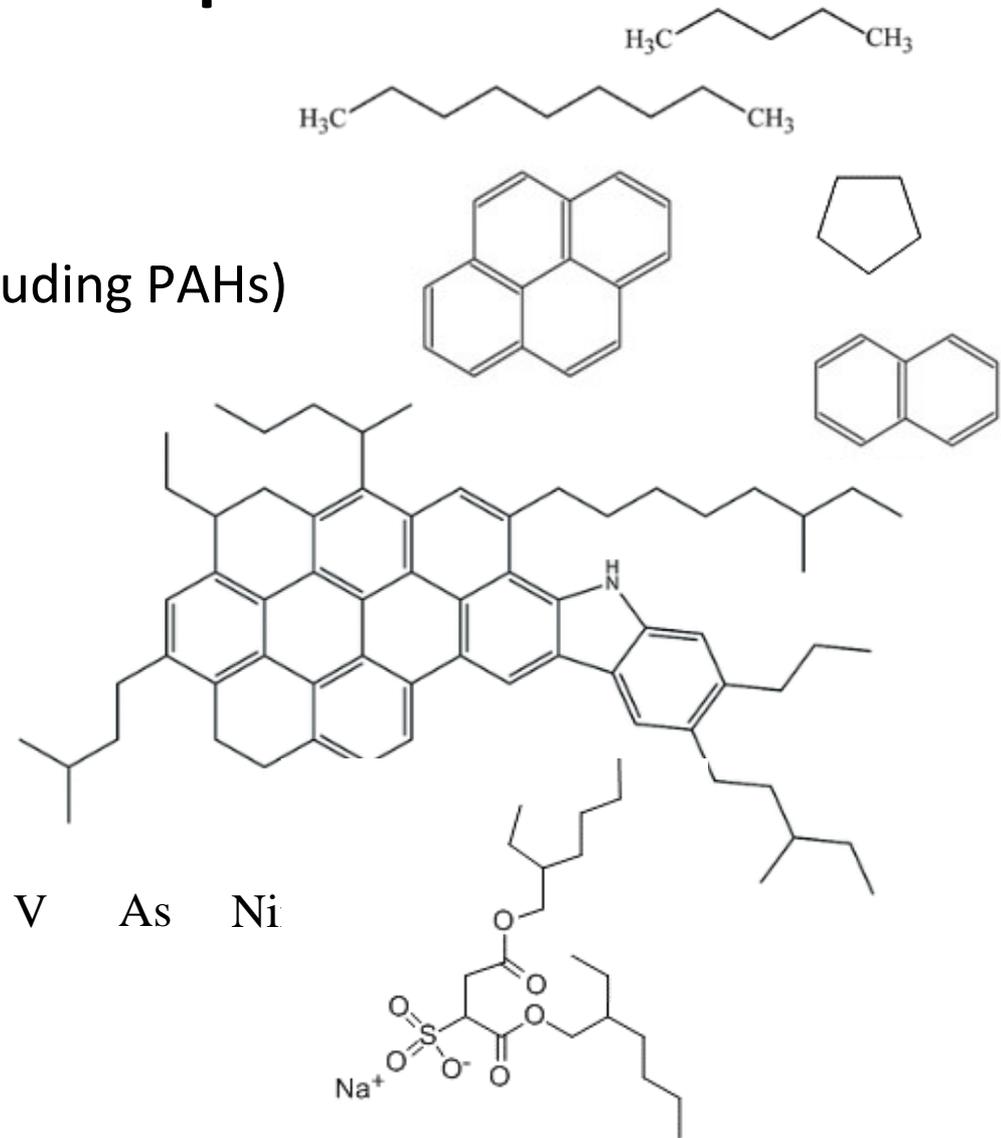


*Image from The
Sun Sentinel*

Oil Spill Compounds

- Alkanes
- Cycloalkanes
- Aromatic hydrocarbons (including PAHs)
- Asphaltenes
- Metals
- Dispersants

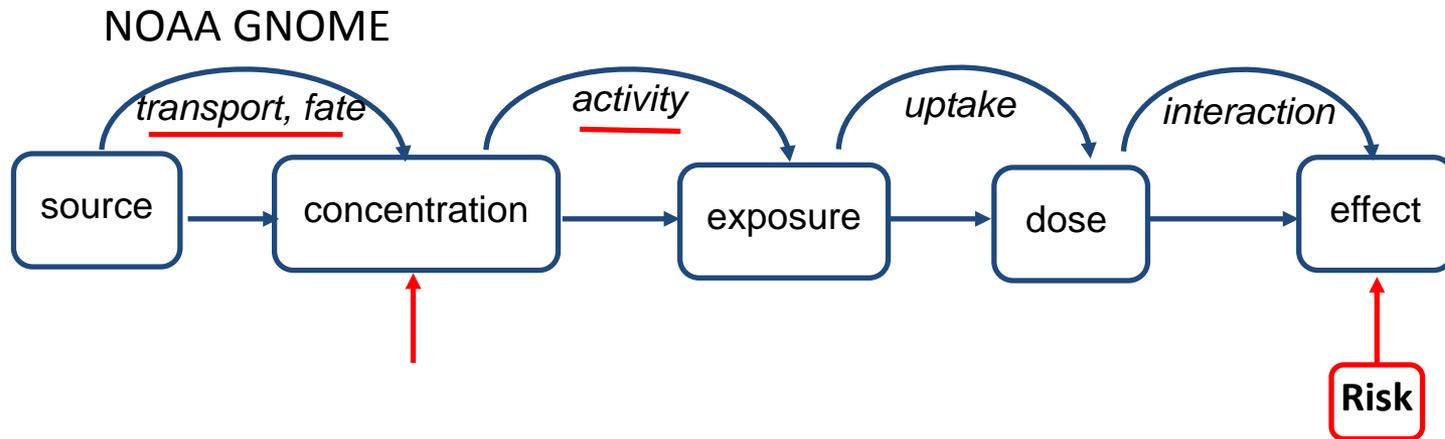
- Light Distillates
- Middle Distillates
- Residue



What is Risk?

- Possibility of negative health outcome from oil spill compounds
- 1 in 10^6 , insignificant increased risk

How to Compute Risk

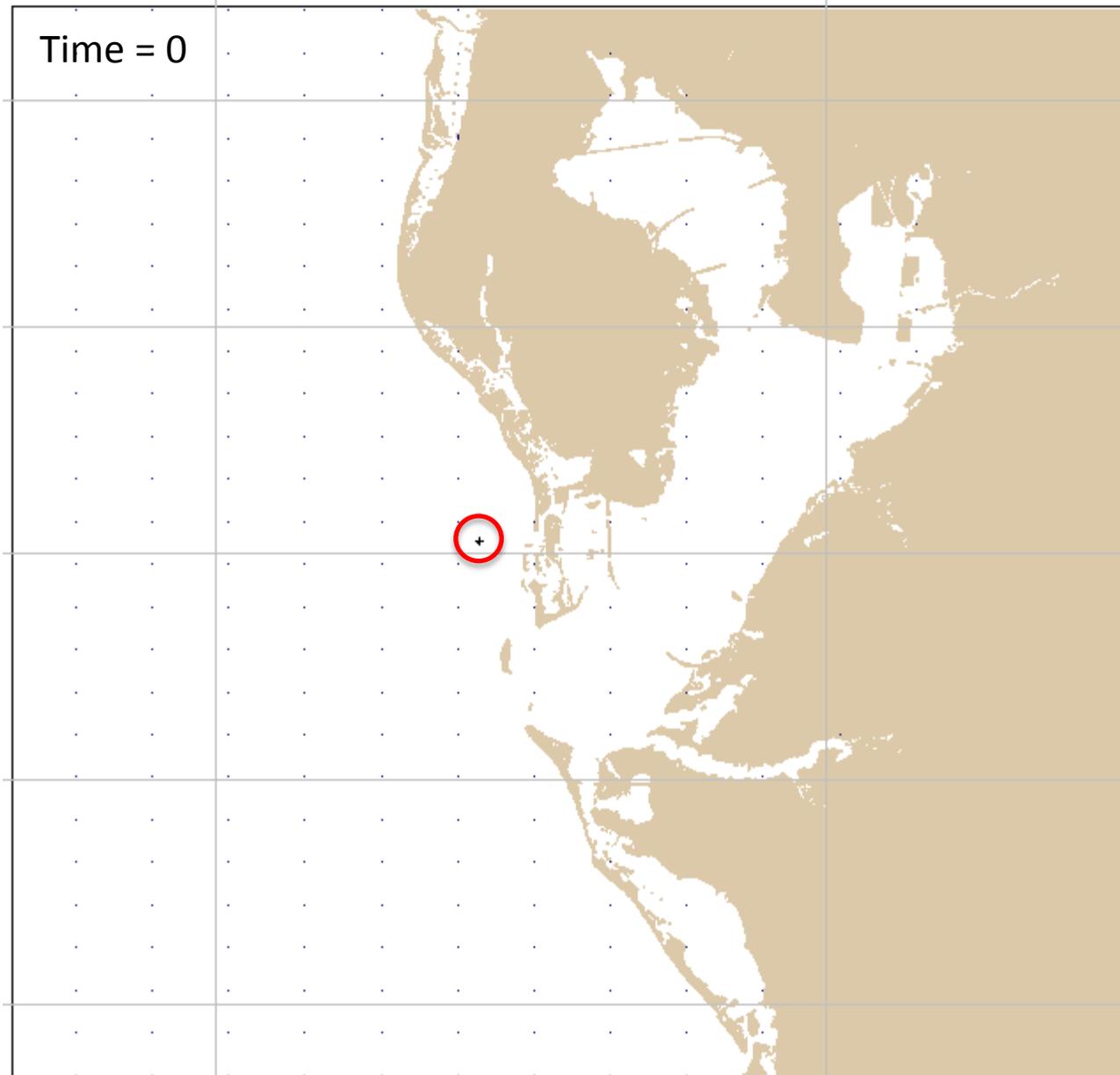


GNOME

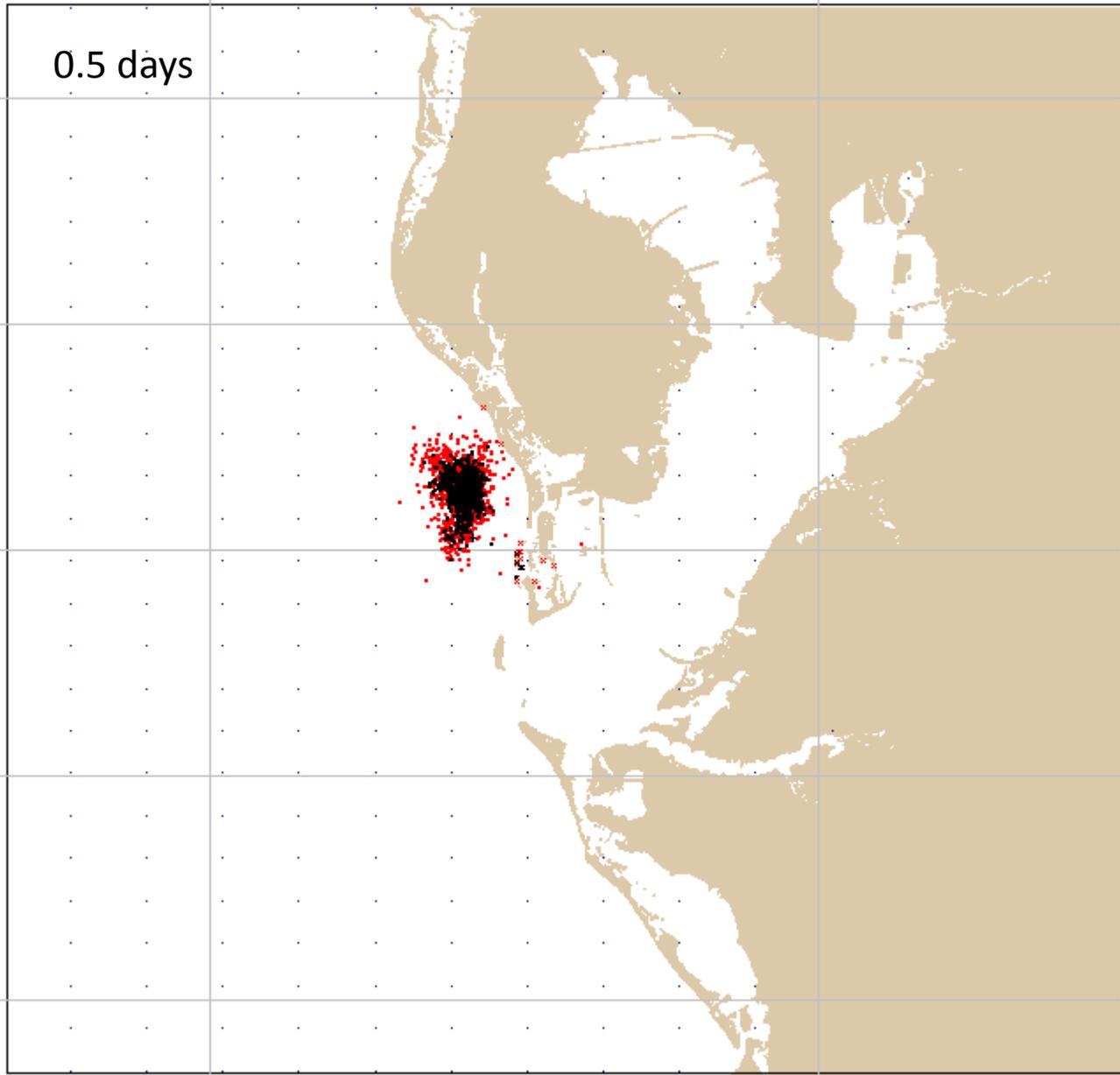


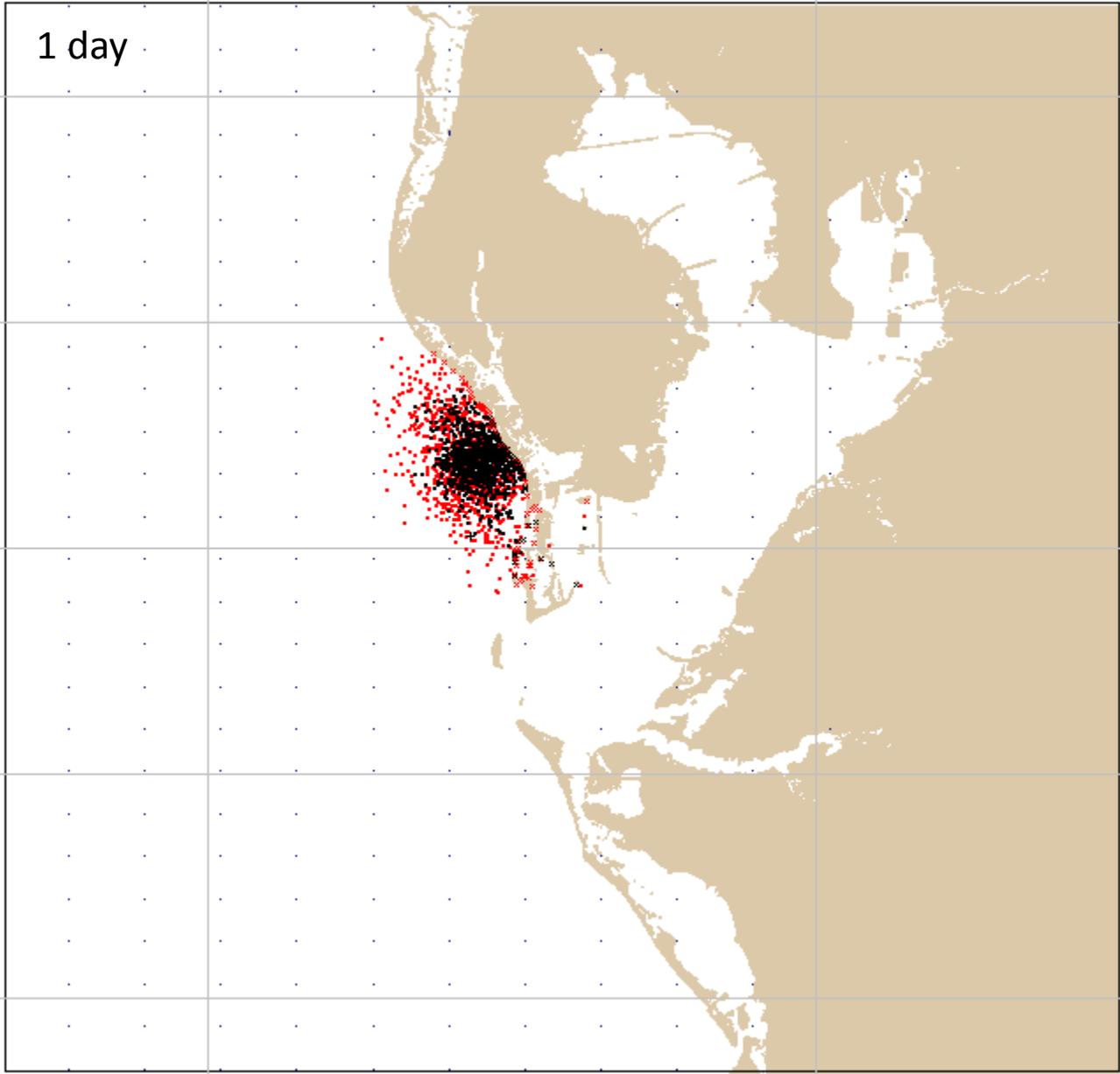
- General NOAA Operational Modeling Environment (GNOME)
- Used by Office of Response and Restoration's (OR&R) Emergency Response Division to predict the trajectory of an oil spill

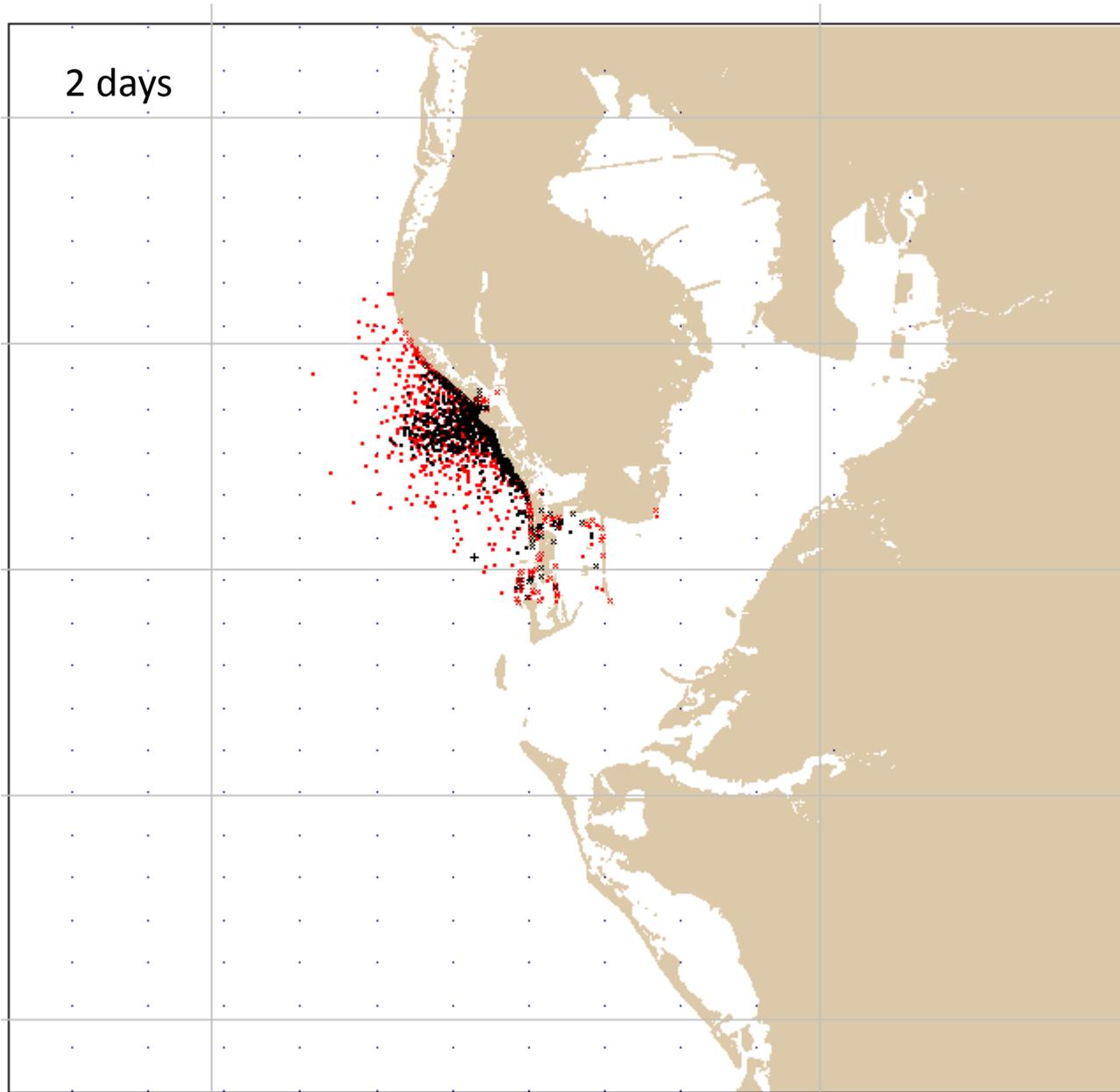
Integration of Oceanographic Data

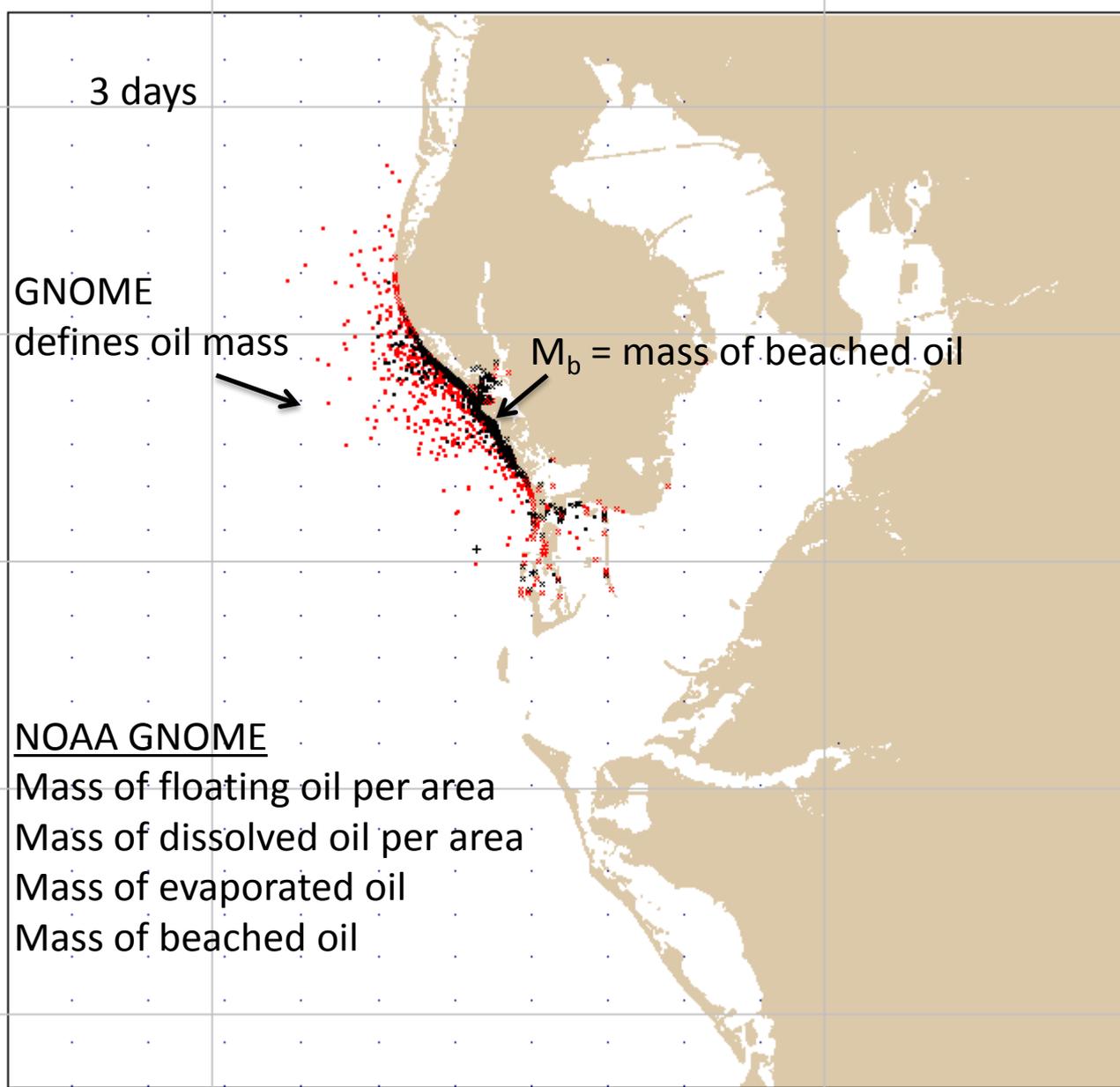


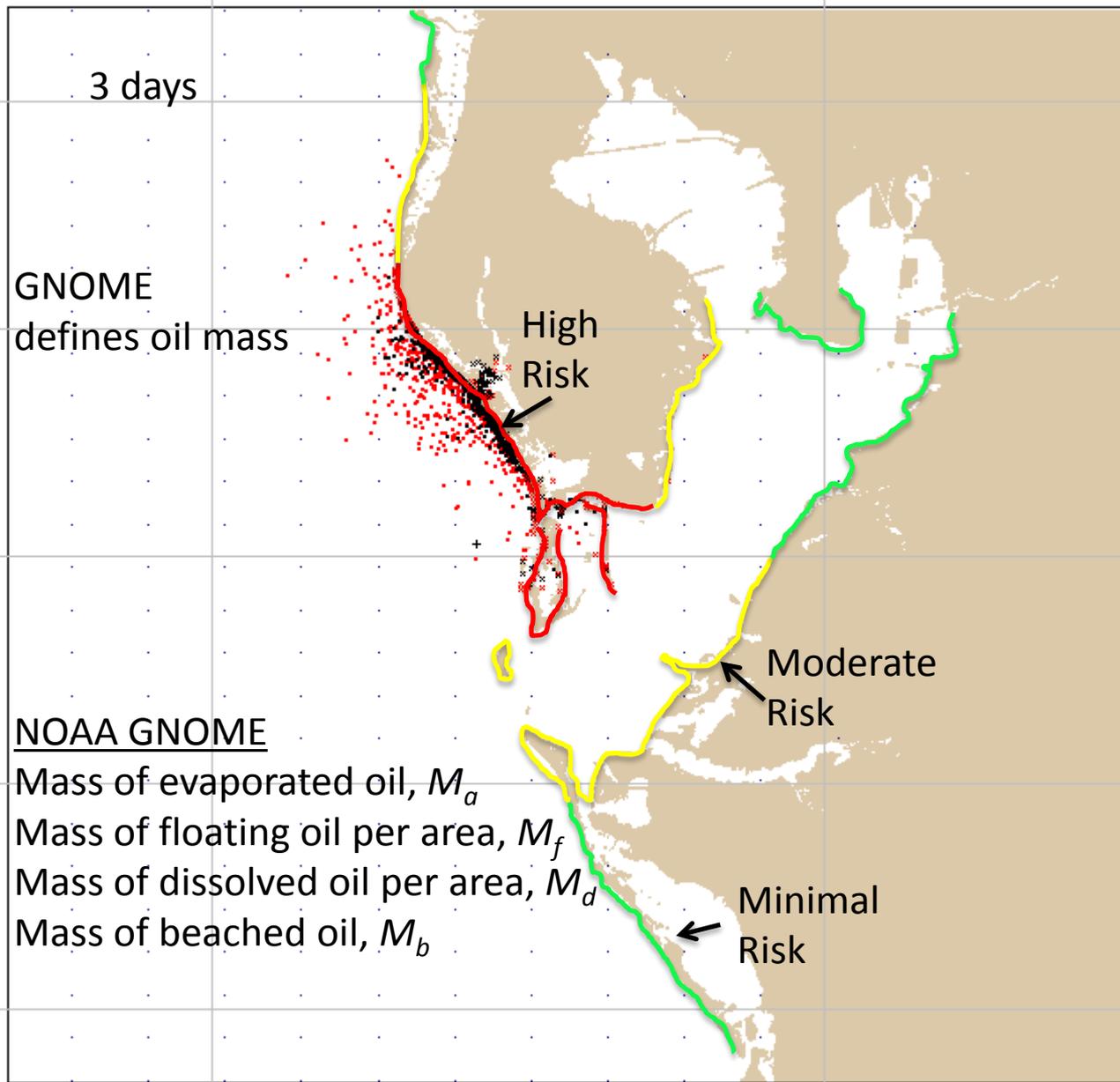
0.5 days

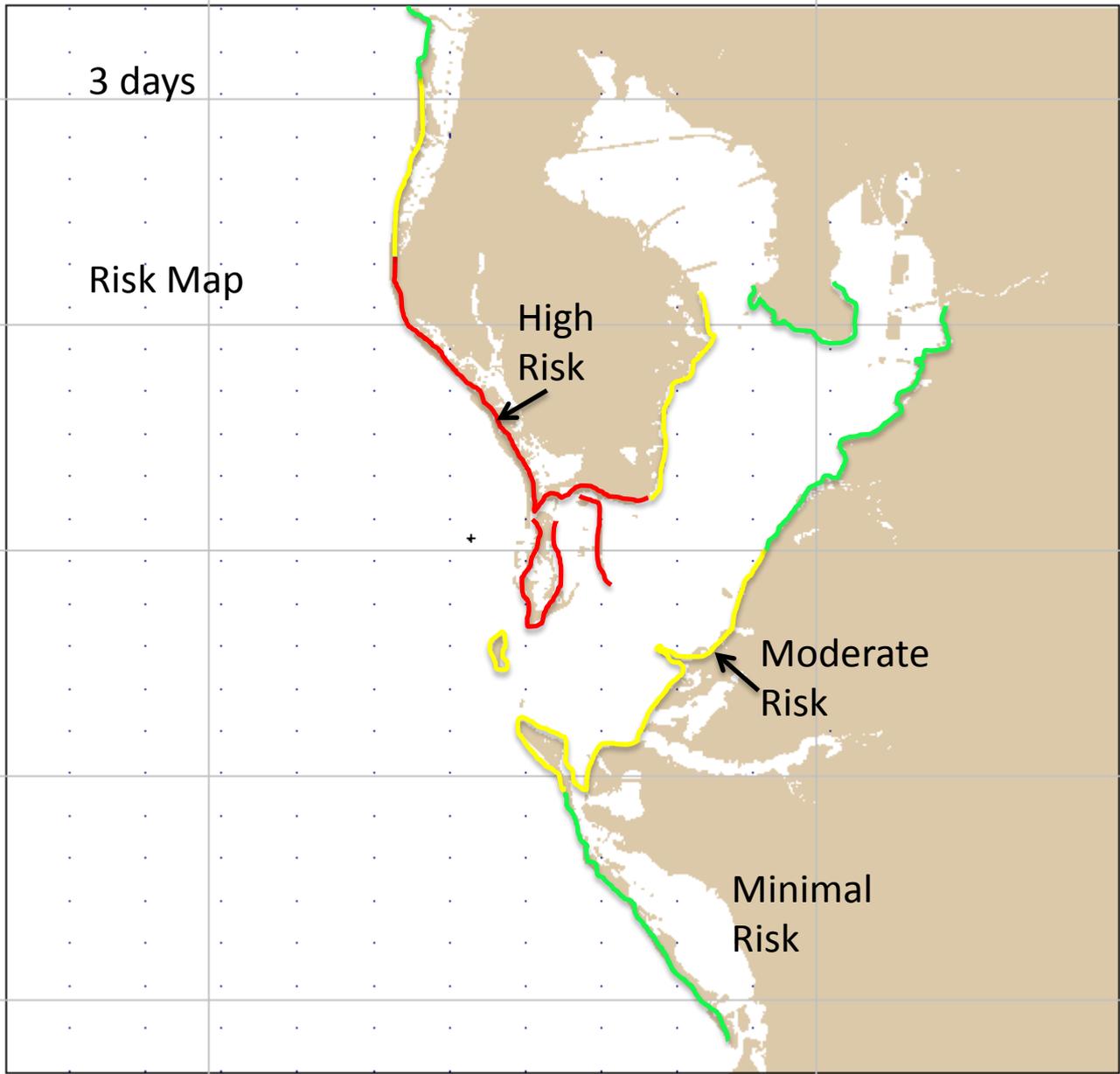












3 days

Risk Map

High Risk

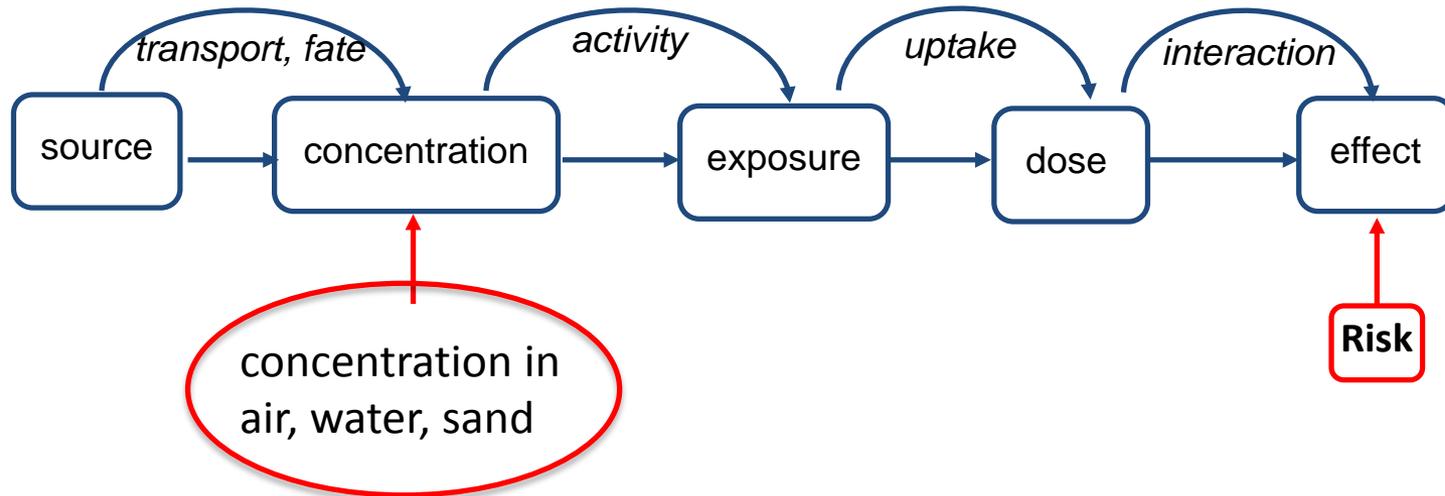
Moderate Risk

Minimal Risk

NOAA GNOME Mass

M_a, M_d, M_f, M_b

→ Concentration



$$C_a = \frac{M_{a,chem}}{V_{air}} \quad C_d = \frac{M_{d,chem}}{V_{water}} \quad C_b = \frac{M_{b,chem}}{V_{sand}}$$

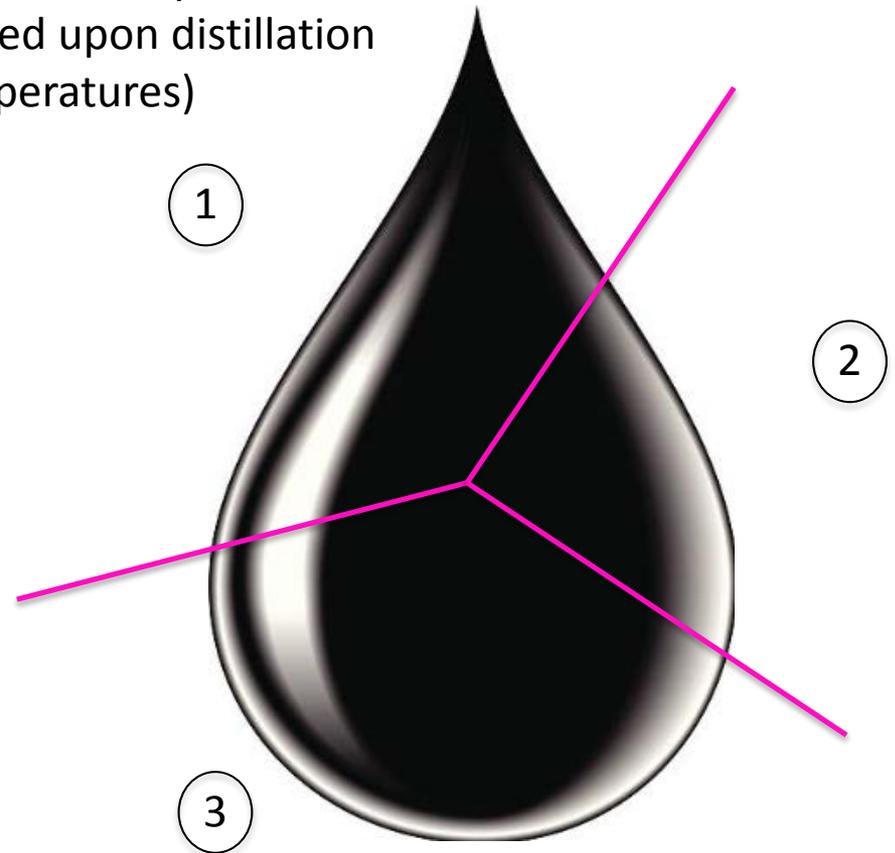
Two Steps Needed

Step 1

Convert GNOME output to chemical mass

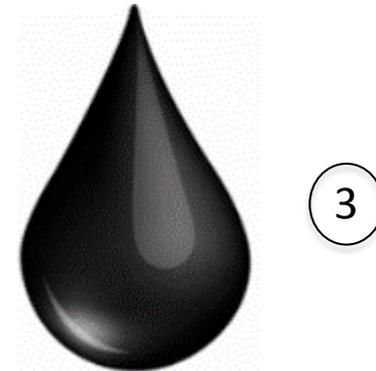
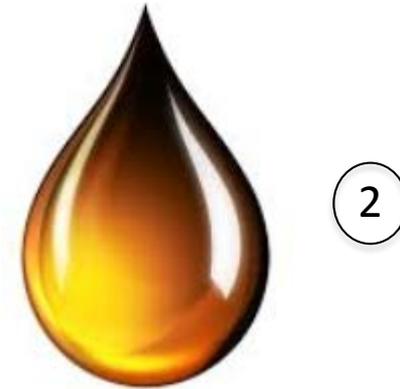
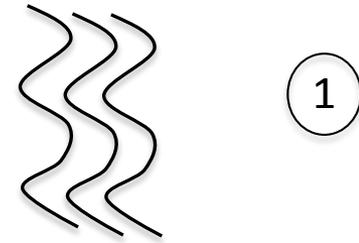
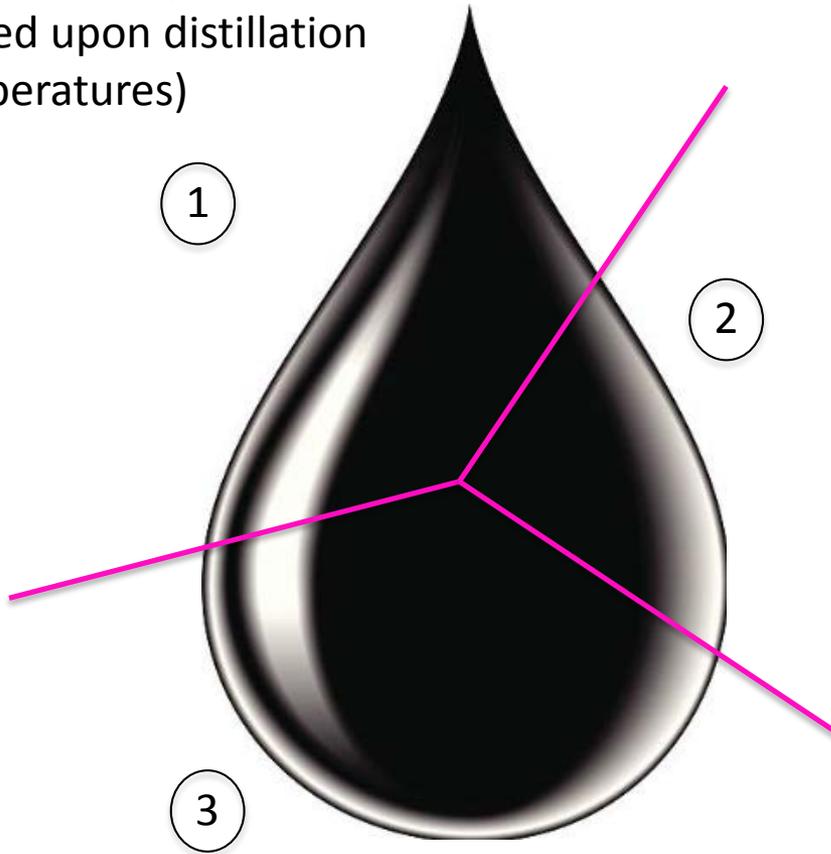
- Define oil chemical composition
- Disaggregation to individual chemicals

GNOME
Pseudo- Components
(Based upon distillation
temperatures)

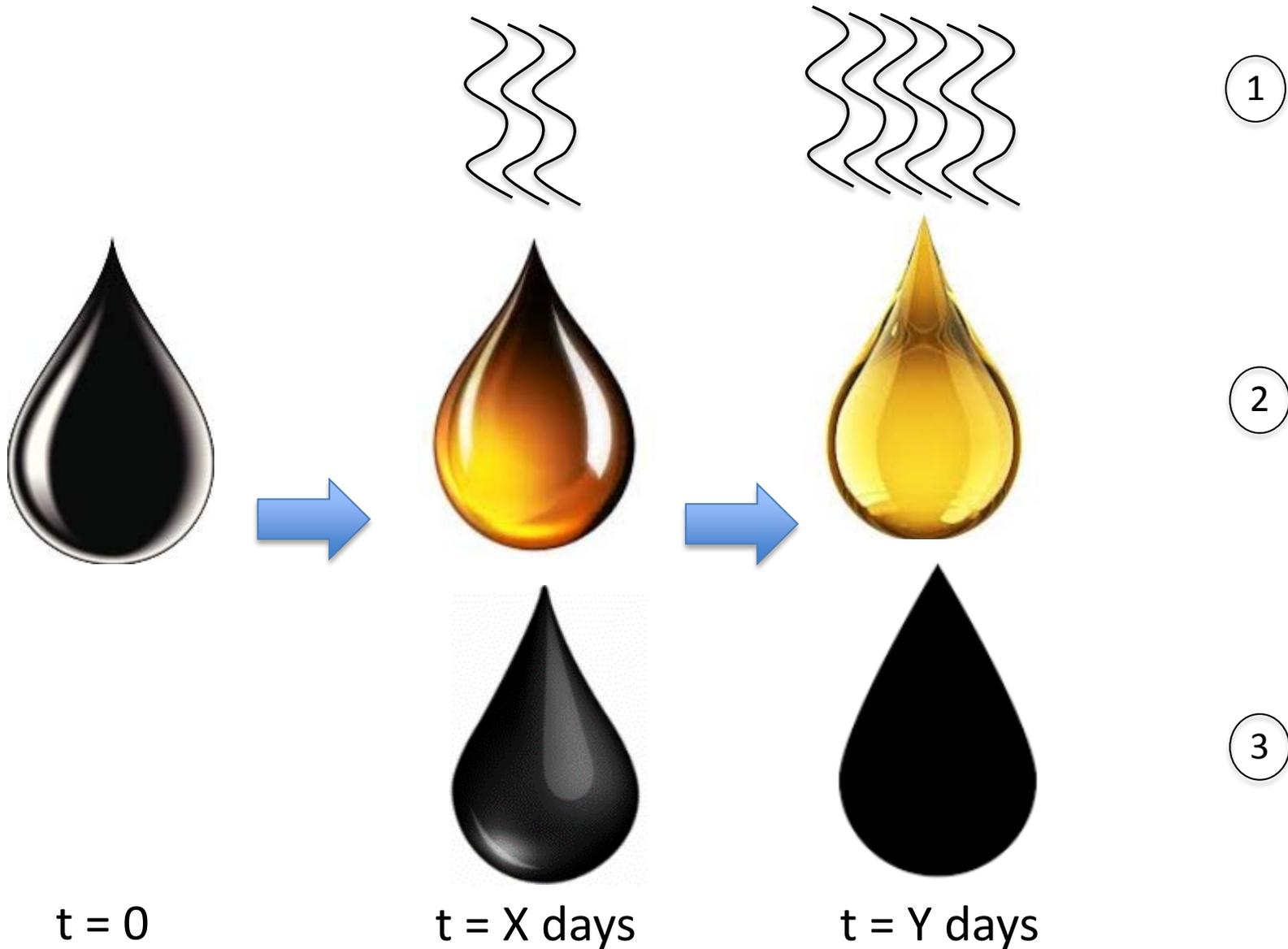


Step 1

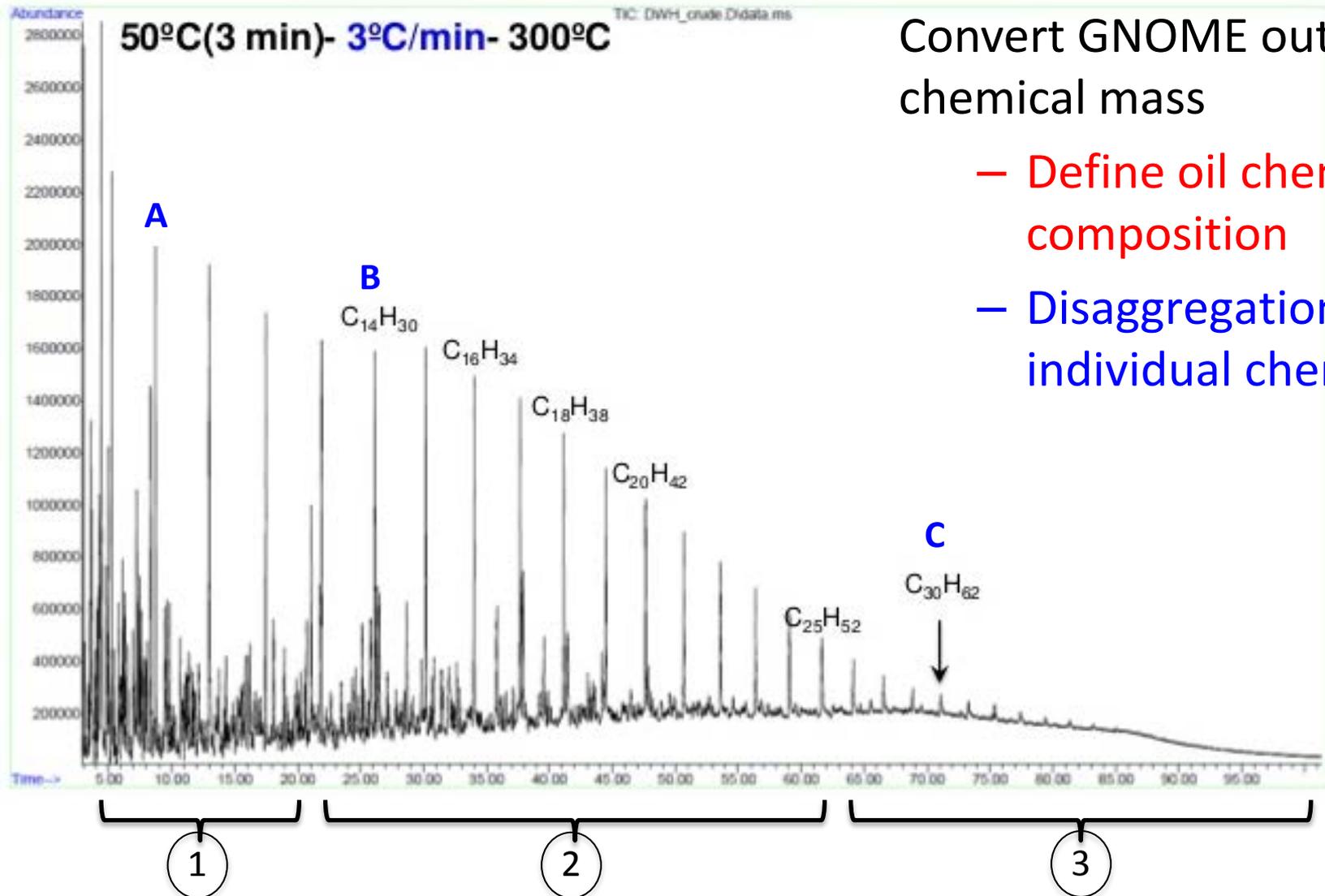
GNOME
Pseudo- Components
(Based upon distillation
temperatures)



Weathering Impacts Proportions



GC/MS of "Macondo crude oil" NIST 2779 (Total Ion Chromatogram)



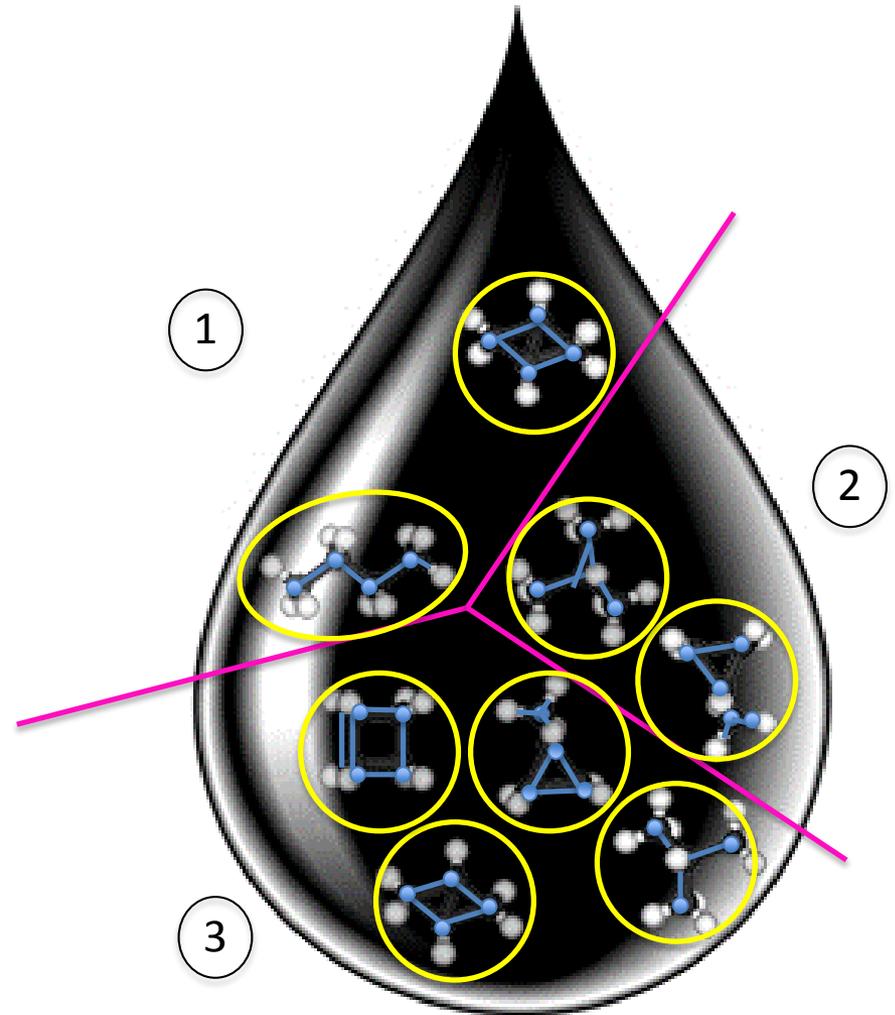
Convert GNOME output to
chemical mass

- Define oil chemical
composition
- Disaggregation to
individual chemicals

Step 1

Convert GNOME
output to chemical
mass

- Define oil chemical composition
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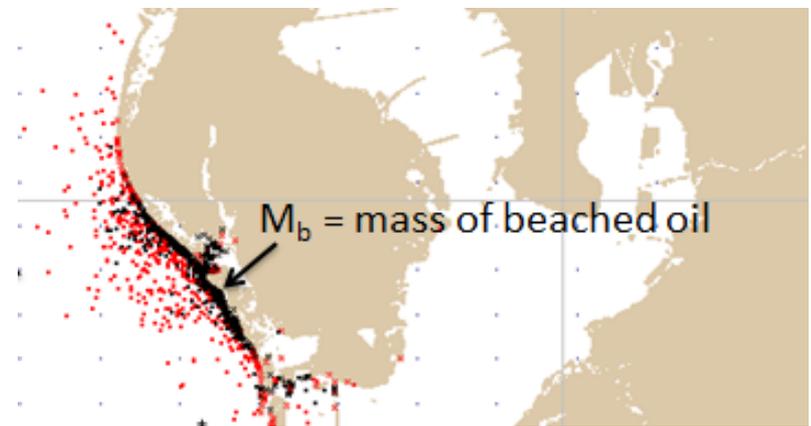


Step 2

Step 2

- Chemical mass to chemical concentration
 - Define air volume
 - Define water volume
 - Define sediment volume
 - Per shellfish consumed





Step 1: M_b to $M_{b,chem}$

$$C_b = \frac{M_{b,chem}}{\rho_b (1 - p) L_b D_b W_b}$$

Where:

C_b = Concentration of chemical in beach sand (mg/kg)

$M_{b,chem}$ = Mass of chemical beached (mg)

ρ_b = bulk density of beach sand (kg/m^3)

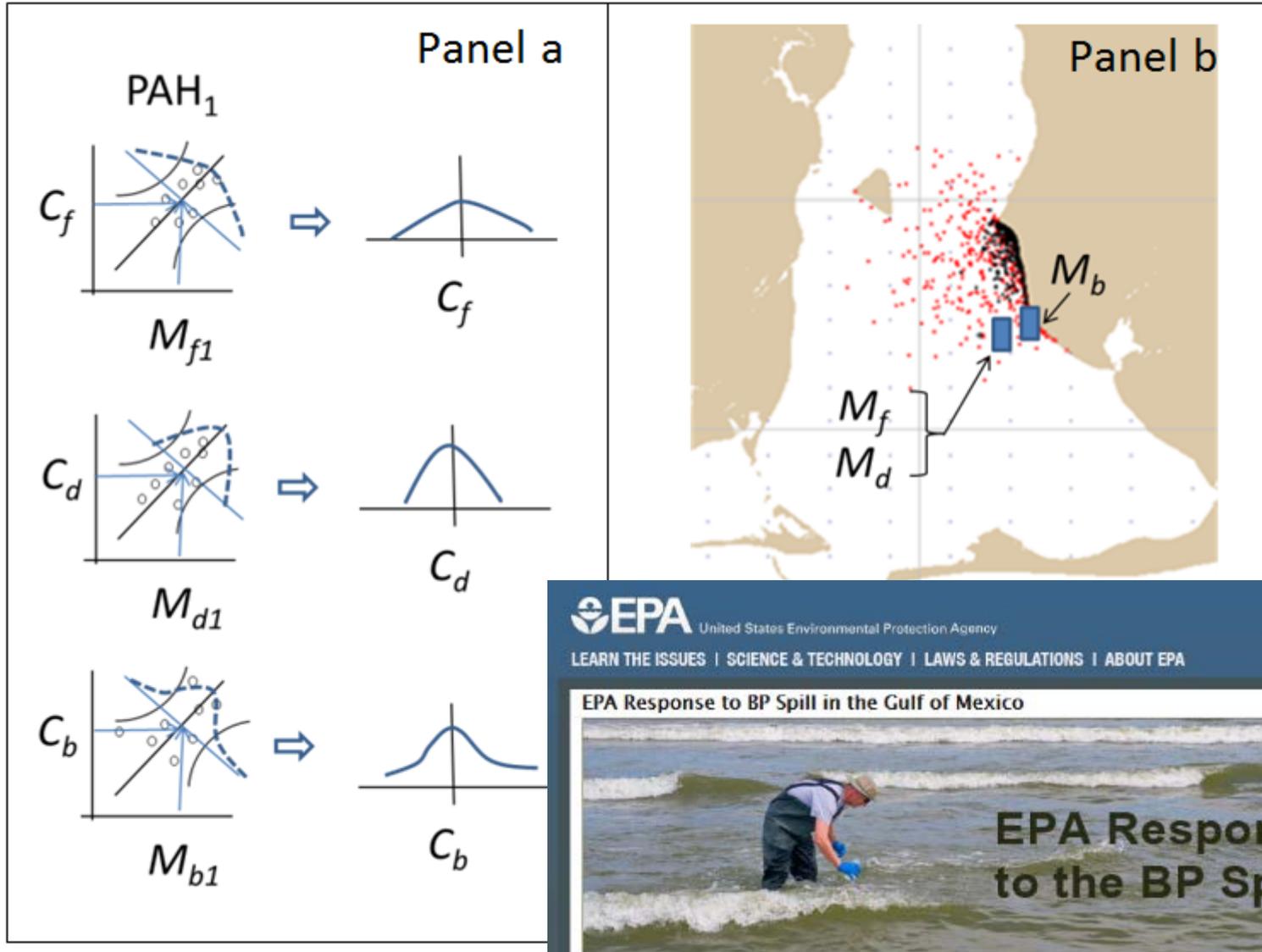
p = porosity of beach sand (unitless)

L_b = Length of beach impacted (m)

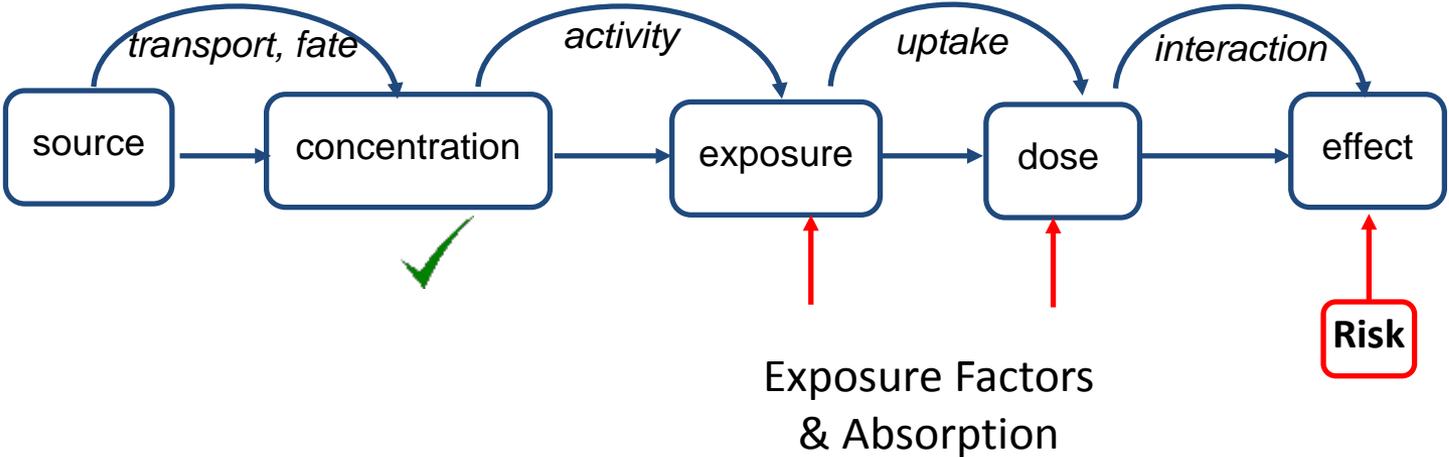
D_b = Depth of beach impacted (m)

W_b = Width of Beach Impacted (m)

Calibrate/Verify



NOAA GNOME
+ two steps



Activities

- Oil Spill Response Workers
- Children at Beach
- Shellfish Consumption



Routes

- Inhalation
- Dermal Absorption
- Ingestion, sand
- Ingestion, shellfish



Contact



Ingestion



Inhalation

Exposure and Dose

NOAA GNOME
+ two steps


$$ADD_{dermal} = \frac{C_b \cdot ABS \cdot AF \cdot SA \cdot EF \cdot ED \cdot CF}{BW \cdot AT}$$

Where: ADD_{dermal} = Absorbed average daily dose from dermal contact with contaminated sand (mg/(kg·d)).

C_b = Concentration of contaminant in sand at site (mg/kg)

ABS = Chemical specific absorption fraction (unitless)

AF_{sand} = adherence factor for sand (mg/cm²)

SA = Surface are of skin that contacts soil (cm²/event·kg)

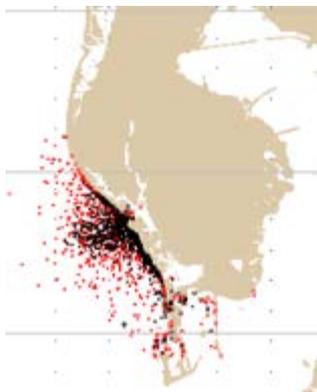
EF = Exposure frequency (events/yr)

ED = Exposure duration (yr)

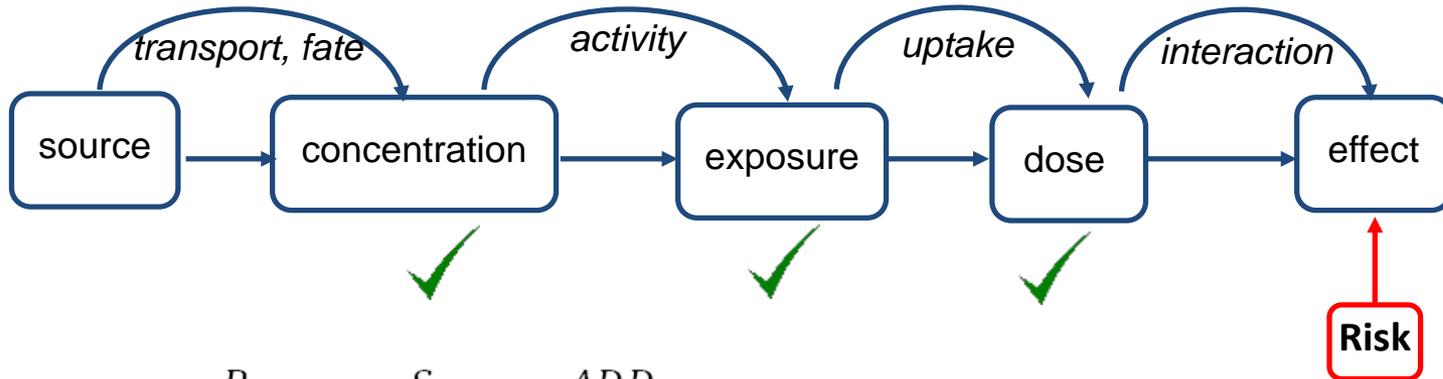
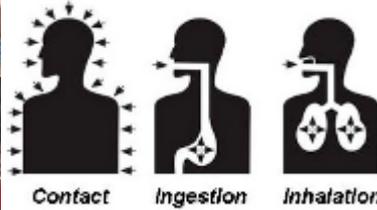
CF = Conversion factor (kg/mg)

BW = Bodyweight (kg)

AT = Averaging time (d)



NOAA GNOME
+ two steps



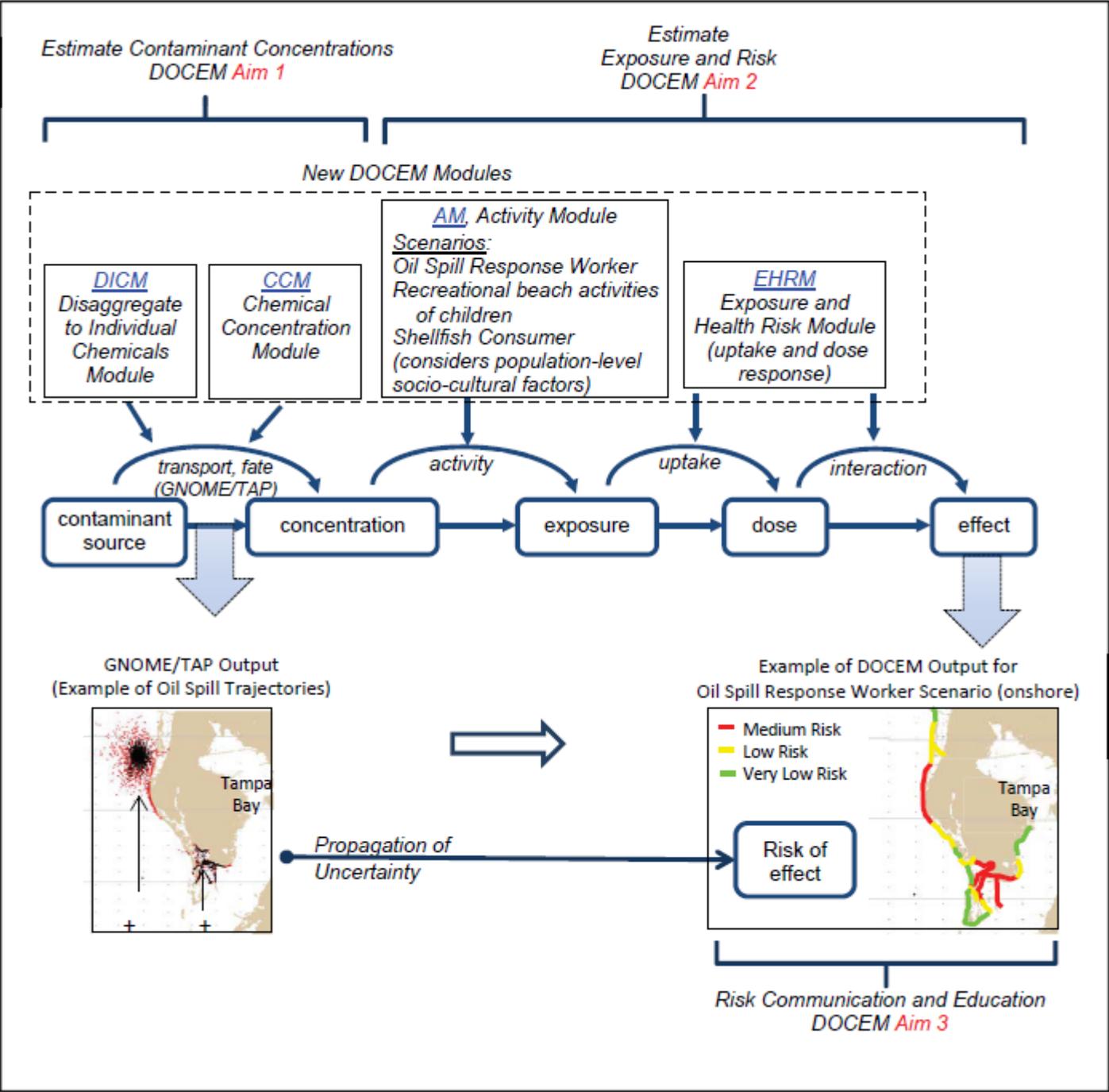
$$R_{i,chem} = S_{i,chem} \cdot ADD_{i,chem}$$

Where:

$R_{i,chem}$ = Cancer risk of chemical via a given exposures route, i
(ingestion, inhalation, dermal) (unitless)

$S_{i,chem}$ = Cancer slope factor of chemical for exposure route i
(kg·d / mg)

$ADD_{i,chem}$ = Average Daily Dose of chemical for exposure route i
(mg / (kg·d))



time = 0

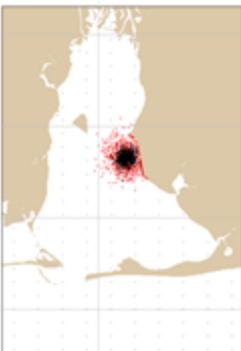


○ Beach Location

Shellfish Harvest Areas



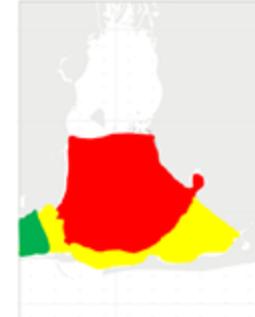
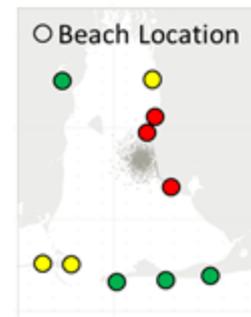
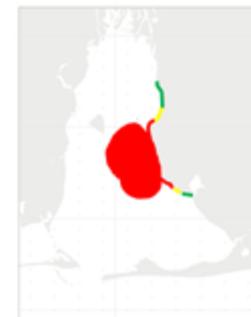
time = 12 hrs.



Oil Spill Response Worker

Child Beach Play

Shellfish Consumer

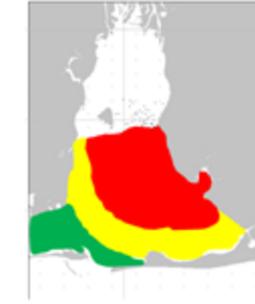
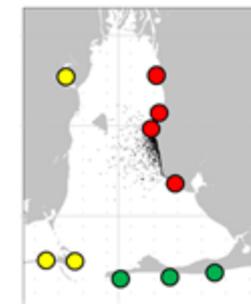
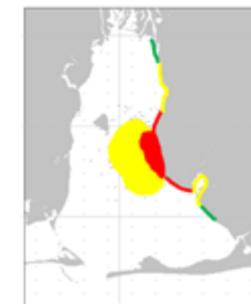


● High Level PPE
● Medium Level PPE
● Low Level PPE

● Closed to public
● Very low risk
● Open to public

● Closed to shellfishing
● Very low risk
● Open to shellfishing

time = 24 hrs.



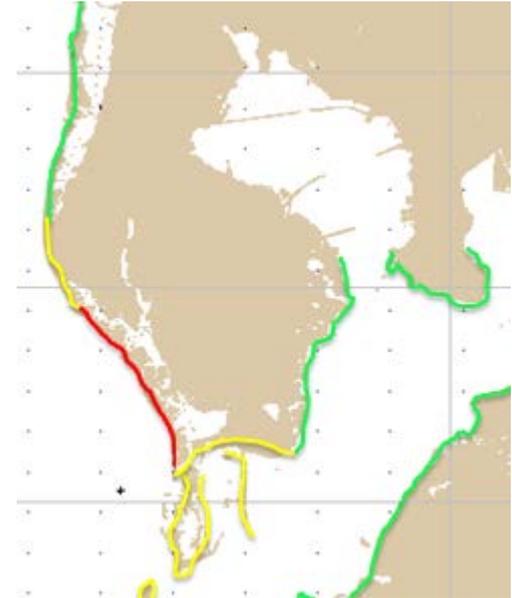
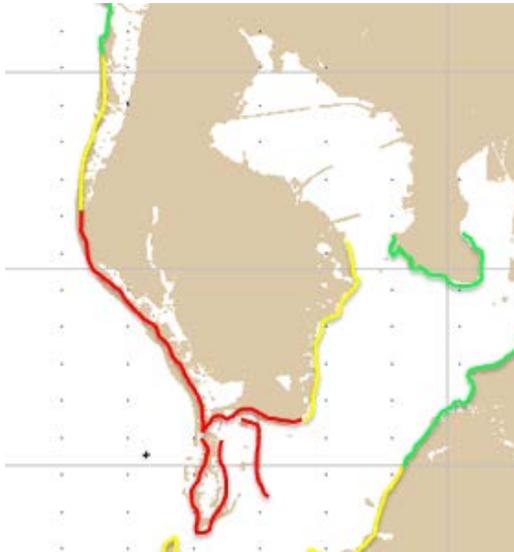
● High Level PPE
● Medium Level PPE
● Low Level PPE

● Closed to public
● Very low risk
● Open to public

● Closed to shellfishing
● Very low risk
● Open to shellfishing

Value Add, Quantify Mitigation Measures

Dispersant addition
Personal protection
Beach clean up efforts



Integration to Practice

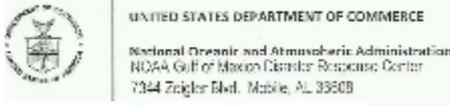
Oil Spill Response
Professionals
(Ann Hayward Walker)

Public Health
Leaders
(Samir Elmir)

Practitioner
Review Board

Research Team

- Methodology
- Communication Materials
- Information Dissemination Plan



State of Louisiana
Louisiana Department of Health
Office of Public Health



TEXAS GENERAL LAND OFFICE
GEORGE P. BUSH, COMMISSIONER



Letters of Support

- Chris Barker, NOAA OR&R
- Nathan Wilkins

Status

Proposal submitted to
NAS Research Practice Grants competition.

Thank you



Helena Solo-Gabriele



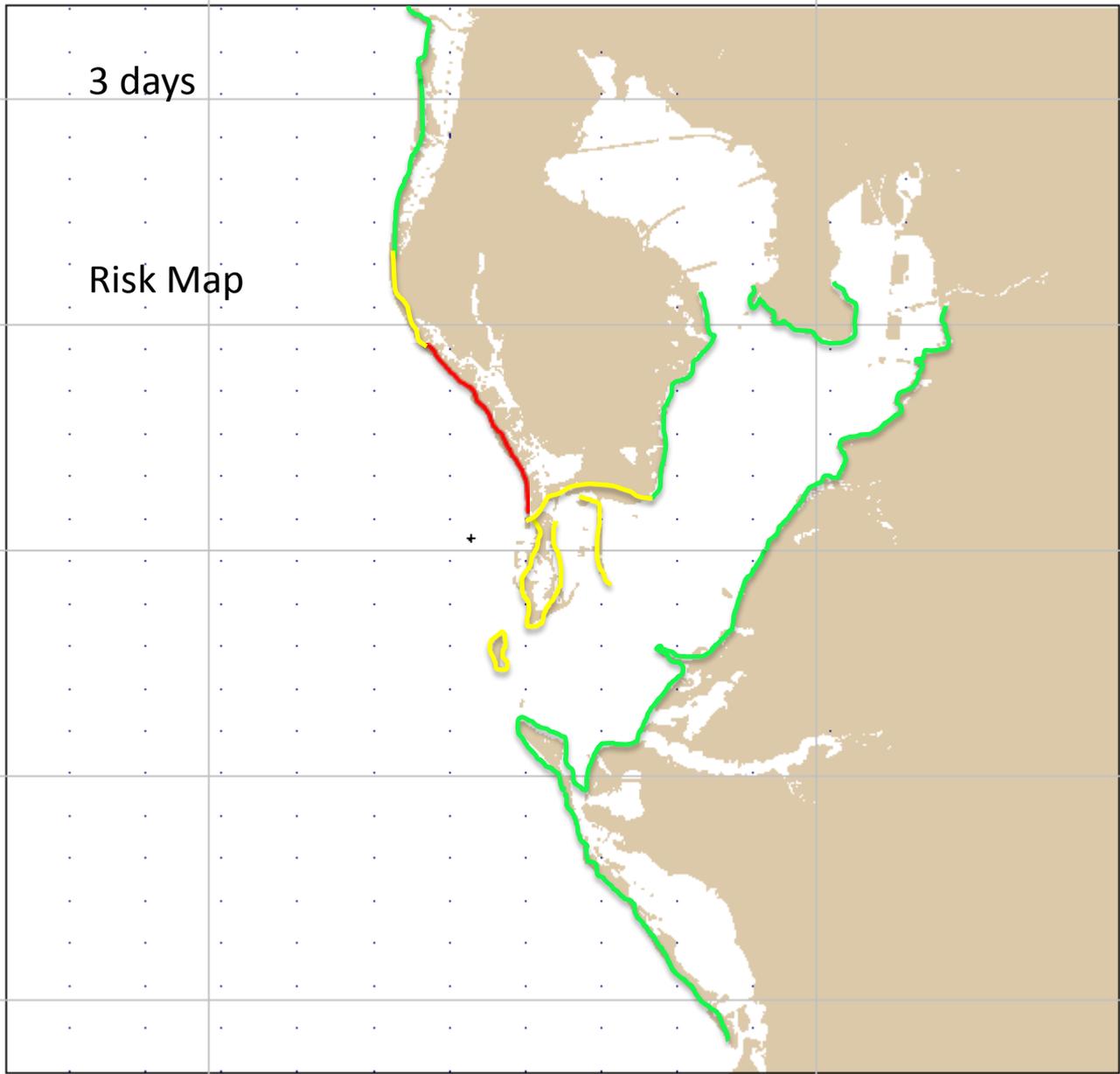
Alesia Ferguson



Ann Hayward Walker

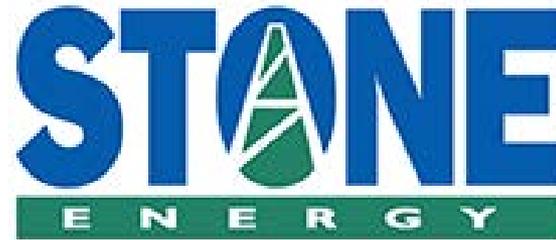


Samir Elmir





Stone Energy Subsea Dispersant Exercise



GC 865 Apple Prospect Well Blowout Annual GOM Drill

RRT-6 Fall 2017 Meeting

Patrick Eiland, Stone Energy

Roger Scheuermann, HWCG –Stone Energy

Mike Sams, USCG



Topics

- Stone Energy SSDI Team
- Exercise Scenario
- Dispersant
 - Utilization Rate
 - Subsea Dispersant Monitoring Kit and Mobile Lab
- Spill Impact Mitigation Assessment (SIMA)
- Incident Specific RRT-6 (ISRRT) Activation
 - RRT-6 Role during ISRRT Teleconference
 - Activation Summaries
 - RRT-6 Job Aid
- Path Forward





Stone Energy SSDI Team

- Patrick Eiland – Stone Energy
- Roger Scheuermann – SSDI Team Lead and Operations Plan
- Dr. Jodi Harney – CSA – Monitoring Plan
- Robert Simmons – Environmental Unit
- Dr. Paige Doelling – NOAA - RAR
- Capt. Blake Welborn, USCG - FOSC

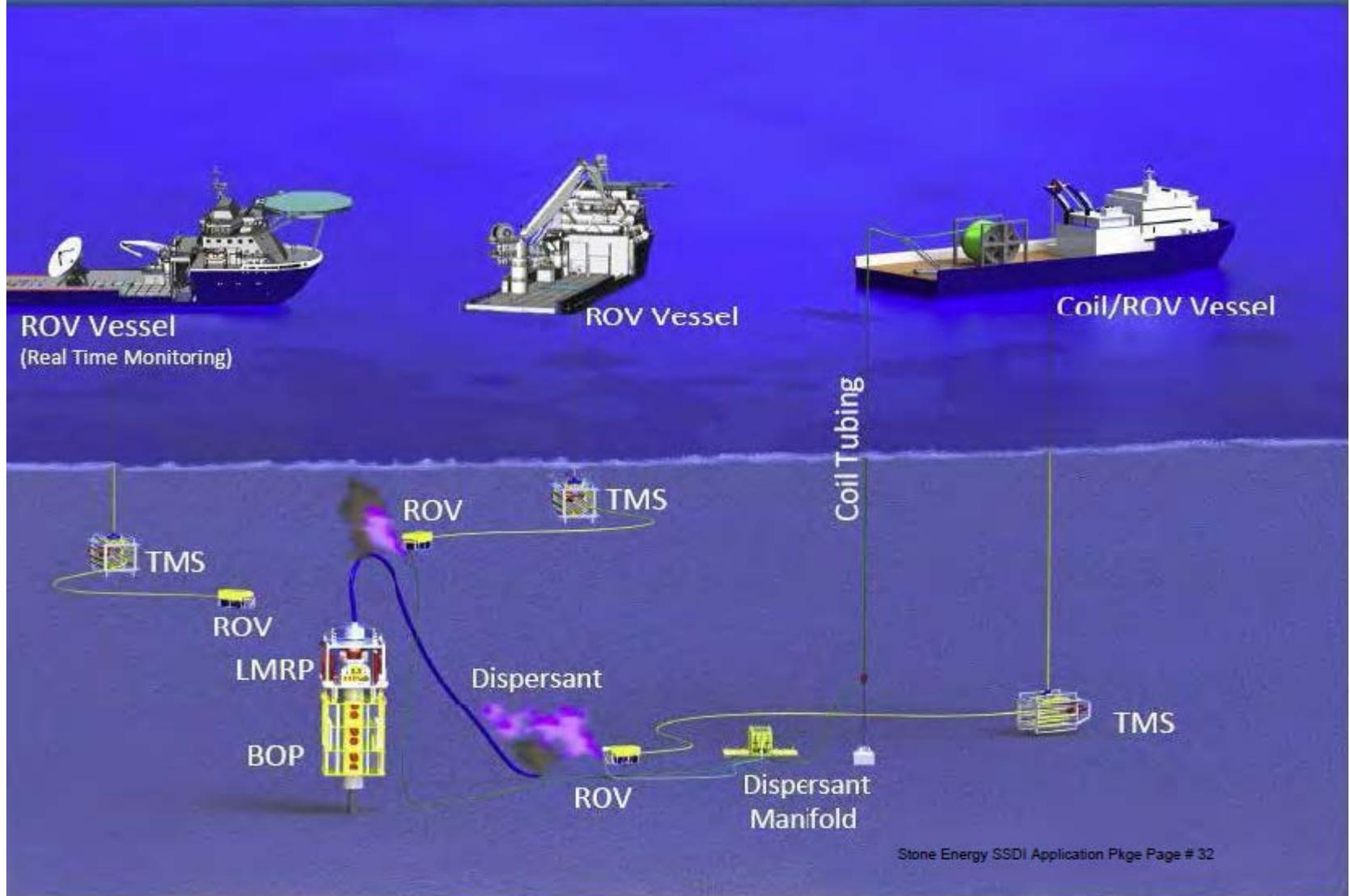
Exercise Scenario

- While the Mobile Offshore Drilling Unit (MODU) ENSCO 8505 was conducting drilling operations (running liner) in the Green Canyon Block 865 (approximately 121 NM south of Port Fourchon, LA) they experienced a casualty with their dynamic positioning system (DPS).
- The Dynamic Positioning System malfunctioned and switched into full power and thrust mode; causing a drive-off event. Before the crew was able to gain control of the propulsion system, the MODU traversed the approved Green-Yellow-Red watch circle and was pushed off station approximately 500M to the east.
- The crew initiated the emergency disconnect sequence (EDS); however, the drive-off caused the lower marine riser package to disconnect with partial drill string. Some drill pipe in hole.
- The blowout preventer (BOP) rams failed to completely seal and the well continued to flow at an initial discharge rate of approximately 24,000 bopd.



Island Venture SSDI Operations Platform

Install Coil for Dispersant Supply and Monitor Well



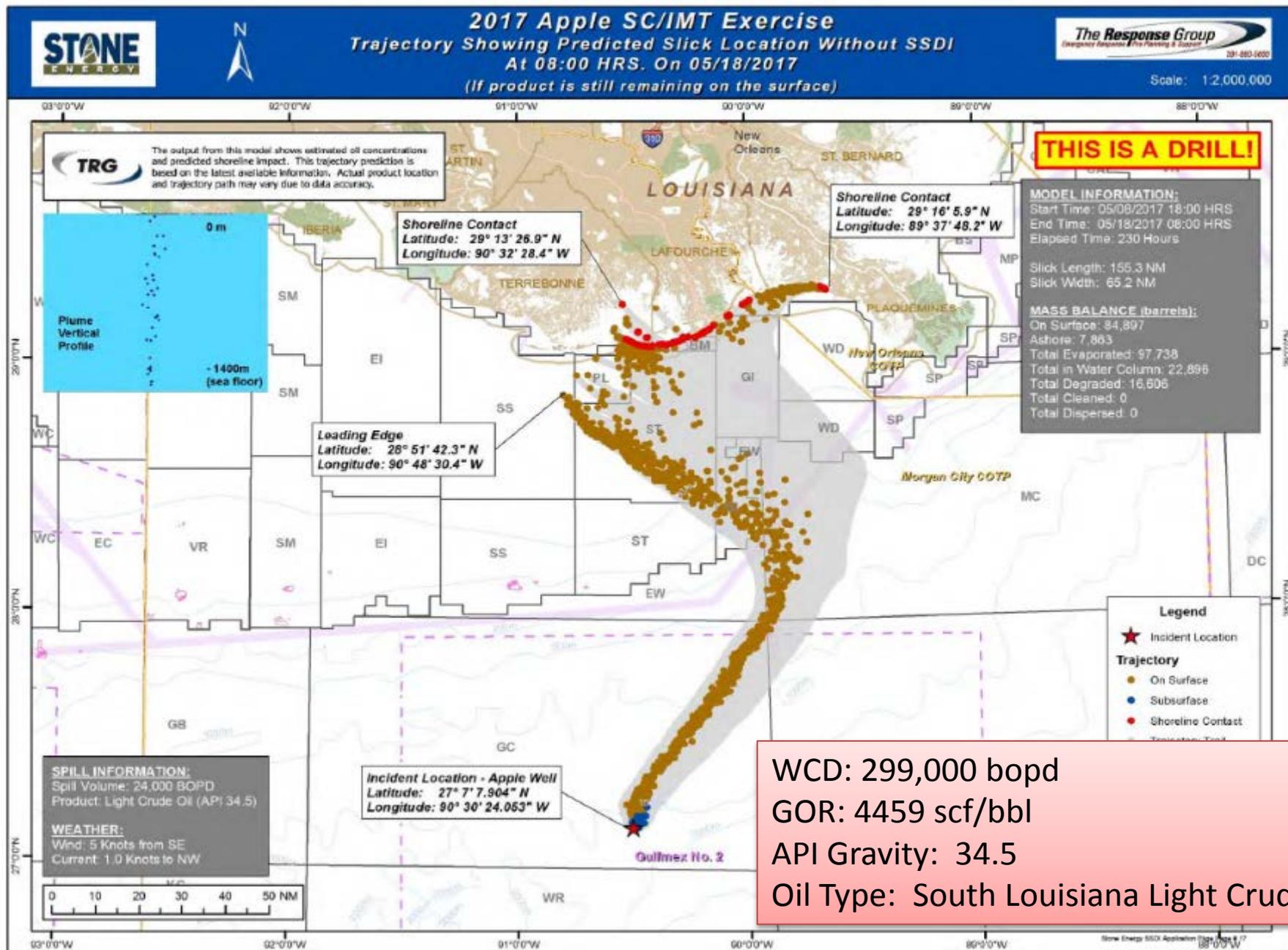
Stone Energy SSDI Application Pkge Page # 32



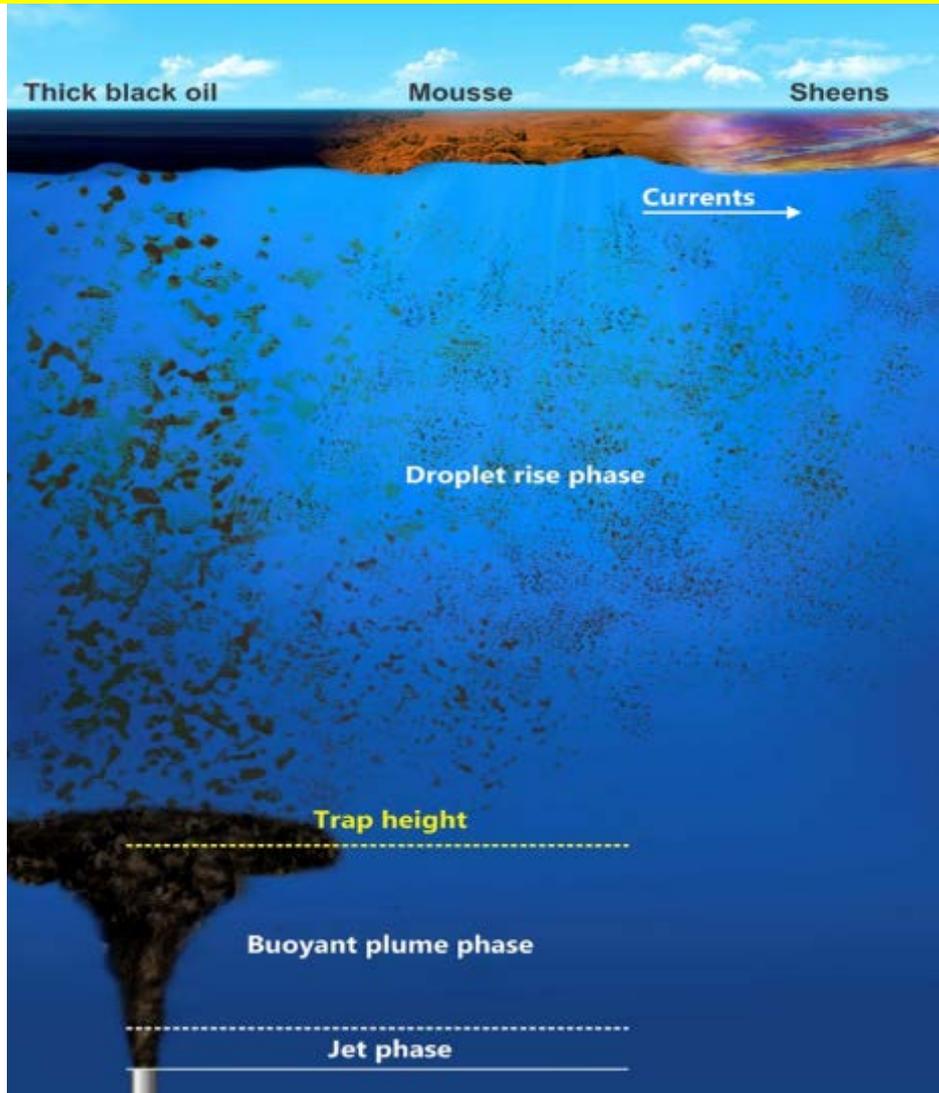
- **Note:** Stone Energy drill was held at the Westin Hotel in Houston, TX, not the contracted PetroSkills location. Shows flexibility if PetroSkills facility is unavailable.
- Stone Energy utilized the Final API Draft #4719 of the “Industry Guidelines on Requesting Regulatory Concurrence for Subsea Dispersant Use”, dated June 2017 – First Edition.

Rentsys was utilized for all phones, printers, and emergency resources within the command post.

Area of Operations and Discharge



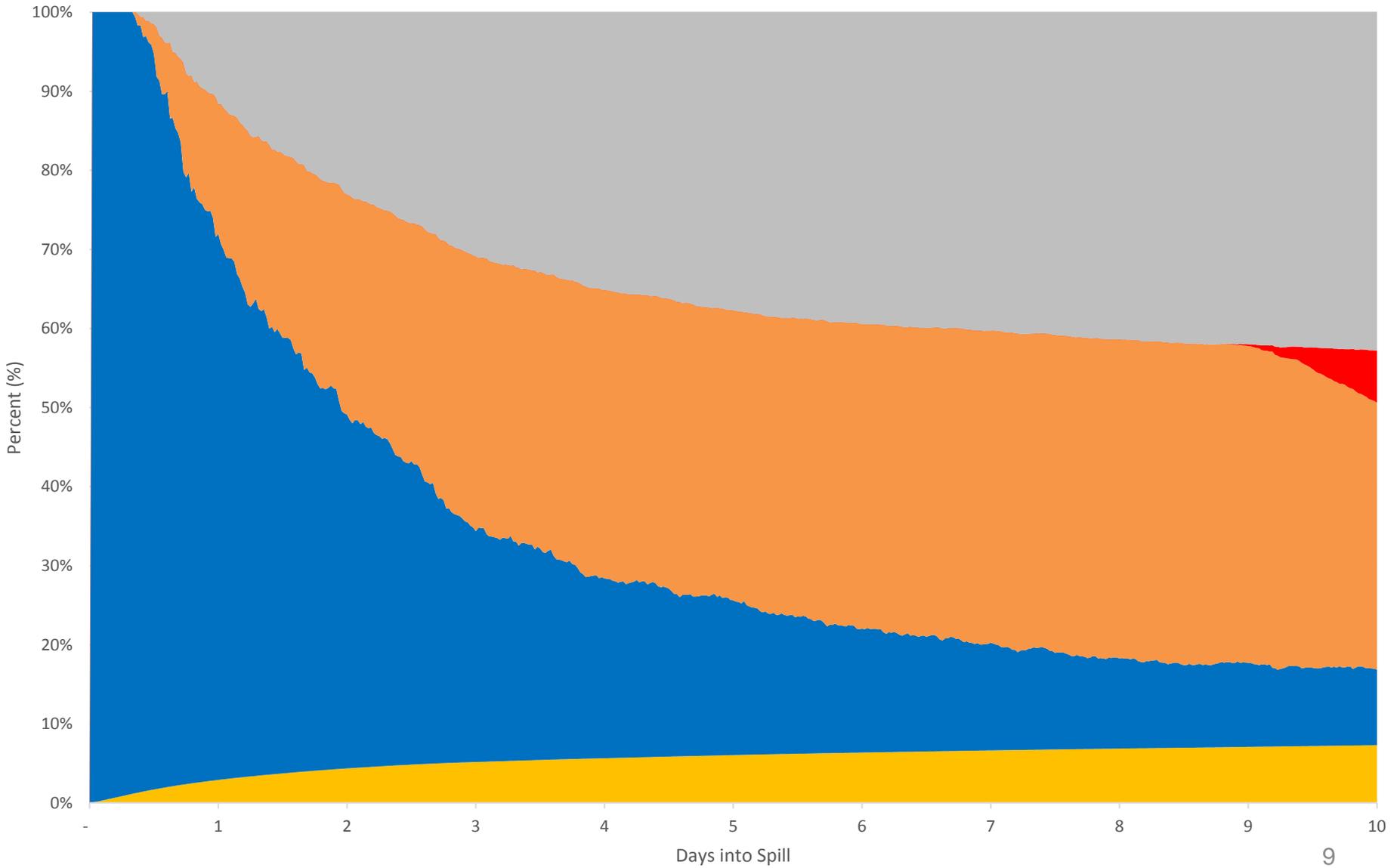
Conceptual Model of a deep water oil and gas well blowout



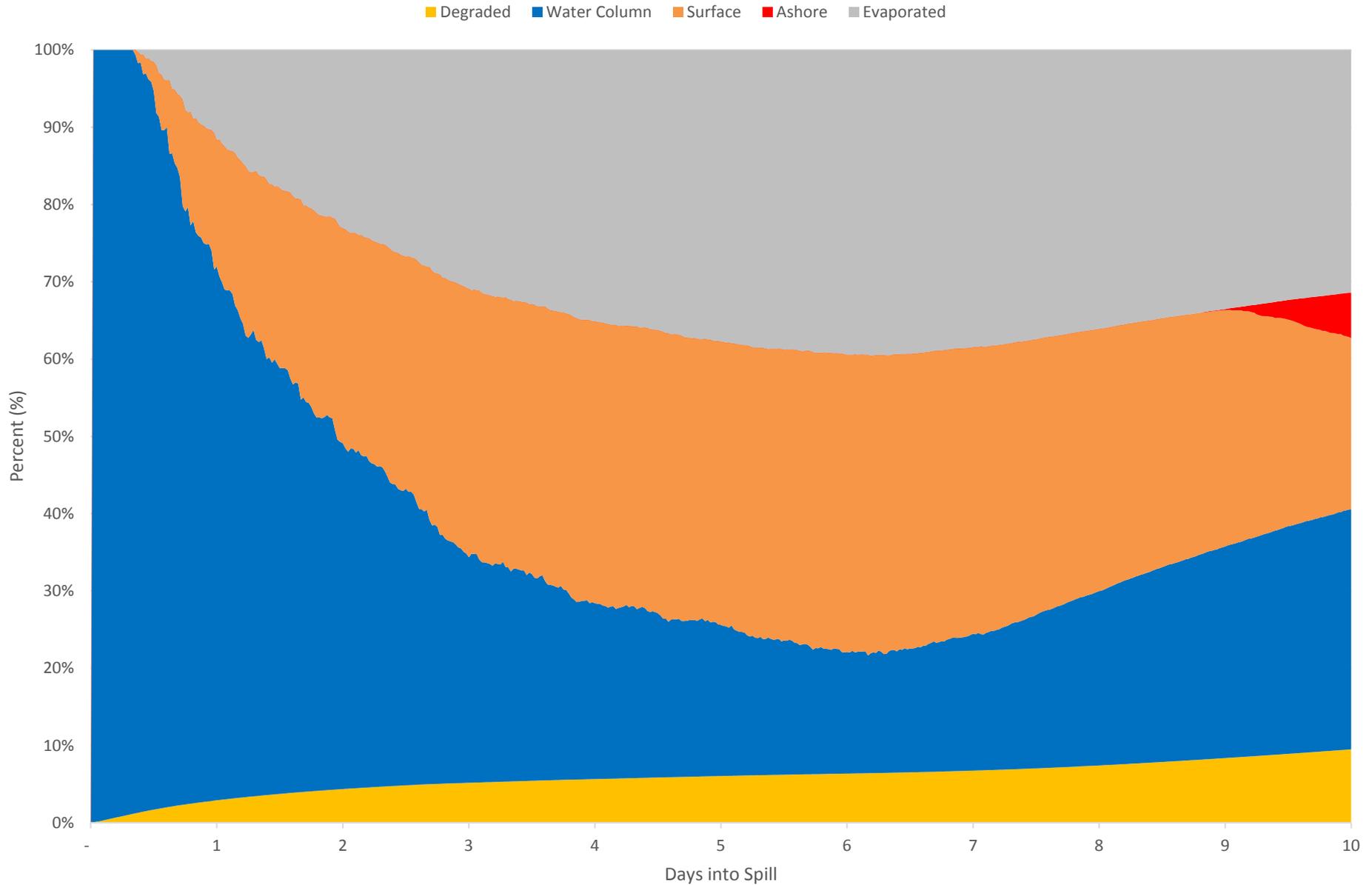
- OILMAP deep model was used to predict trap heights and droplet sizes
- Model used to predict transport and weathering
- Droplet model predicts the size and volume distribution of oil droplets.
- Droplet size dictates how long droplets will remain in the water column.
- Smaller droplets remain in the water column longer, and drift with subsea currents

Stone Apple Trajectory Model Mass Balance Without SSDI

■ Degraded ■ Water Column ■ Surface ■ Ashore ■ Evaporated



Stone Apple Trajectory Model Mass Balance With SSDI



Dispersant Utilization Rate



- Start SSDI on Day 6 –drill induced
- Initial Flow Rate: 24,000 bopd
- Injection rate at initial flow rate: 7 gal/min or 10,080 gal/day
- Worst Case Discharge – 299,000 bopd
- Injection rate with WCD: 87 gal/min or 125,580 gal/day
- Dispersant to Oil Injection Ratio - 1 to 100 (start)

Dispersant Stockpile

- Dispersants Proposed
 - COREXIT® 9500A
 - ACCELL CLEAN® DWD
- **Proposed use described in SSDI Operations Plan.**
 - Clean Gulf 114,000 gallons Corexit
 - Clean Gulf 5,000 gallons Accell Clean DWD
- Accell Manufacture could provide 30,000 gal/day in 5 days
- SSDI Team requested use of BP stockpile of 200,000 gallons if BSEE approved.
- Safety Data Sheets (SDS) included in Operations Plan



Quantities of Dispersants Available:

- **Initial amount of dispersant:**
 - COREXIT® 9500A – 314,000 gallons
(CGA – 114,000 gallons in stock Houma, LA)
 - ACCELL CLEAN® DWD – 5,000 gallons
(CGA – 5,000 gallons in stock Houma, LA)
- BSEE approved 200,000 gallons of Corexit from BP stockpile after verbiage exchange.
- Worked with Accell Clean Manufacture and they can provide dispersant in 5 days at 15,000 gallons per day per facility (2) - Total 30,000 gal/day.
- Chattanooga, TN and Dallas, TX

Additional Production Capacity:

- COREXIT® 9500A
 - Nalco Environmental Solutions LLC – Manufacturer
 - 10-14 day plant start up
 - 25,000 gallons per day – Sugar Land, TX
- With current available stockpile (319,000 gallons) that gives Stone Energy (31.5) days before any additional amounts are required.
- Manufacturers up and running to produce volumes if required.
- “IF” WCD went to 299,000 bopd, Stone would have engaged with OSRL who owns 1.1 Million gallons, SSDI Team was working this possibility.

Island Venture – SSDI Platform

- Vessel length – 426'
- 2 ROV's
- Large moon-pool
- 2 Coiled Tubing Units – 2-3/8"
- Cranes
- Ample in-deck storage-coated tanks, 3,000 + bbls or 126,000 gallons of storage for dispersant.



Support Vessels

- 2 support vessels for transporting dispersant on SSDI Platform vessel.
- Coated storage
- Approximately 3,000 bbls storage, can support Corexit and Accell Clean in separate tanks.



M/V Pelican



MV Dolphin

HWCG SSDI Kit

- 2 outlets
- 17H Hotstabs
- 3 – wands



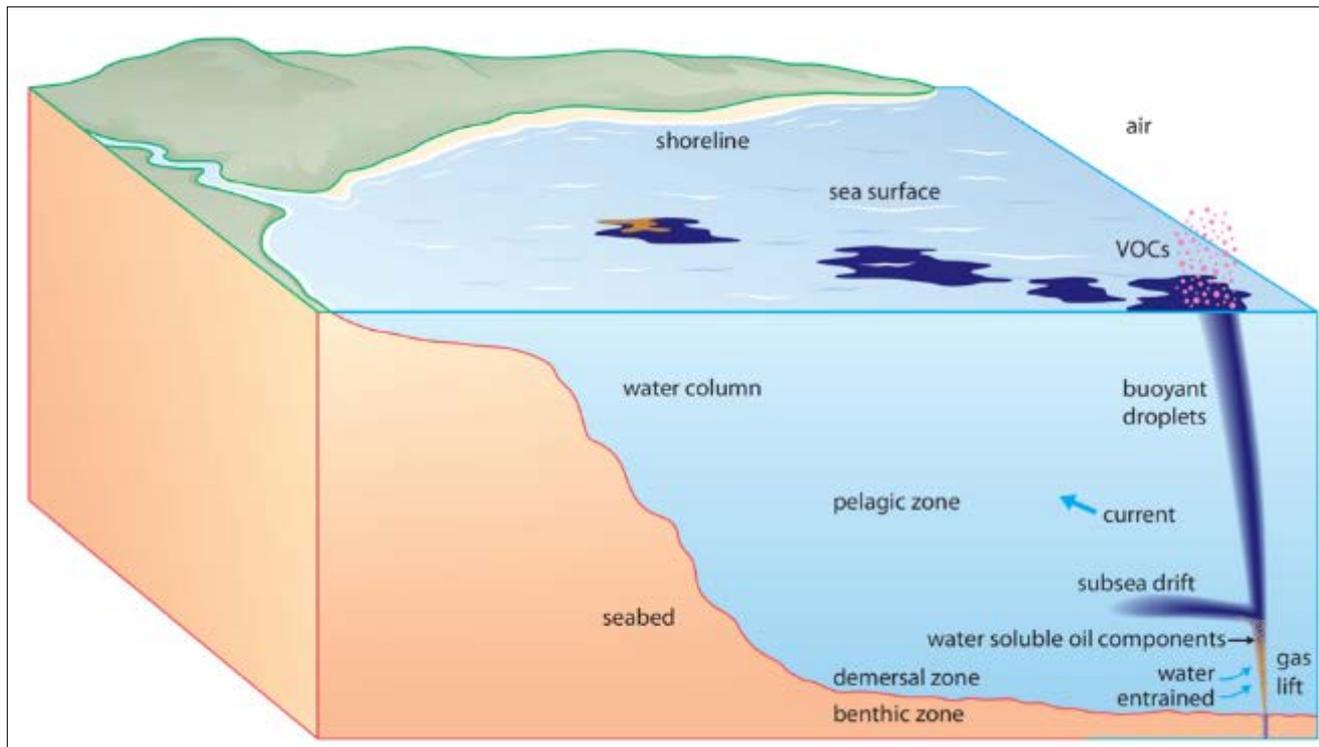
2 bbls per minute per outlet
Rated 10,000 PSI & 10,000 WD

Subsea Dispersant Monitoring Kit and Mobile Lab – HWCG/CSA



Spill Impact Mitigation Assessment (SIMA)

- An actual event would involve the EU, all resource trustees, and emergency consultation processes. This was discussed during RRT call
- Considered all environmental compartments – RAR and Trade-offs
- Based on existing NOAA Northern GOM RAR
 - Modified to account for scenario specific conditions



Special Kudos

- API Bulletin 4719

“Industry Guidelines on Requesting Regulatory Concurrence for Subsea Dispersant Use”

Mike Drieu – Anadarko – Team Leader on Project

- **Dr. Paige Doelling – NOAA – RAR and SIMA - Analysis of Potential Benefits and Trade-offs. Great stuff!!**
- **Mike Prendergast – BSEE Source Control Support Coordinator**
- **Capt. Blake Welborn– USCG – FOSC – Leading the charge as FOSC for SSDI and consultation**

Conclusions

- Modeling illustrated that:
 - SSDI use would reduce particle sizes by at least an order of magnitude.
 - The impact on the mass balance of oil would be a significant shift from the water surface to the water column.
 - Levels of dispersed oil in the deep water column would increase temporarily, but over a relatively small area and depth then be swept away by sea currents.
 - VOC reduction in source control work area for surface operations

Conclusions

- SIMA found that:
 - The most significant exposure of RAR to oil would occur at the water surface.
 - Use of mechanical recovery techniques alone would not be expected to produce significant reductions in RAR exposure at the water surface.
 - SSDI use has the potential to produce significant reductions in exposure of RAR to oil at the surface and in the shallow water column nearshore.
 - SSDI use could increase levels of exposure of organisms inhabiting deeper portions of the water column, but the areas impacted would be relatively small, and likely to decrease rapidly due to weathering and biodegradation.

Purpose for Requesting the RRT 6 Conference Call

- To review, discuss and potentially approve the request to apply subsea dispersants to:
 - Mitigate the discharge
 - Reduce volatile organic compounds (VOCs) exposure to responders
 - Reduce oil impacts to the shoreline and resources at risk



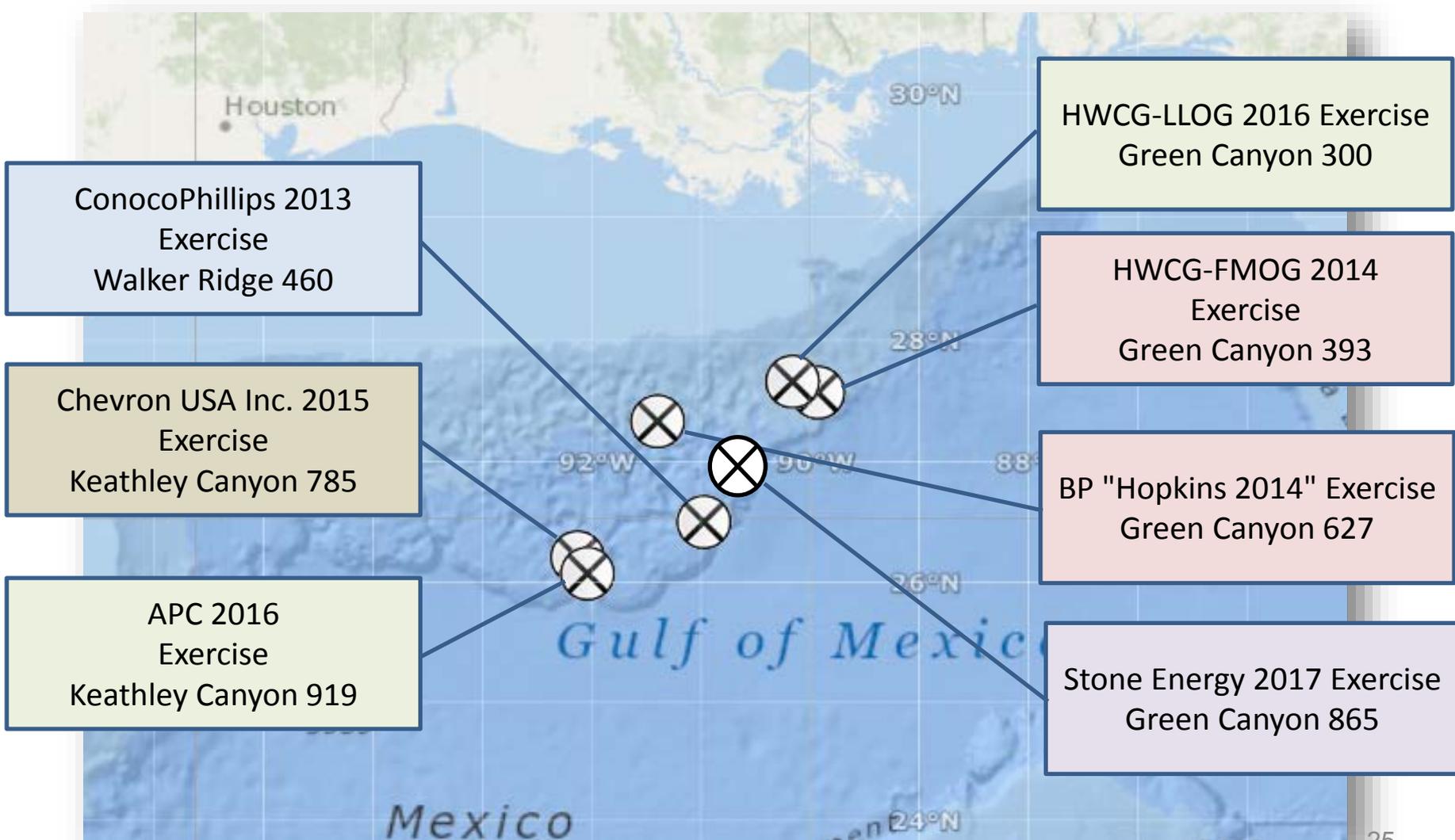
Subsea Dispersants

40 CFR 300.910 Subpart J

- RRTs and Area Committees shall address, as part of their planning activities, the desirability of using appropriate dispersants, etc.
 - Preauthorization plans
 - Incident Specific
 - Concurrence of the EPA
 - As appropriate, the concurrence of the RRT representatives from the states with jurisdiction over the navigable waters threatened by the release or discharge
 - Consultation with the DOC and DOI natural resource trustees, when practicable



Exercise History



Activation Summaries

Incident Specific Activation Report
 Incident #1004-1004-1004-1004
 Gulf of Mexico Exercise
 Simulated Major Oil Spill - Coastal Zone
 U.S. Coast Guard, Marine Safety Unit Morgan City, LA



Regional Response Team 6
 APRIL 2, 2013
 (GOMEX-1301)

Short Timeline of Events:

On 4/2/2013 at 08:00, the simulated oil spill was initiated. The exercise was conducted in the Gulf of Mexico, off the coast of Louisiana. The exercise was a full-scale activation of the Regional Response Team (RRT) 6, including the USCGC Spencer (WMEC-914), USCGC Healy (WMEC-913), and USCGC Delaney (WMEC-912). The exercise was a success and demonstrated the RRT's ability to respond to a simulated oil spill in the Gulf of Mexico.

Exercise **Exercise** **Exercise**

Incident Specific Activation Report
 Incident #1004-1004-1004-1004
 Gulf of Mexico Exercise
 Simulated Major Oil Spill - Coastal Zone
 U.S. Coast Guard, Marine Safety Unit Morgan City, LA



Regional Response Team 6
 APRIL 29 & MAY 1, 2014
 (GOMEX-1401)

Short Timeline of Events:

On 4/29/2014 at 08:00, the simulated oil spill was initiated. The exercise was conducted in the Gulf of Mexico, off the coast of Louisiana. The exercise was a full-scale activation of the Regional Response Team (RRT) 6, including the USCGC Spencer (WMEC-914), USCGC Healy (WMEC-913), and USCGC Delaney (WMEC-912). The exercise was a success and demonstrated the RRT's ability to respond to a simulated oil spill in the Gulf of Mexico.

Incident Specific Activation Report
 Incident #1004-1004-1004-1004
 Gulf of Mexico Exercise
 Simulated Major Oil Spill - Coastal Zone
 U.S. Coast Guard, Marine Safety Unit Morgan City, LA



Regional Response Team 6
 NOVEMBER 5, 2014
 (GOMEX-1402)

Short Timeline of Events:

On 11/5/2014 at 08:00, the simulated oil spill was initiated. The exercise was conducted in the Gulf of Mexico, off the coast of Louisiana. The exercise was a full-scale activation of the Regional Response Team (RRT) 6, including the USCGC Spencer (WMEC-914), USCGC Healy (WMEC-913), and USCGC Delaney (WMEC-912). The exercise was a success and demonstrated the RRT's ability to respond to a simulated oil spill in the Gulf of Mexico.

Incident Specific Activation Report
 Incident #1004-1004-1004-1004
 Gulf of Mexico Exercise
 Simulated Major Oil Spill - Coastal Zone
 U.S. Coast Guard, Marine Safety Unit Morgan City, LA



Regional Response Team (RRT) 6
 AUGUST 19, 2015
 (GOMEX-1501)

Short Timeline of Events:

On 8/19/2015 at 08:00, the simulated oil spill was initiated. The exercise was conducted in the Gulf of Mexico, off the coast of Louisiana. The exercise was a full-scale activation of the Regional Response Team (RRT) 6, including the USCGC Spencer (WMEC-914), USCGC Healy (WMEC-913), and USCGC Delaney (WMEC-912). The exercise was a success and demonstrated the RRT's ability to respond to a simulated oil spill in the Gulf of Mexico.

Incident-Specific Activation Report
 Incident #1004-1004-1004-1004
 Gulf of Mexico Exercise
 Simulated Major Oil Spill - Coastal Zone
 U.S. Coast Guard, Marine Safety Unit Morgan City, LA



Regional Response Team (RRT) 6
 MAY 10, 2016
 (GOMEX-1601)

Short Timeline of Events:

On 5/10/2016 at 08:00, the simulated oil spill was initiated. The exercise was conducted in the Gulf of Mexico, off the coast of Louisiana. The exercise was a full-scale activation of the Regional Response Team (RRT) 6, including the USCGC Spencer (WMEC-914), USCGC Healy (WMEC-913), and USCGC Delaney (WMEC-912). The exercise was a success and demonstrated the RRT's ability to respond to a simulated oil spill in the Gulf of Mexico.

Incident-Specific Activation Report
 Incident #1004-1004-1004-1004
 Gulf of Mexico Exercise
 Simulated Major Oil Spill - Coastal Zone
 U.S. Coast Guard, Marine Safety Unit Morgan City, LA



Regional Response Team (RRT) 6
 OCTOBER 24, 2016
 (GOMEX-1602)

Short Timeline of Events:

On 10/24/2016 at 08:00, the simulated oil spill was initiated. The exercise was conducted in the Gulf of Mexico, off the coast of Louisiana. The exercise was a full-scale activation of the Regional Response Team (RRT) 6, including the USCGC Spencer (WMEC-914), USCGC Healy (WMEC-913), and USCGC Delaney (WMEC-912). The exercise was a success and demonstrated the RRT's ability to respond to a simulated oil spill in the Gulf of Mexico.

Incident-Specific Activation Report
 Incident #1004-1004-1004-1004
 Gulf of Mexico Exercise
 Simulated Major Oil Spill - Coastal Zone
 U.S. Coast Guard, Marine Safety Unit Morgan City, LA



Regional Response Team (RRT) 6
 AUGUST 2, 2017
 (GOMEX-1701)

Short Timeline of Events:

On 8/2/2017 at 08:00, the simulated oil spill was initiated. The exercise was conducted in the Gulf of Mexico, off the coast of Louisiana. The exercise was a full-scale activation of the Regional Response Team (RRT) 6, including the USCGC Spencer (WMEC-914), USCGC Healy (WMEC-913), and USCGC Delaney (WMEC-912). The exercise was a success and demonstrated the RRT's ability to respond to a simulated oil spill in the Gulf of Mexico.

Incident Specific Activation Report & Job-Aid

Exercise
Exercise
Exercise

Incident-Specific Activation Report

Stone Energy 2017
Gulf of Mexico Exercise

Simulated Major Oil Spill – Coastal Zone
U.S. Coast Guard, Marine Safety Unit Houma, LA



Regional Response Team (RRT) 6

[Link](#)

August 2, 2017

(RRT-6 Activation Date)

Brief Timeline of Events:

- On May 8, 2017, Stone Energy conducted their annual Preparedness for Response Exercise Program (PREP) exercise based on their oil spill response plan's worst-case discharge (299,000 barrels of oil per day (bopd)). As part of the exercise, they requested RRT consultation and concurrence to use subsea dispersants, specifically CORENT EC9500A and ACCCELL Clean DWD, as an effective means to minimize environmental impact.
- On July 14, 2017, Stone Energy's exercise planners provided their subsea dispersant injection package (SSDI) to RRT-6 and MSU Houma (Federal On-Scene Coordinator (FOSC)) for review/comment.
- On August 2, 2017:
 - 0900 CT, key RRT-6 members convened to discuss the package and align with the RRT-6 Job-Aid checklist. Call adjourned at 0920.
 - 0930 CT, the Incident-Specific RRT (ISRRT) teleconference commenced, call adjourned at 1020.

Exercise Scenario: While the Mobile Offshore Drilling Unit (MODU) ENSCO 8505 was conducting drilling operations (running floor) in the Green Canyon block 865 (approximately 121 NM south of Port Fourchon, LA) they experienced a casualty with their dynamic positioning system (DPS). The DPS malfunctioned and switched into full power mode, causing a drive-off event. Before the crew was able to gain control of the propulsion system, the MODU had been pushed off station approximately one-mile to the east. The crew initiated the emergency

1

RRT-6 ART Evaluation Job-Aid - Dispersants

Incident Name: GCM9 Apple (Stone Energy Subsea Dispersant Exercise)
NRC #: 117811
Incident date: May 8, 2017
Date of RRT incident-specific call: August 2, 2017

Spill Zone (Check all that apply and use one form per Spill Zone):

- OFFSHORE/SURFACE Dispersant Application
 NEARSHORE/SURFACE Dispersant Application
 OFFSHORE/SUBSEA Dispersant Application

BSEE 40 CFR 300.906

	Y	N	N/A	Key Components
1	✓			Have the applicable forms been appropriately filled out and been submitted to the RRT?
2	✓			Is the spilled product dispersible?
3	✓			Is the dispersant listed on the NCP Product Schedule?
4	✓			Are other options for product removal considered inadequate?
5	✓			Will dispersant application achieve the desired environmental benefit for identified RRTs?
6	✓			Is sufficient dispersant available?
7	✓			Can the dispersant be deployed in a timely manner?
8	✓			Did the dispersant application contractor have a pre-existing contract to support the operation?
9	✓			Has the contractor handled the dispersant before?
10	✓			Are weather conditions conducive for the proposed operation?
11			✓	Are operations to be conducted during daylight hours?
12	✓			Are operations to be conducted on 24hr basis?
13	✓			Will application personnel be using the required PPE?
14	✓			Are the personnel applying dispersants properly trained and qualified?
15	✓			Does the Dispersant Application System meet applicable guidelines? a) Aircraft spray systems in accordance with manufacturer and ASTM standards. b) Boat application equipment in accordance with ASTM standards. c) Fire monitor and/or nozzle equipment meet ASTM application standards. d) Subsea application systems in accordance with Best Available Technology (BAT)*
16			✓	Has the FOOSC activated the SMART Program monitoring team?
17			✓	Will the SMART observers fly over to monitor dispersant applications?
18	✓			Is the subsea monitoring plan in accordance with BAT?
19			✓	Will DO/DOC provide an aerial survey specialist to accompany the SMART observer?
20	✓			Have ESA, EFH, and NHPA Sect on 106 consultations been initiated?
21	✓			Have all potentially affected jurisdictions been notified? States, BOEM, BSEE

Recommendation:

- Approve
 Don't approve
 Approve under the following conditions: **FOSC shall report progress to the RRT on a regularly scheduled basis as prescribed by the RRT**

*At this time BAT are RRT and API guidelines

RRT6-ART JA

Ver. 2 Aug 2017

Path Forward

- Committed to refining Subsea Dispersant Protocols and Processes.
- Up to two exercises per year
- Collaborate with Region 4 for maximum consistency within the Gulf of Mexico
- Refine Job Aid as necessary



QUESTIONS??



U.S. Coast Guard District 8

Federal On-Scene Coordinator (FOSC) Reports







Sector Corpus Christi

Captain Richard "Tony" Hahn

Sector Commander

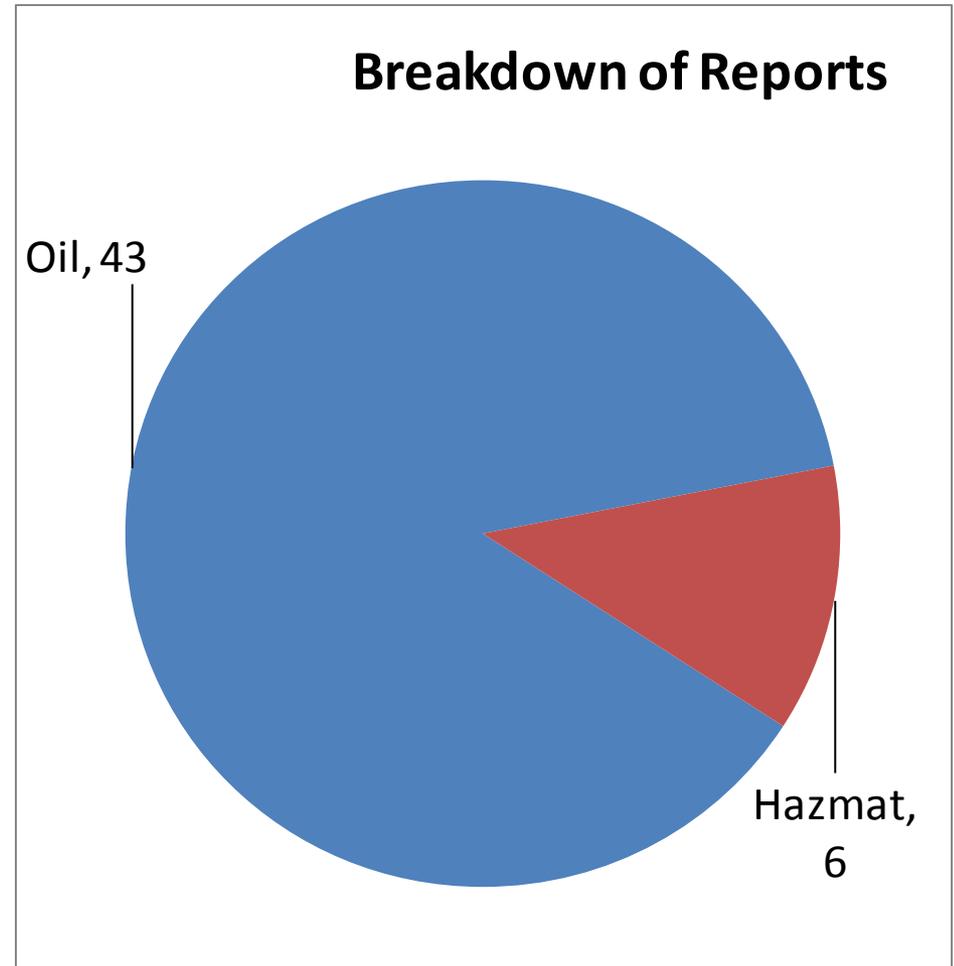


NRC Notifications	RRT Activations	Federal Projects	CERCLA Projects
49	1 Surface Washing Agents 0 In-situ Burns 0 Dispersants	04	02



NRC Notifications

- **Oil discharge:** reports down 12% since last RRT meeting (49)
- **Hazmat release:** reports remain the same since last RRT meeting (6)





RRT Activation / Notification



Date:	19-21 Aug 2017	Activation	N	Notification	N
Incident Name:	2017 South Texas Tar Balls				
Location:	Port Aransas to Brownsville, Texas				
Responsible Party:	Unknown				
Type and amount of product spilled:	4,137 gallons – Sector Corpus Christi 25,500 gallons – MSD Brownsville * Total 2017: Approx 32,700 gallons				
Issue / Concern:	Lack of sufficient number of OSRO contractors and equipment in Brownsville available to respond to such a large clean up operation				
Agencies Involved:	Multi-agency response including responders from TGLO, USCG, and the city of Brownsville.				
Decisions Made:	This annual event was better managed by keeping the OSLTF open for an extended duration. It is key to a more effective & streamlined effort.				

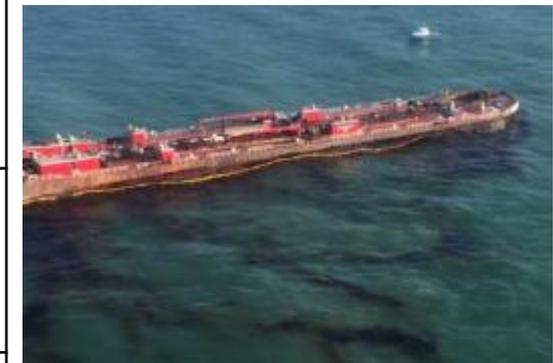




RRT Activation / Notification



Date:	20 Oct – 1 Nov 2017	Activation	Y	Notification	Y
Incident Name:	BARGE B NO 255 FIRE				
Location:	Aransas Pass Anchorage				
Responsible Party:	Bouchard Transportation Co				
Type and amount of product spilled:	Initial: 2000 bbls missing product Secondary: 5-10 bbls Product: crude oil				
Issue / Concern:	FOSC Requested RRT-6 approval to use Surface Washing Agent (SWA) to facilitate decon. Communication and RPs timeliness in decision making created delays throughout response due to company decision makers not being present in ICP.				
Agencies Involved:	Multi-agency response including responders from TGLO, USCG, Port of Corpus Christi, NOAA, & TPWD				
Decisions Made:	RRT-6 Approved SWA. MSRC SOUTHERN RESPONDER was contracted under OSLTF due to RP inability to source appropriate response assets in a timely manner.				





Consultations

Start	Stop	With	Phase- Planning (P) Response (R)	For	Species (Common Name)	Listing Status	Cost
01 Feb 2016	Ongoing	DOI/USFWS, DOC/NMFS	P	SWA Pre- Authorization	Multiple	ESA/EFH	\$1423
27 Oct 2017	Ongoing	DOI/USFWS, DOC/NMFS, SHPO & THPO	R	Barge B No 255 Fire	Multiple	ESA/EFH	\$1440
GRAND TOTAL							\$2863

[REIMBURSABLE STANDARD RATES](#)



Accomplishments



Training

Exercises/Workshops

Description	Dates
Pollution Responder College	10-14 Jul 2017
Oiled Wildlife Seminar	11 Jul 2017 21-22 Sep 2017
Response Manager Training	25 Aug 2017

Description	Dates
PREP Notification Drill	27 Jun 2017 25 Sep 2017
GIUE	21 Sep 2017
Sector HURREX	15-19 May 2017

Federal, state, and local planning and coordination efforts

Description	Dates
STCZAC Meeting Brownsville	23 May 2017
LEPC Meeting	27 Jun 2017
STCZAC Meeting Corpus	22 Aug 2017



Outlook



Training

Description	Dates
GOM Oil & Gas Geodatabase	TBD
Corpus Christi Area Oil Spill Control Association (CCAOSCA)	Dec 2017
ICS 300	27 Feb – 2 Mar 2018

Exercises/Workshops

Description	Dates
Clean Gulf Conference	5-7 Dec 2017
PREP Notification Drill	Mar 2018
Plains All American TTX	TBD

Federal, state, and local planning and coordination efforts

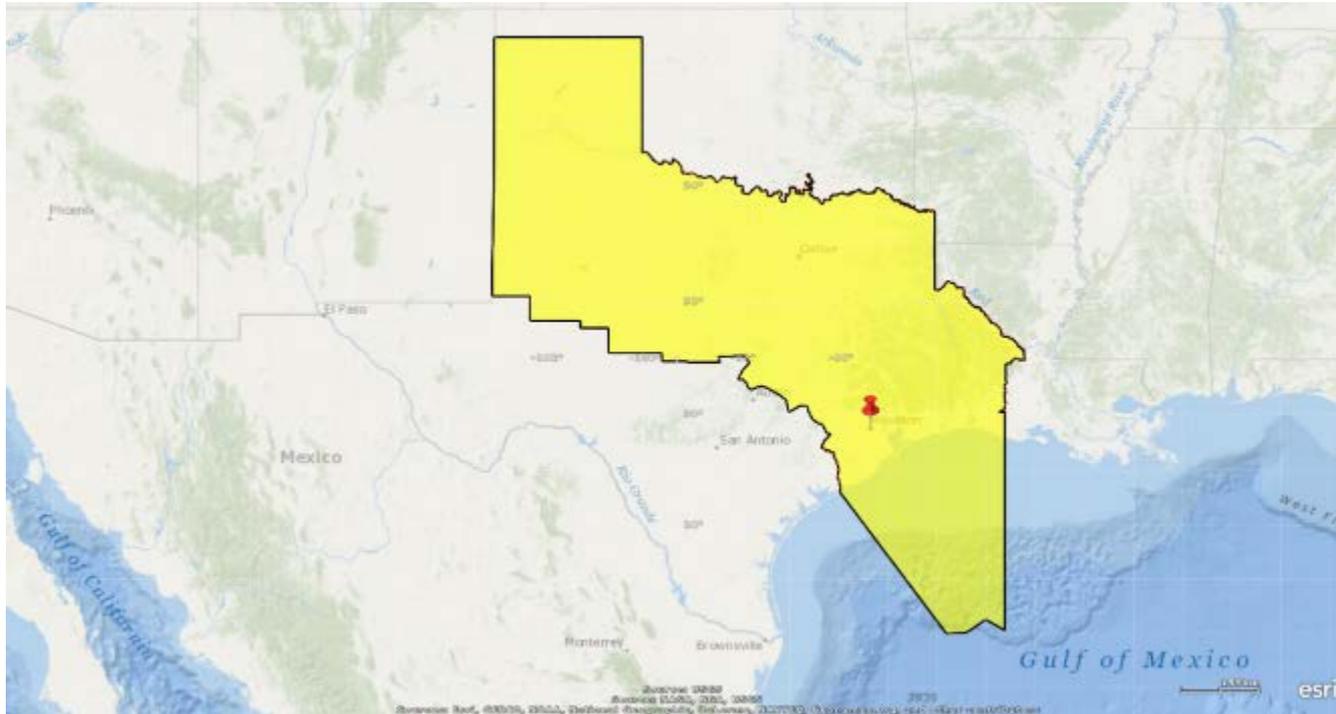
Description	Dates
TX Statewide AC Meeting	15 Nov 2017
STCZAC Meeting	Jan 2018
STCZAC Meeting	Jun 2018
STCZAC Meeting	Sep 2018



Sector Houston-Galveston



Captain Kevin Oditt
Sector Commander

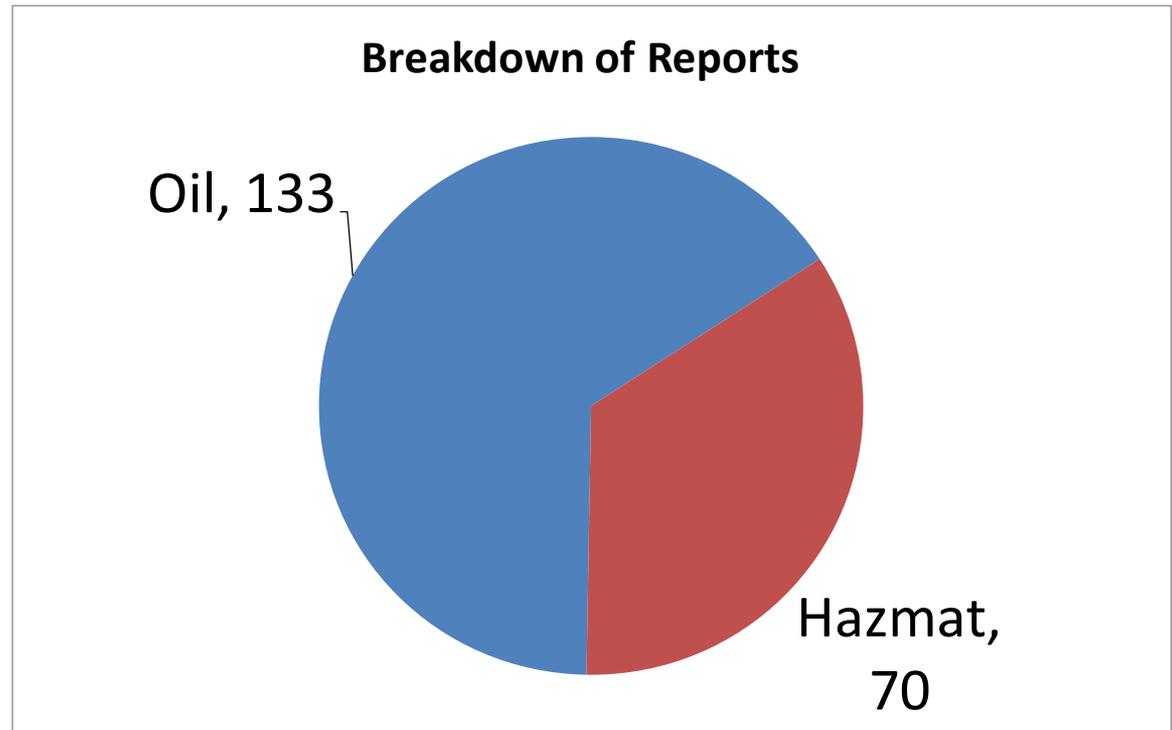


NRC Notifications	RRT Activations	Federal Projects	CERCLA Projects
203	00 Surface Washing Agents 00 In-situ Burns 00 Dispersants	5	4



NRC Notifications

- Oil discharge: 133
- Hazmat release: 70





RRT Activation / Notification

Date:	18 Aug 2017	Activation	N	Notification	N
Incident Name:	Caney Creek Marina				
Location:	Caney Creek located in Sargent, TX				
Responsible Party:	Fishing vessel St. Theresa (VIN: 945592; TX2257270181)				
Type and amount of product spilled:	20 gallons of waste oil				
Issue / Concern:	<p>USCG and EPA jurisdictional responsibilities. EPA Region 6 pre-designates the COTP as the OSC in response to an incident in the inland zone when it involves a commercial vessel.</p> <p>In this incident, according to the MOA between EPA Region 6 and the Eighth Coast Guard District, the vessel did not meet the definition of a commercial vessel; therefore, USCG transferred FOSC to EPA.</p>				
Agencies Involved:	USCG, TGLO, EPA , & Brazoria County Sheriff's Dept.				
Decisions Made:	Waste oil was discharged due to breakup of the vessel. RP hired Garner for cleanup. Discharge was contained within 3 hours of report. All Phase III actions were transferred to EPA.				





RRT Activation / Notification

Date:	16 Sep 2017	Activation	N	Notification	N
Incident Name:	Williams Petroleum Platform GA393B-AUX				
Location:	Gulf of Mexico; 26 miles SE of Freeport, TX				
Responsible Party:	Williams Gulf				
Type/amount of product spilled:	Approximately 10 gallons of condensate				
Issue / Concern:	<p>USCG received notification from recreational vessel DEEP EDDY that platform GA-393B discharged an unknown amount of condensate onto their vessel and into the Gulf of Mexico producing a sheen and causing injury. RP pursuing legal action. Coast Guard responded and conducted investigation for pollution and marine casualty.</p> <p>BSEE conducted offshore flight and responded to the scene. Conducted investigation, provided pictures and findings to the Coast Guard.</p>				
Agencies Involved:	USCG, EPA, & BSEE				
Decisions Made:	NSTR				





Accomplishments

Training

Description	Dates
FOSC Rep School	10 Jul 2017
Oil Spill Control School	31 Jul 2017 21 Aug 2017 25 Sep 2017
Pollution Responder School	24 Jul 2017

Exercises/Workshops

Description	Dates
GIUE (03)	FY17 (Q3 & Q4)
Oiled Wildlife	17 Aug 2017 21 Sep 2017

Federal, state, and local planning and coordination efforts

Description	Dates
TGLO	26 Jul 2017
OMI (OSRO)	18 Aug 2017



Outlook



Training

Description	Dates
FOSC Rep School	Fiscal year 2018

Exercises/Workshops

Description	Dates
Clean Gulf Conference	5-7 Dec 2017
GIUE	Feb 2018
Marine Fire Fighting	TBD (canceled due to Harvey)

Federal, state, and local planning and coordination efforts

Description	Dates
TX Statewide AC Meeting	15 Nov 2017
TCEQ	Nov 2017



MSU Port Arthur

Captain Jacqueline Twomey
MSU Commanding Officer



NRC Notifications	RRT Activations	Federal Projects	CERCLA Projects
258	00 Surface Washing Agents 00 In-situ Burns 00 Dispersants	5	4

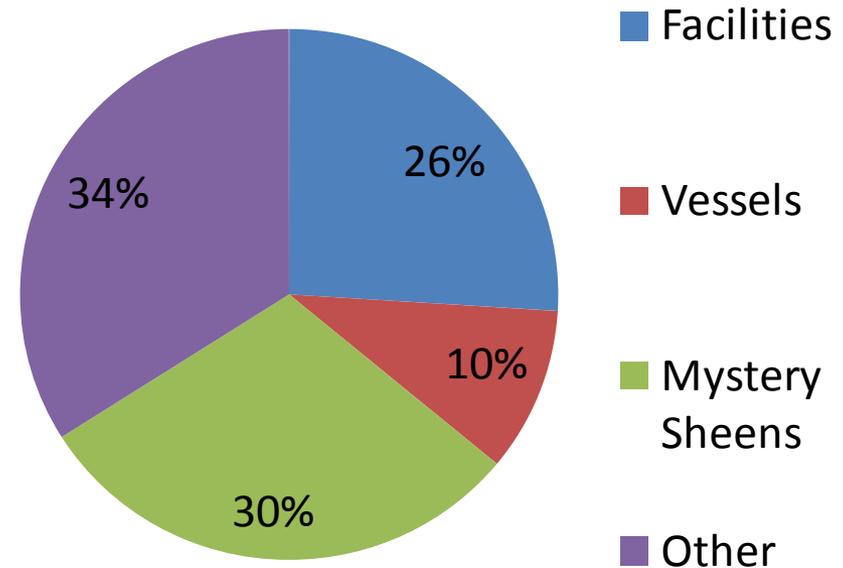


NRC Notifications



- **Facility** reports up 11% since last RRT meeting (66)
- **Vessel** reports up 4% since last RRT meeting (26)
- **Mystery Sheen** reports up 27% since last RRT meeting (77)
- **Other reports** up 44% since last RRT meeting (89)

Breakdown of Reports





MEP- CFV SOUTHERN BELL



Date of Incident	13OCT2017
MISLE Case #	1102369
Incident Specifics	
Facility/ Vessel	Southern bell
Product type/name	DIESEL
Product Potential/Status	~5,000
Affected Waterway/Status	IVO SABINE CHANNEL/JETTIES

Operational Summary

BLUF:

74ft CFV SOUTHERN BELL sank on the LA side of the Sabine Pass East Jetty on the morning of 13Oct17 in ~15ft of water. 03POB were rescued by Sta Sabine; MSU PA notified and is investigating (IMD, IO).

Current Ops:

18OCT17. Initial dive survey was able to locate sunken vessel at same location. Vessel was laying on its port side with stern partially submerged in mud. No oil or odor was noted. Salvage operation will resume 19 Oct 2017.

Future Ops: MSU PA Investigator and NTSB arrived on scene with PR around 0800 19 OCT 2017. Vessel was still fully submerged at location. Divers are unable to capture a clear picture or video of vessel due to visibility . MSU PA Investigator and NTSB are awaiting full dive reports to access damages.



MS - Barge TOPS DB1

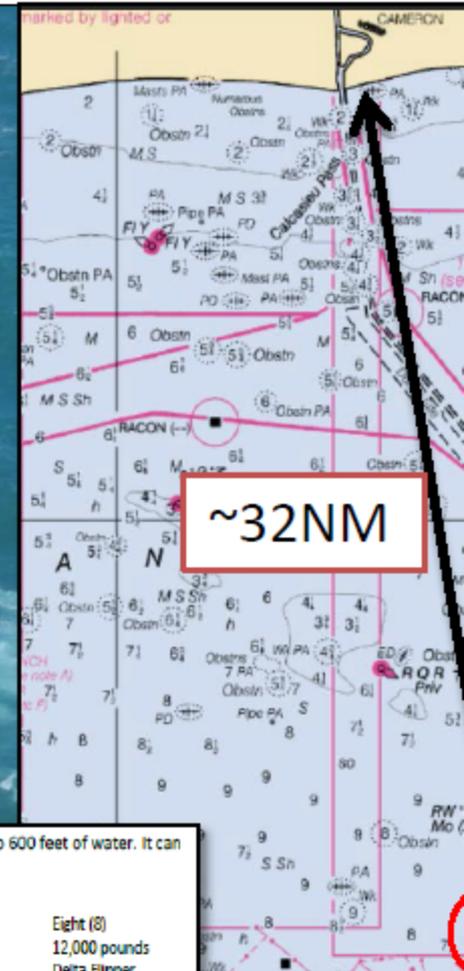
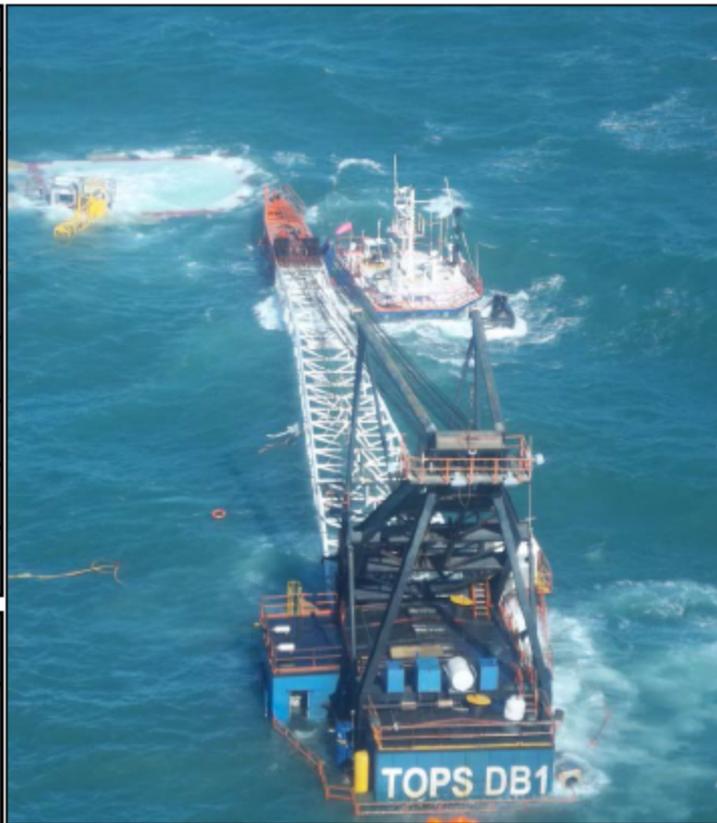
Update 5: 31OCT17

Incident	22OCT2017
Case #	1103465
Incident Specifics	
Official #	TOPS DB1 / 2051086
Length	350 Feet
Fuel	Diesel Fuel
Potential	~71,000 gallons
Responsible Party	Turnkey Offshore Project Services, LLC
Waterway	None

Operational Summary

The barge, TOPS DB1, sank approx 32 nm west of West Cameron Block 198a due to heavy weather conditions. 71 POB rescued, vessel sits on the seabed ~60 ft. Salvage, pollution mitigation and cleanup are pending.

USCGC Laredo Construction on scene with the Liftboat USV FMS COURAGE to take sonar pictures of the platform WC 198A to guide BRAZOS to safe landing spud down. Detailed Lightering and Dive Plan submitted for MSU PA and MSC SERT as safe and feasible. USCGC vessels have reported that sheen has reduced in the area over the last three days. RP has conducted interviews, NCB Inspector cooperating with



The TOPS DB-1 is an eight point mooring system derrick barge with capabilities of working in up to 600 feet of water. It can accommodate up to 110 persons.

DIMENSIONS

Length	350 feet (106.68 meters)
Width	100 feet (30.48 meters)
Depth	25 feet (7.6 meters)
Operating Draft	11 feet (3.35 meters)
Working Deck Area	20,000 sq feet (6,096 meters)
Classification	Germanischer Lloyd
Registry	Republic of Vanuatu

Hull Deck

Dimensions	49x46 feet (14.94x14.02 meters)
Load Capacity	11,000 pounds

ACCOMMODATIONS

Living Space	110 person quarters
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MOORING EQUIPMENT

Anchors	Eight (8)
Capacity	12,000 pounds
Type	Delta Flapper

Winches

Quantity	Eight (8)
Type	Intercon Single Drum
Capacity	200,000 pounds

Wire

Diameter	2 inch
Length	5,000 feet

AUXILIARY EQUIPMENT

Main Generator	5-750KW, 480volt, 5 phase, 60Hz
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Consultations



Start	Stop	With	Phase- Planning (P) Response (R)	For	Species (Common Name)	Listing Status	Cost
1 Jun 2017	2 Jun 2017	SHPO	R	Booming	Historical	N/A	N/A
?	Ongoing	DOI/USFWS, DOC/NMFS, & SPHO	P	SWA Pre- Authorization	Multiple	ESA/EFH	\$?
GRAND TOTAL							

[REIMBURSABLE STANDARD RATES](#)



Accomplishments



Training

Description	Dates
TES Institute Presentation	17 May 2017
NDOW Response Manager Training	26 Jul 2017
Oiled Wildlife Training	17 Aug & 21 Sep 2017

Exercises/Workshops

Description	Dates
GIUE (PA)	31 May 2017
GIUE (LKC)	20, Sep 2017
CITGO PREP (LKC)	11-12 Oct 2017
Phillips 66 PREP FSE (LKC)	17-19 Oct 2017

Federal, state, and local planning and coordination efforts

Description	Dates
Hurricane Prep Workgroup	9 Jun 2017
NDOW Meeting	21-22 Jun 2017
AC Meeting	22 Aug 2017



Outlook



Training

Description	Dates
Inland Oil Spill Course	13-17 Nov 2017
Oil Spill Course	27 Nov – 1 Dec 2017
Clean Gulf Conference	5-7 Dec 2017

Exercises/Workshops

Description	Dates
GIUE (MSU PA)	Dec 2017

Federal, state, and local planning and coordination efforts

Description	Dates
TX Statewide AC Meeting	15 Nov 2017



Sector New Orleans



Captain Wayne Arguin
Sector Commander

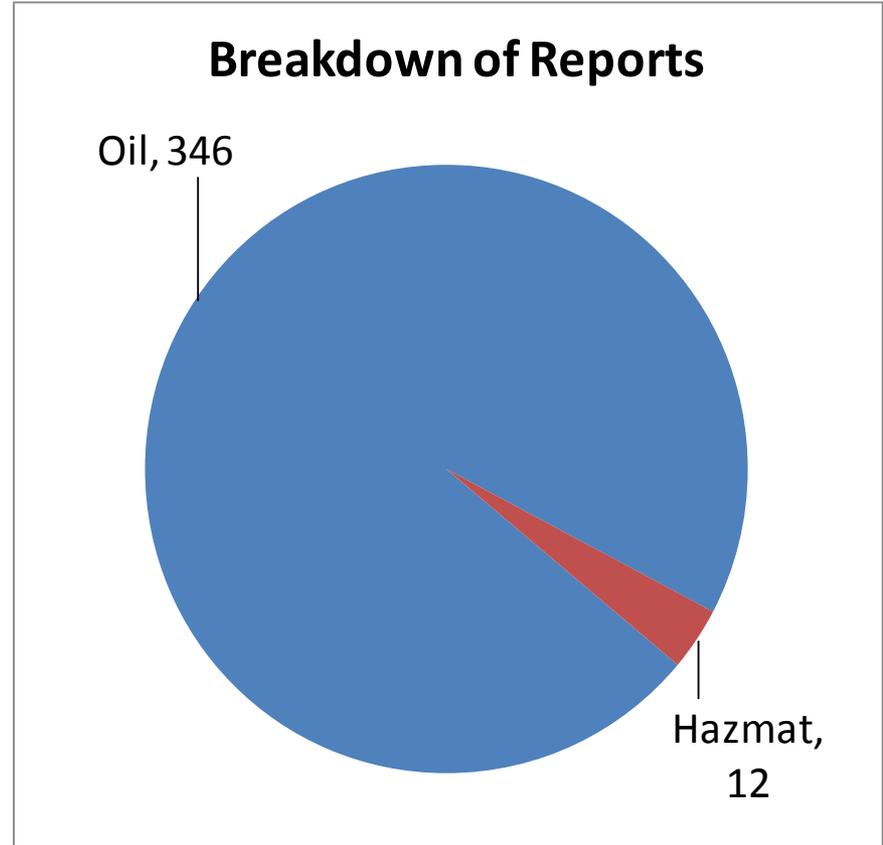


NRC Notifications	RRT Activations	Federal Projects	CERCLA Projects
358	None	3	0



NRC Notifications

- **Oil discharge:** reports up 61% since last RRT meeting (346)
- **Hazmat release:** reports since last RRT meeting (12)





RRT Activation / Notification

Date:	20 Jun 2017	Activation	N	Notification	N
Incident Name:	Lobo Tank Battery 12 discharge				
Location:	SE Louisiana/Cox Bay				
Responsible Party:	Lobo Oil				
Type and amount of product spilled:	Estimated 30 bbls of Crude				
Issue / Concern:	Occurred during T/S CINDY; Tank Battery 12 'Pit' Barge as source				
Agencies Involved:	USCG, EPA, LOSCO, and LDEQ OSRO: ES&H				
Decisions Made:	Worked w/ partners to compel owner to permanently decommission 'Pit' barge				





RRT Activation / Notification

Date:	10 Oct 2017	Activation	N	Notification	N
Incident Name:	Hilcorp Lake Grand Ecaille				
Location:	In the vicinity of Port Sulphur, LA				
Responsible Party:	Hilcorp				
Type and amount of product spilled:	Estimated 30 bbls of Crude				
Issue / Concern:	Discharge was from an out of service well; Infrastructure				
Agencies Involved:	USCG, LOSCO, LDEQ, and LDWF OSROs: CGA, ESH, OMI				
Decisions Made:	NSTR				





RRT Activation / Notification

Date:	15 Oct 17	Activation	N	Notification	N
Incident Name:	Clovelly Platform Explosion				
Location:	Lake Pontchartrain, LA				
Responsible Party:	Clovelly				
Type and amount of product spilled:	Estimated 30 bbls				
Issue / Concern:	Platform Explosion in Lake Pontchartrain, LA during maintenance; 01 deceased; ~490 bbls potential				
Agencies Involved:	USCG, EPA, LDEQ, LDNR, LDWF, Louisiana State Police, City of Kenner, and Jefferson Parish OSROs: OMI, CTEH				
Decisions Made:	NSTR				





Accomplishments



Training

Description	Dates
Clean Gulf Associates (CGA) Familiarization	31 May 2017
OSC – Crisis Management	11-16 Sep 2017
Aerial Observer Training	17 Oct 2017
Oil Spill Control	06-09 Nov 2017

Exercises/Workshops

Description	Dates
Shell WCD FSE	25-26 Jul 2017
PREP TTX - SMFF	16 Aug 2017
ExxonMobil WCD Drill	22 Sep 2017
CAMO Pipeline Workshop	11 Oct 2017
Crimson Gulf WCD TTX	11 Oct 2017
Cantium TTX	18 Oct 2017

Federal, state, and local planning and coordination efforts

Description	Dates
SELA Area Committee Meeting	19 Jul 2017
NOAA Marine Debris Workshop	24-25 Jun 2017
GOHSEP (State EOC) Hurricanes Harvey and Nate Hotwashes	17 Oct 2017
Plaquemines LEPC Meeting	25 Oct 2017



Outlook



Training

Description	Dates
NSTR	

Exercises/Workshops

NDRP TTX/FTX	Pending
Chevron Exercise	28-30 Nov 2017
Clean Gulf Conference	5-7 Dec 2017

Federal, state, and local planning and coordination efforts

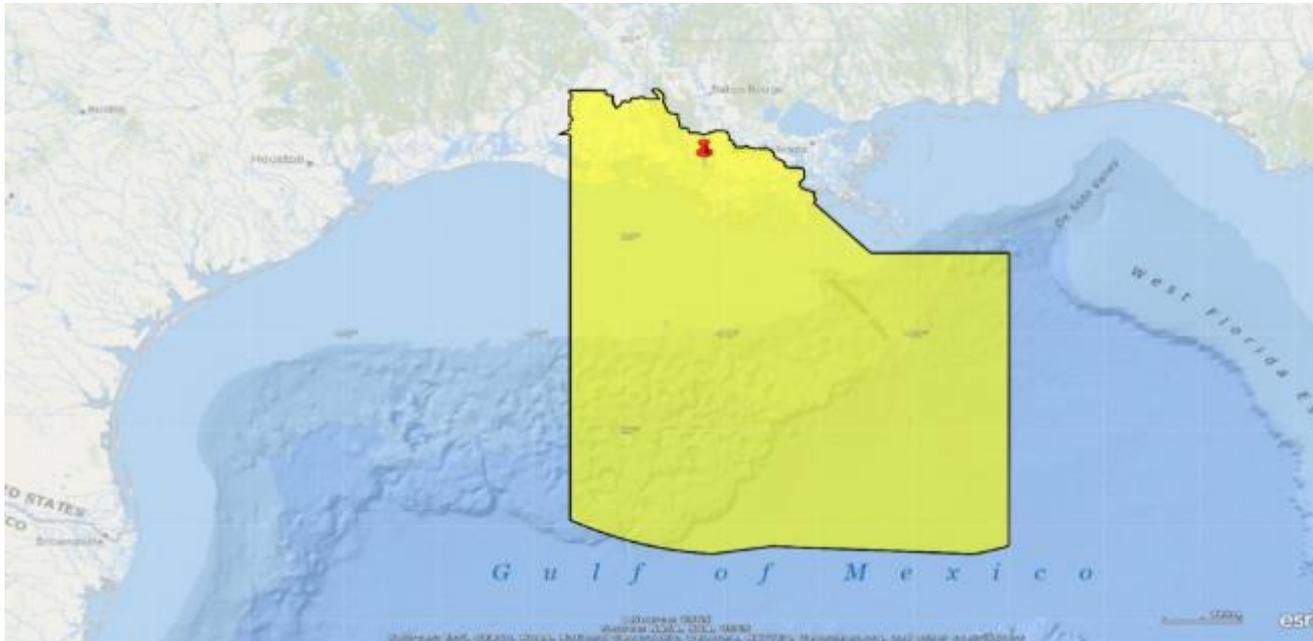
Description	Dates
Area Committee Meeting	24 Jan 2018
La Statewide AC Meeting	Apr 2018



MSU Houma

Captain Blake Welborn

MSU Commanding Officer



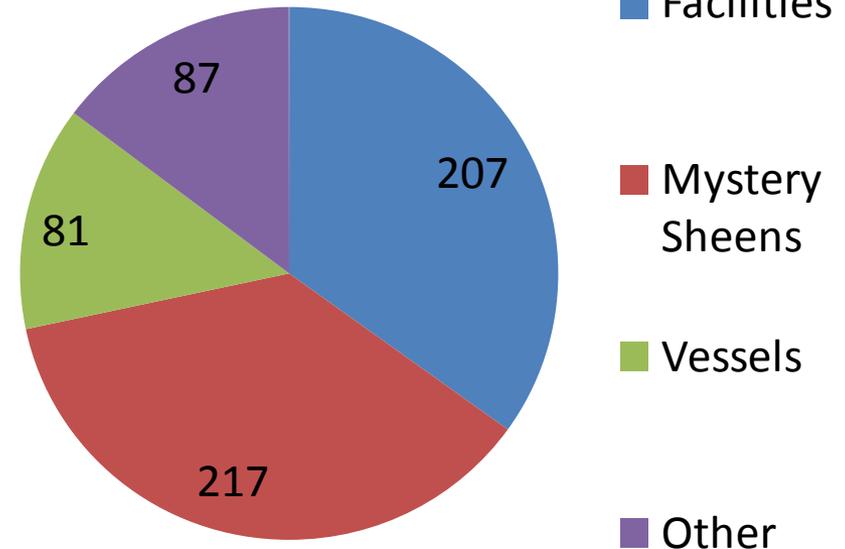
NRC Notifications	RRT Activations	Federal Projects	CERCLA Projects
592	00 Surface Washing Agents 00 In-situ Burns 00 Dispersants	05	00



NRC Notifications

- **Facility** reports up 45% since last RRT meeting (143)
- **Mystery Sheen** reports up 417% since last RRT meeting (42)
- **Vessel** reports up 56% since last RRT meeting (52)
- **Totals:** 592 reports verses 237 reported in spring 2017 represents a 150% increase.

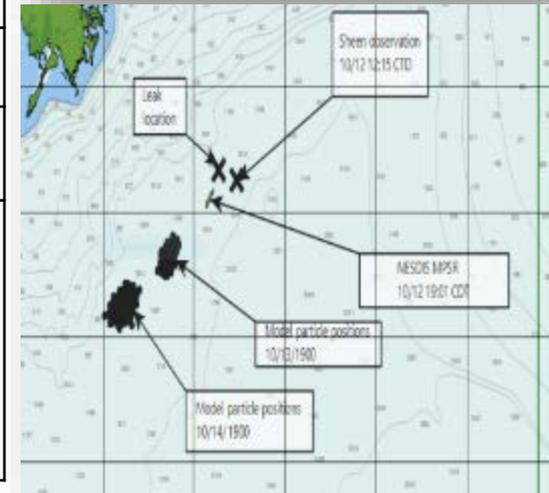
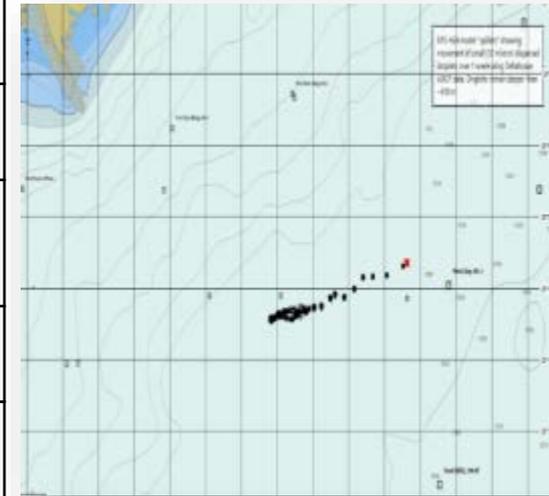
Breakdown of Reports





RRT Activation / Notification

Date:	12 Oct 2017	Activation	N	Notification	N
Incident Name:	Mississippi Canyon 209				
Location:	GOM, Mississippi Canyon 209				
Responsible Party:	LLOG Exploration L.L.C.				
Type and amount of product spilled:	Estimated 16,000 bbls of crude oil from a jumper line.				
Issue / Concern:	No visible or recoverable oil was ever located at the surface.				
Agencies Involved:	USCG, NOAA, & BSEE				
Decisions Made:	Overflights were conducted three (3) times a day for over a week and no oil was observed on the surface. NOAA SSC worked with LLOG to determined subsea trajectories. Due to the depth of the spill and location of the crack it was determined that no recoverable oil would be found at the surface.				





Accomplishments



Training

Description	Dates
NOAA Aerial Observer	02 Aug 2017

Exercises/Workshops

Description	Dates
Joint GIUE with EPA	11 Jul 2017
Stone Energy ISRRT for Sub-sea dispersants	02 Aug 2017
Joint GIUE with State Partners.	07 Sep 2017
GIUE	24 Oct 2017

Federal, state, and local planning and coordination efforts

Description	Dates
Area Committee Houma, LA	01 Aug 2017



Outlook



Training

Description	Dates
Spill Response Course	28 Nov – 01 Dec 2017
NOAA SCAT	Spring 2018

Exercises/Workshops

Description	Dates
Chevron	29-30 Nov 2017
Clean Gulf Conference	5-7 Dec 2017
GIUE	Feb 2018

Federal, state, and local planning and coordination efforts

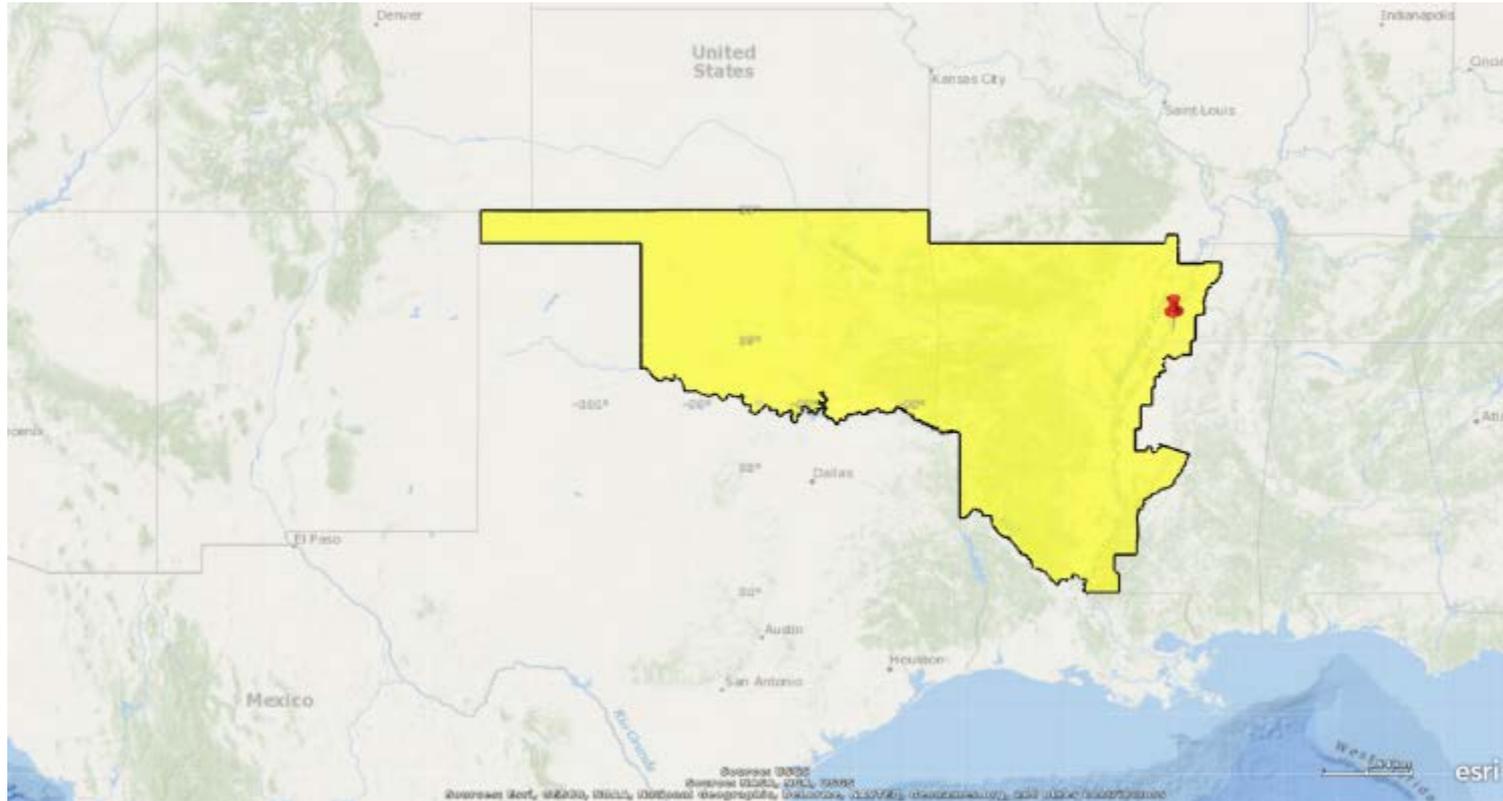
Description	Dates
Area Committee Meeting	TBD
La Statewide AC Meeting	Apr 2018



Sector Lower Mississippi River



Captain Roxanne Tamez
Sector Commander

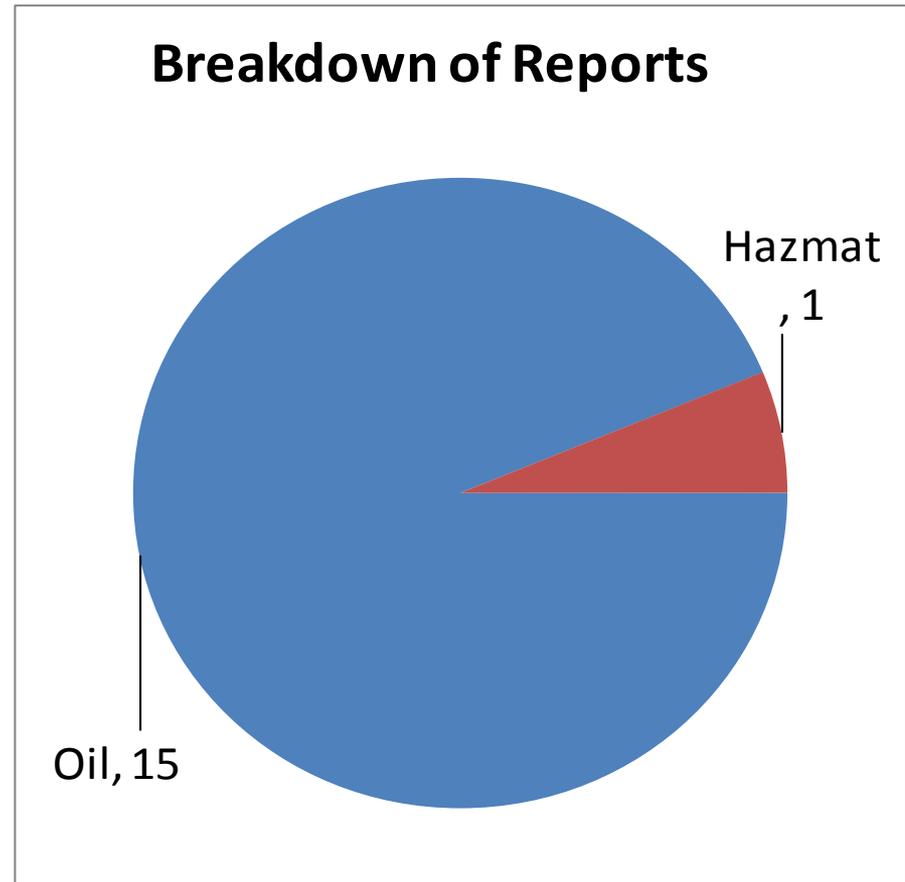


NRC Notifications	RRT Activations	Federal Projects	CERCLA Projects
16	00	00	00



NRC Notifications

- **Oil discharge:** reports up 26% since last RRT meeting (11)
- **Hazmat release:** reports down 100% since last RRT meeting (2)





Accomplishments



Training

Description	Dates
Clean Waterways Conference	27-28 Jun 2017
Oil Spill Control School	30 Jul - 04 Aug 2017

Exercises/Workshops

Description	Dates
GIUE: TransMontaigne	06 Jul 2017
Valero OPA 90 Drill	04 Oct 2017
Valero Hydrofluoric Acid HAZMAT Exercise	24 Oct 2017
Preventative Radiological / Nuclear Detection Drill	24 Oct 2017

Federal, state, and local planning and coordination efforts

Description	Dates
RRT6	10-12 May 2017
Preparedness Assist Visit – First Response (OSRO)	16 Jun 2017



Outlook



Training

Description	Dates
Transcaer Rail Safety and Hazmat Emergency Response Training	06 Nov 2017

Exercises/Workshops

Description	Dates
Mass Rescue Exercise	08 Nov 2017
GIUE	Nov 2017
Vertex Chemical Exercise	11 Dec 2017

Federal, state, and local planning and coordination efforts

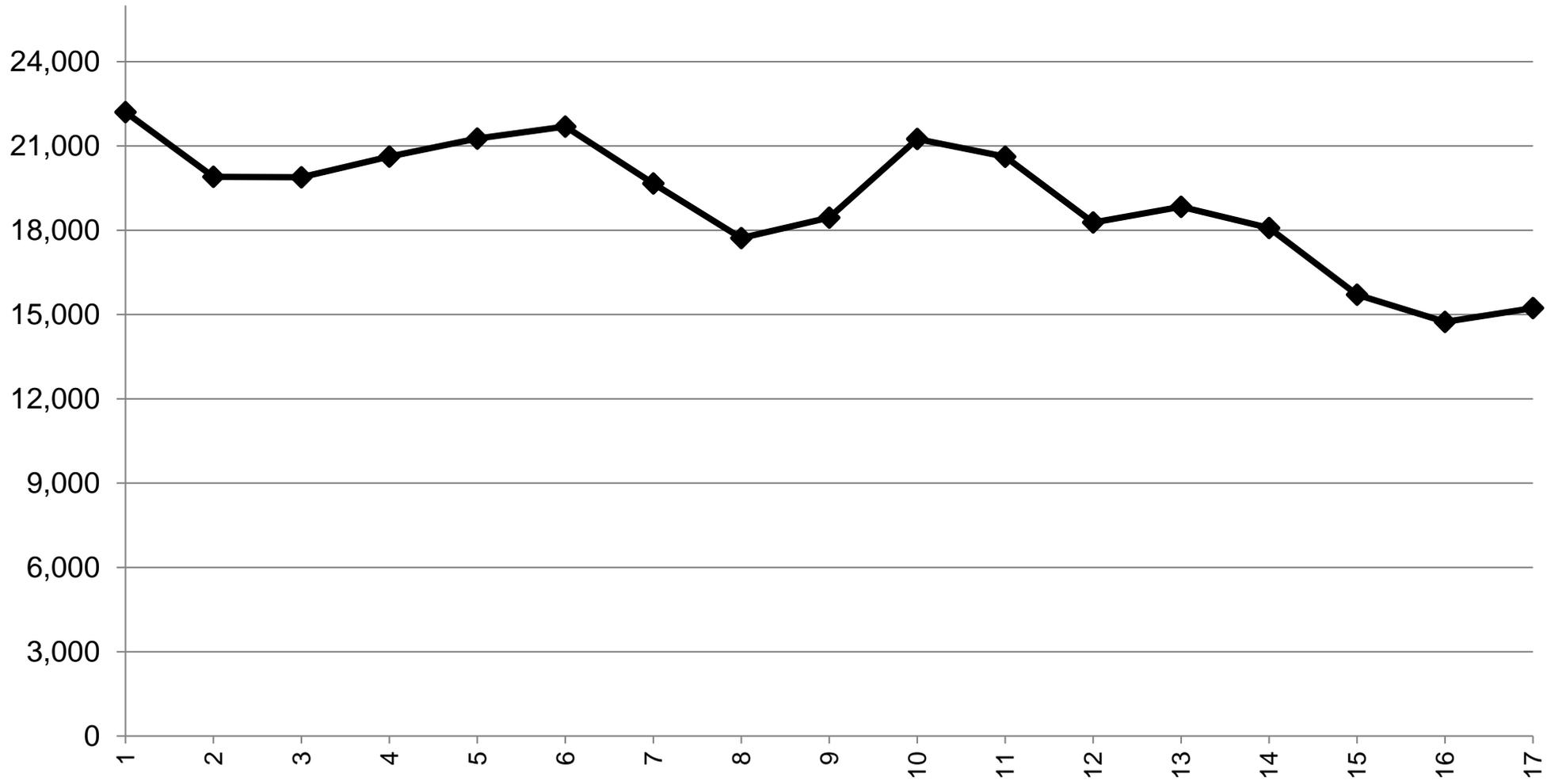
Description	Dates
Super Bowl LII	25 Jan – 05 Feb 2018
RRT7	27-28 Mar 2018
Clean Waterways Conf.	4-5 Apr 2018



EPA National Accidental Release Information:

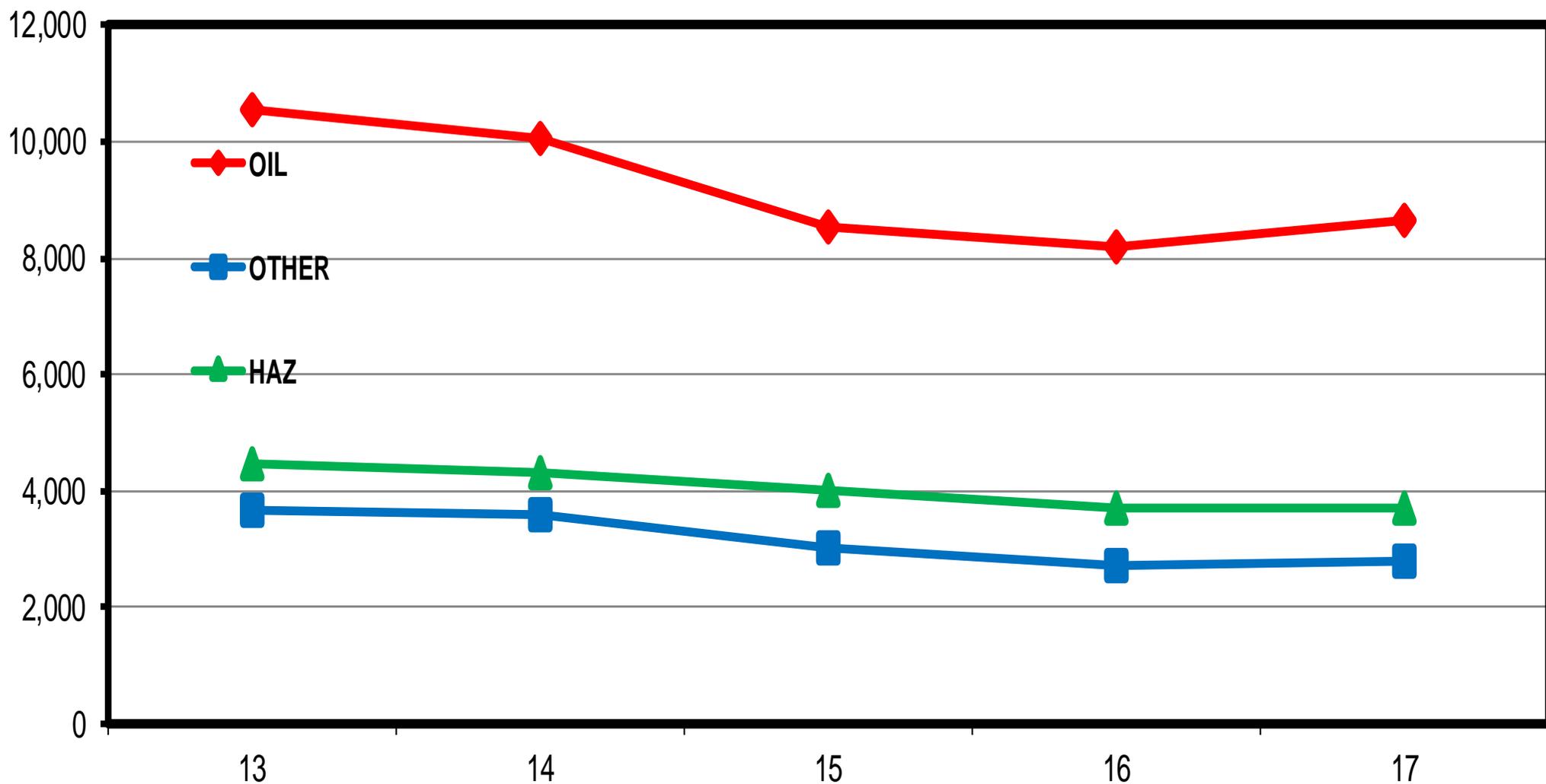
FY 2013 - 2017

Over Thirty Years of Collecting Release / Spill Information



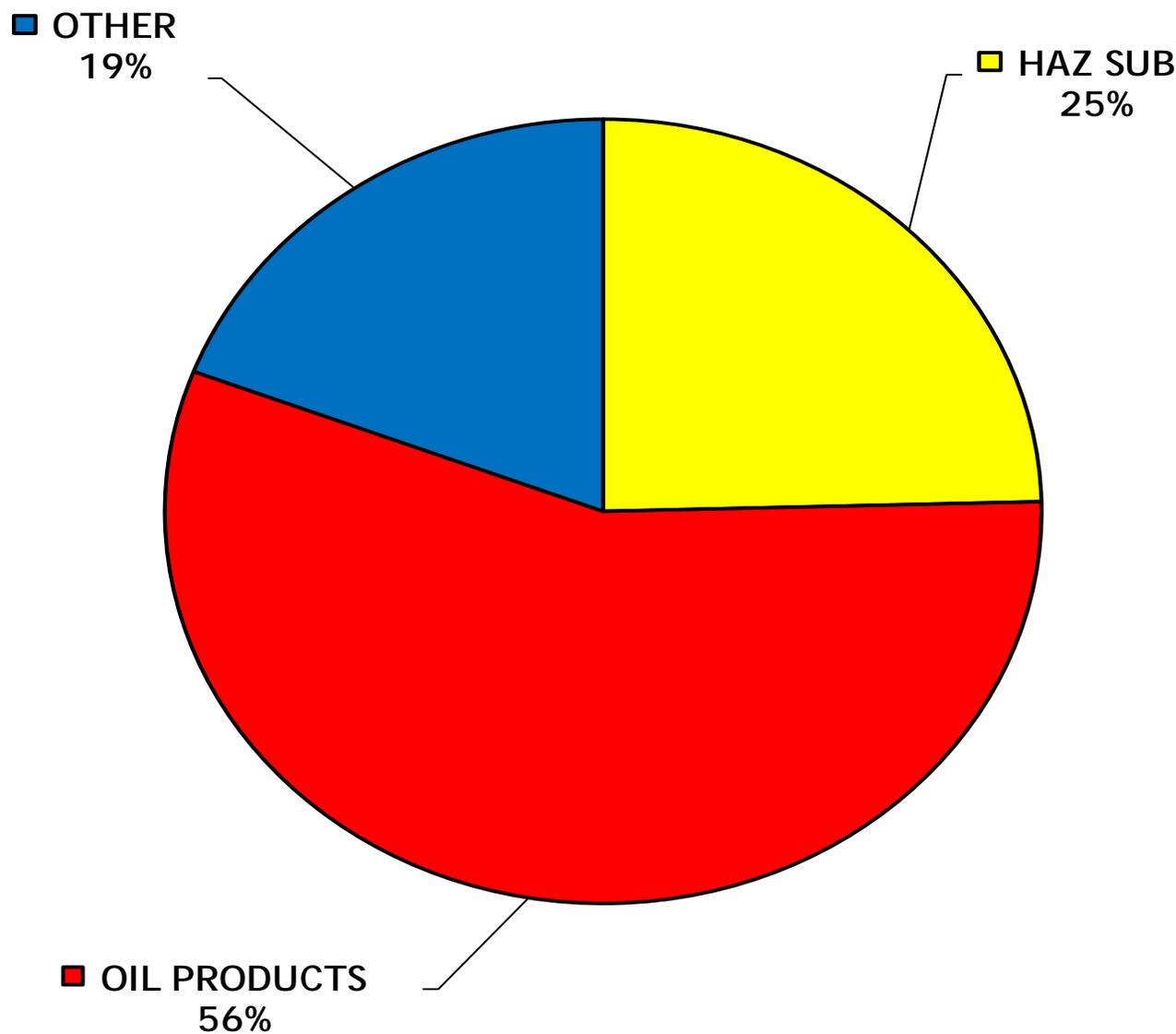
2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
22,203	19,900	19,884	20,620	21,263	21,688	19,663	17,721	18,449	21,247

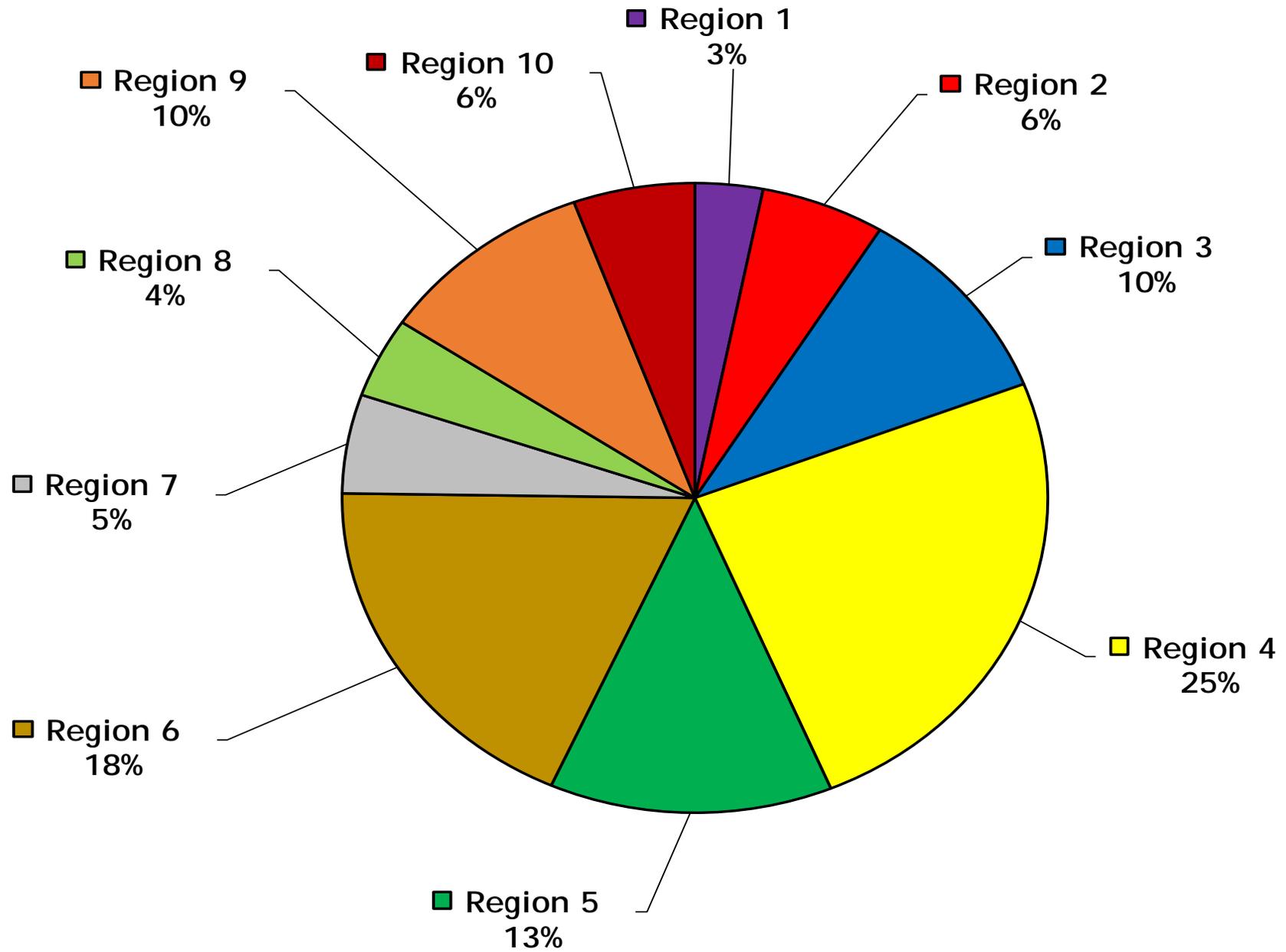
2011	2012	2013	2014	2015	2016	2017
20,617	18,275	18,834	18,080	15,705	14,738	15,229

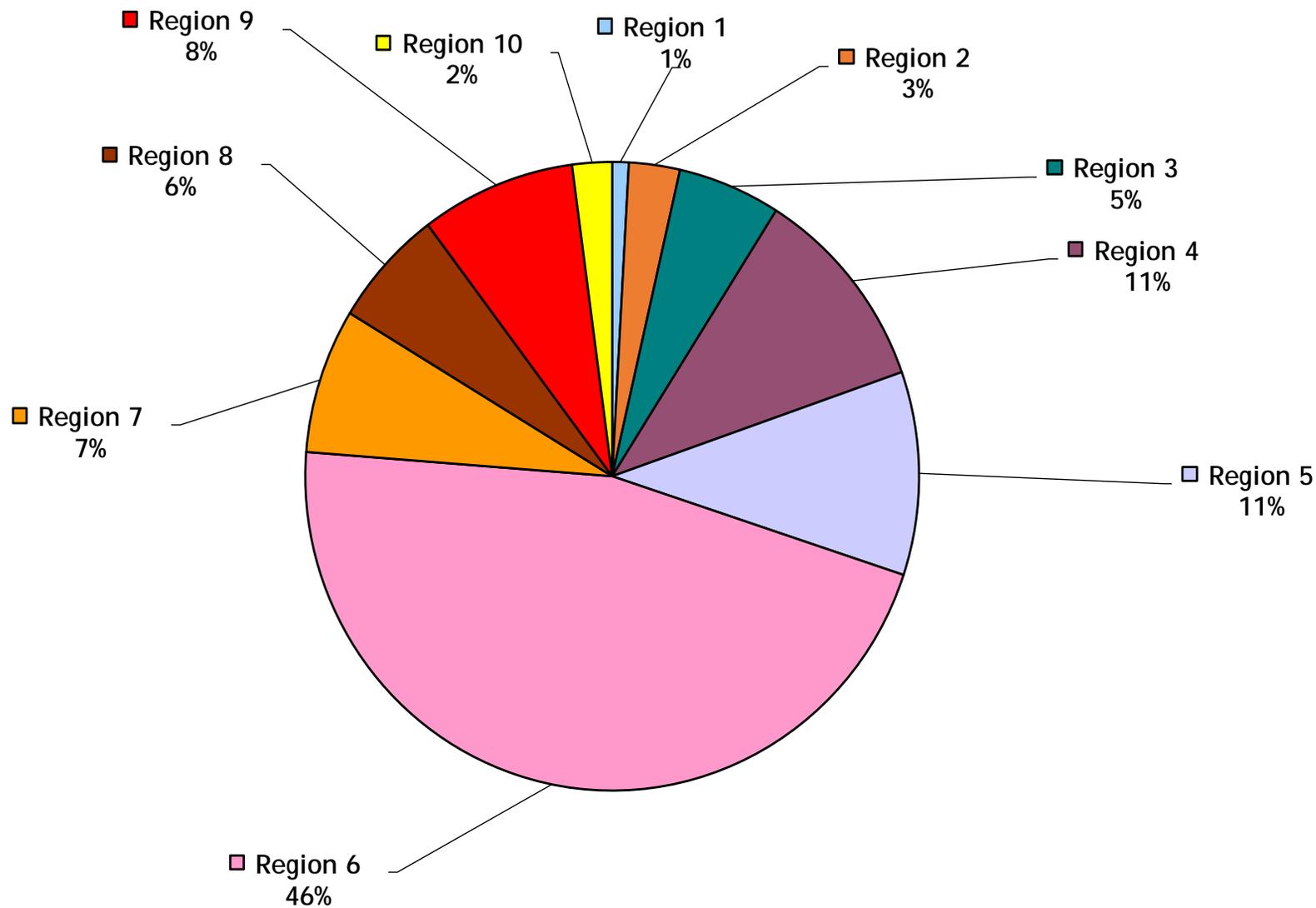


	FY13	FY14	FY15	FY16	FY17
Oil/Oil Products	10,566	10,045	8,550	8,201	8,665
Other	3,652	3,570	2,998	2,717	2,787
Hazardous Substances	4,450	4,314	4,006	3,702	3,683

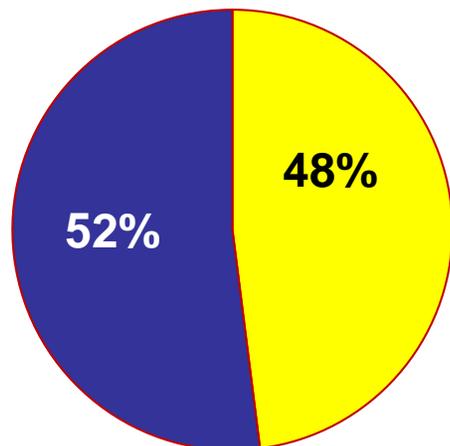
HAZ SUB: CERCLA Hazardous Substances



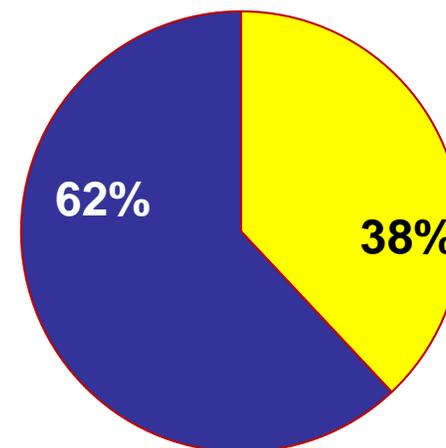




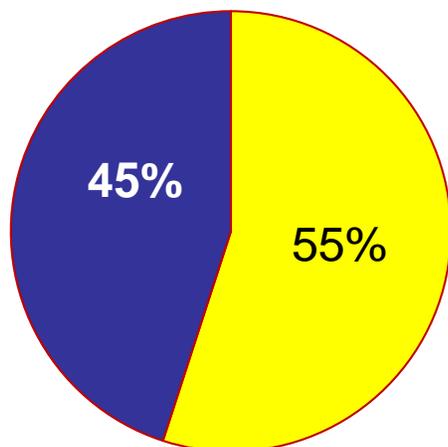
Hazardous Materials



Other



Oil / Oil Products



Known

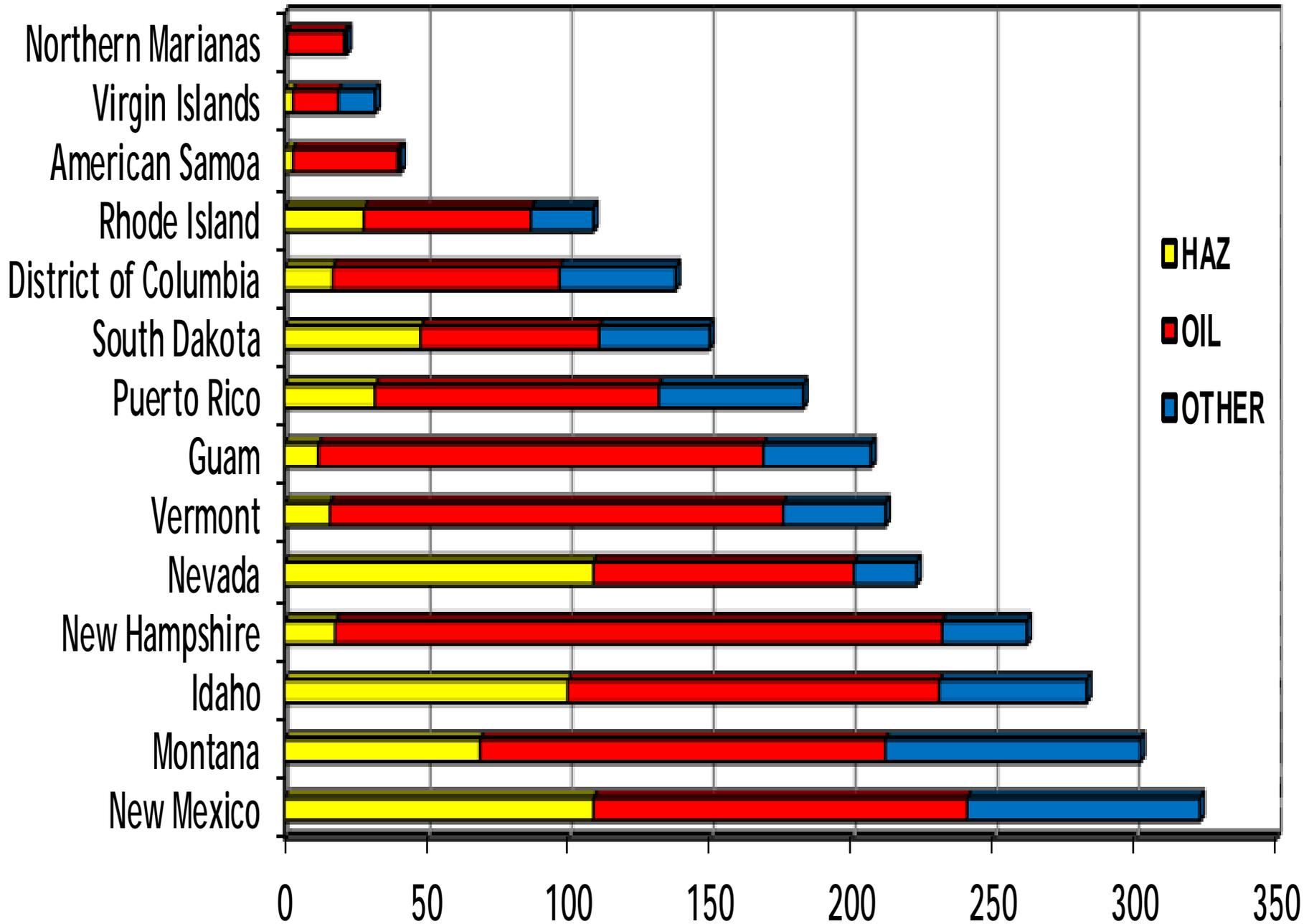


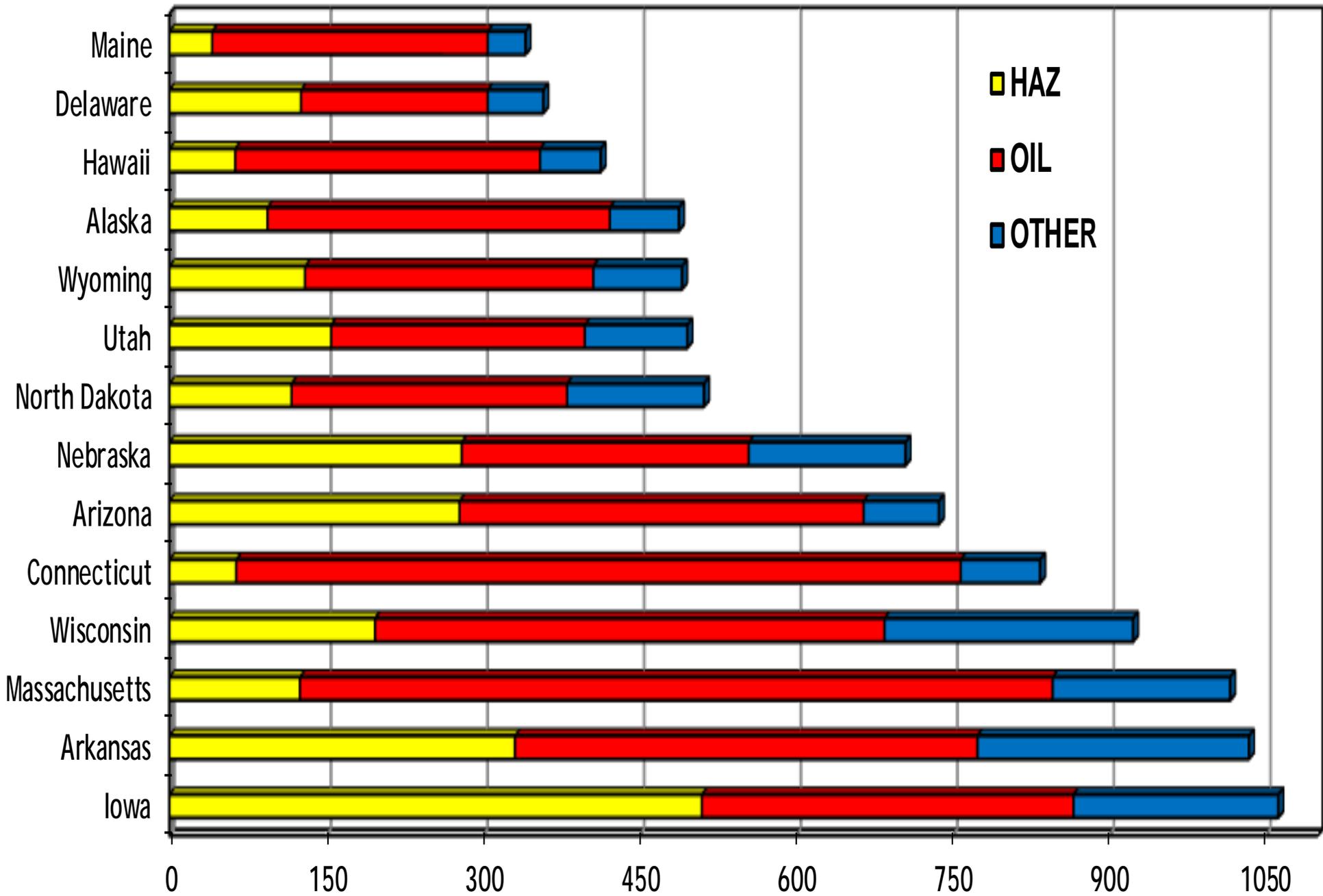
Unknown

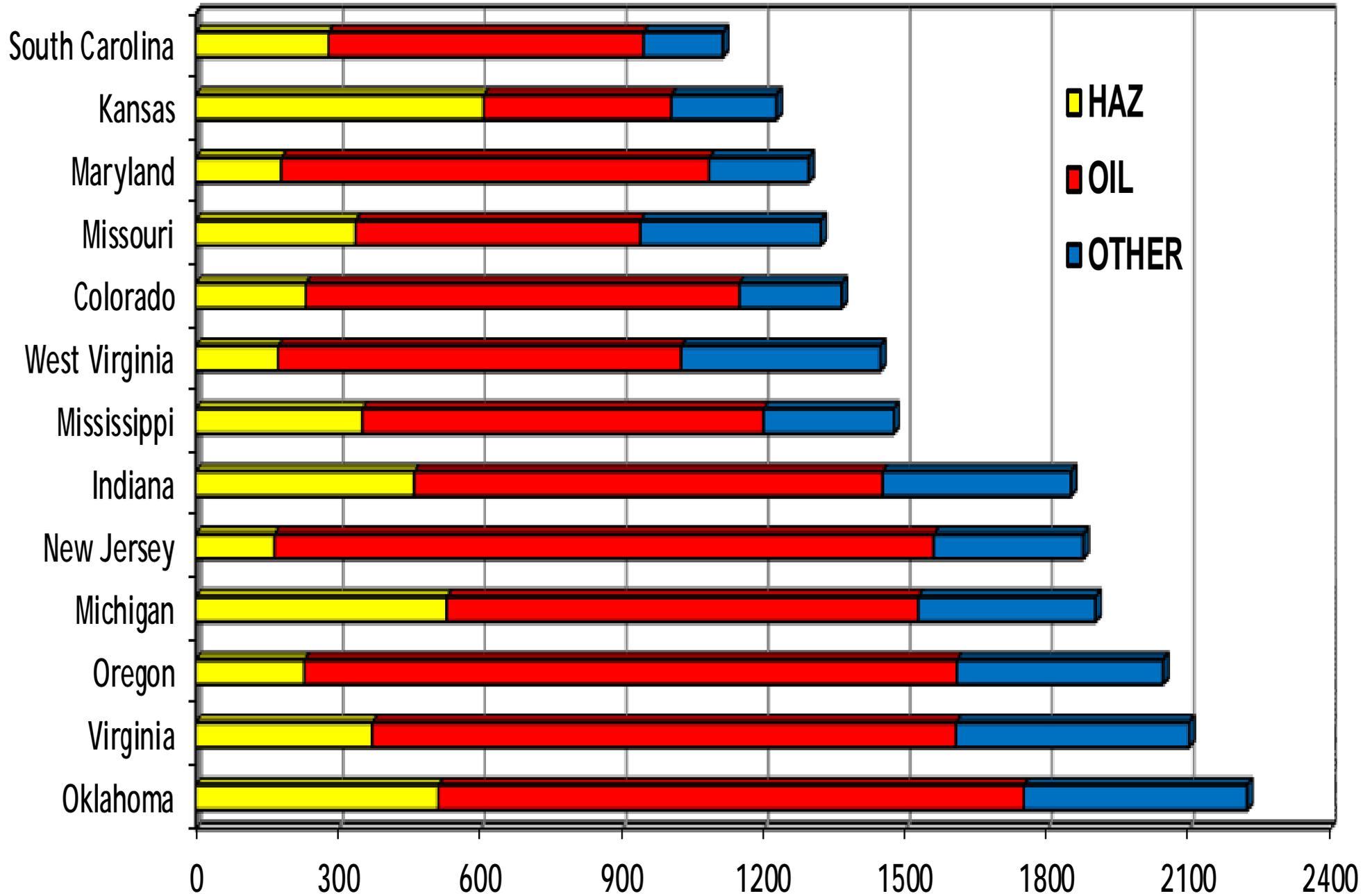
Since 2013, approximately 7.6% of all release reports involved a significant event (death, injury, community evacuation, evacuation of a facility, shelter-in-place)

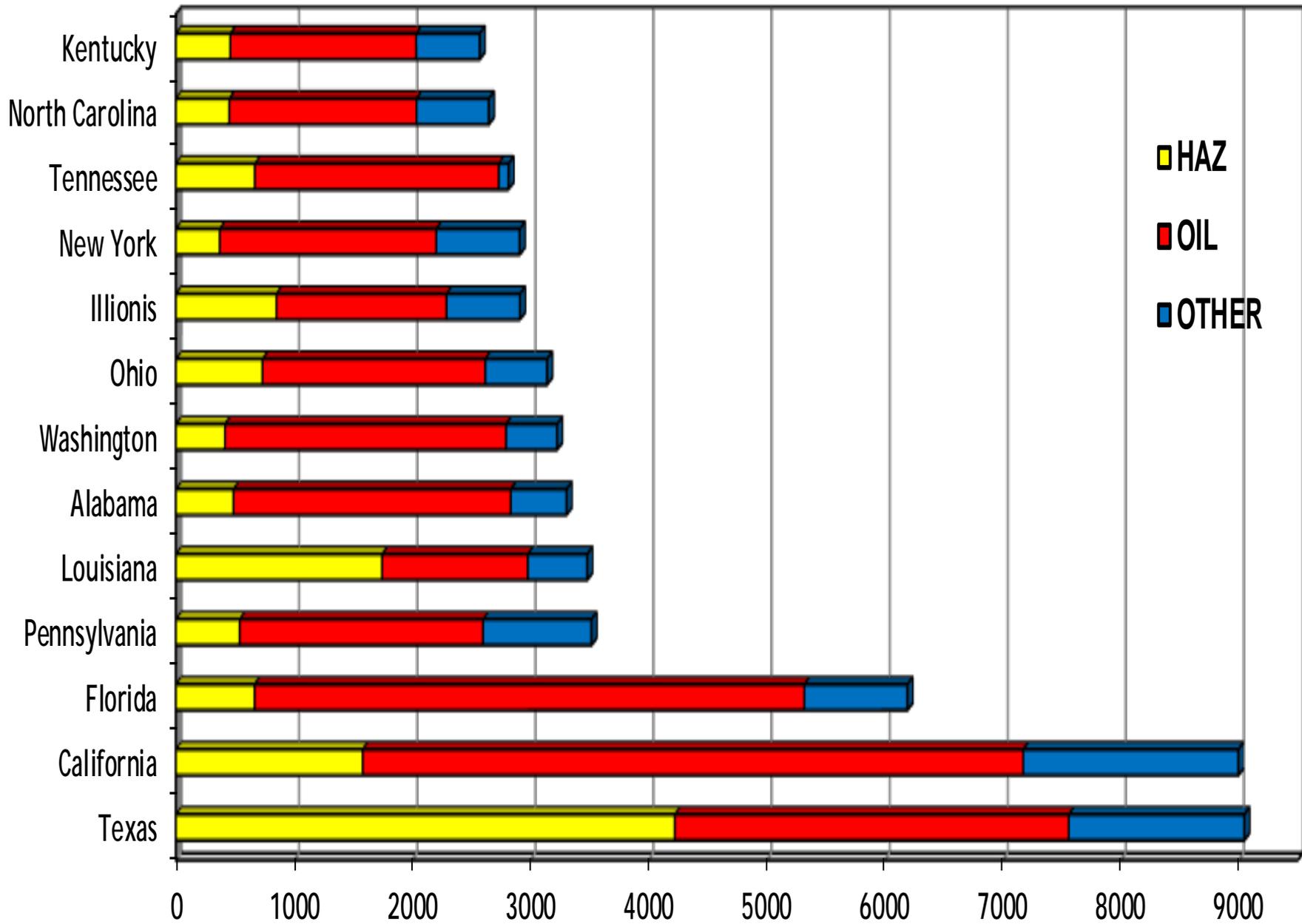
Deaths, injuries, and evacuations may not be directly due to exposure, but as a consequence of the accident resulting in the release

Since 2013, statistically there is approximately eight (8) shelter-in-places or evacuations of a community (whole or part) or of a facility due to a hazardous substance, oil, or other material incident somewhere, on a weekly basis

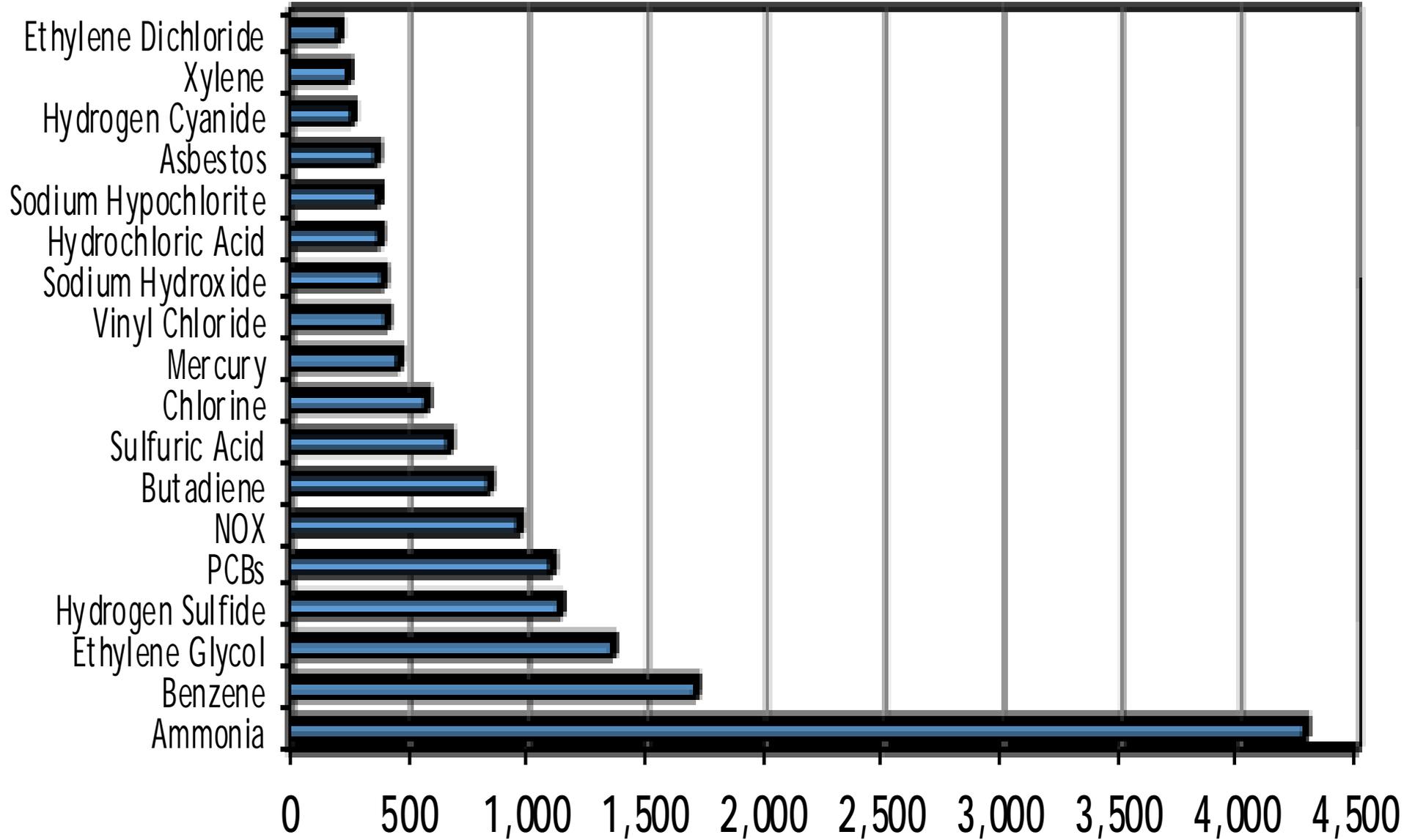




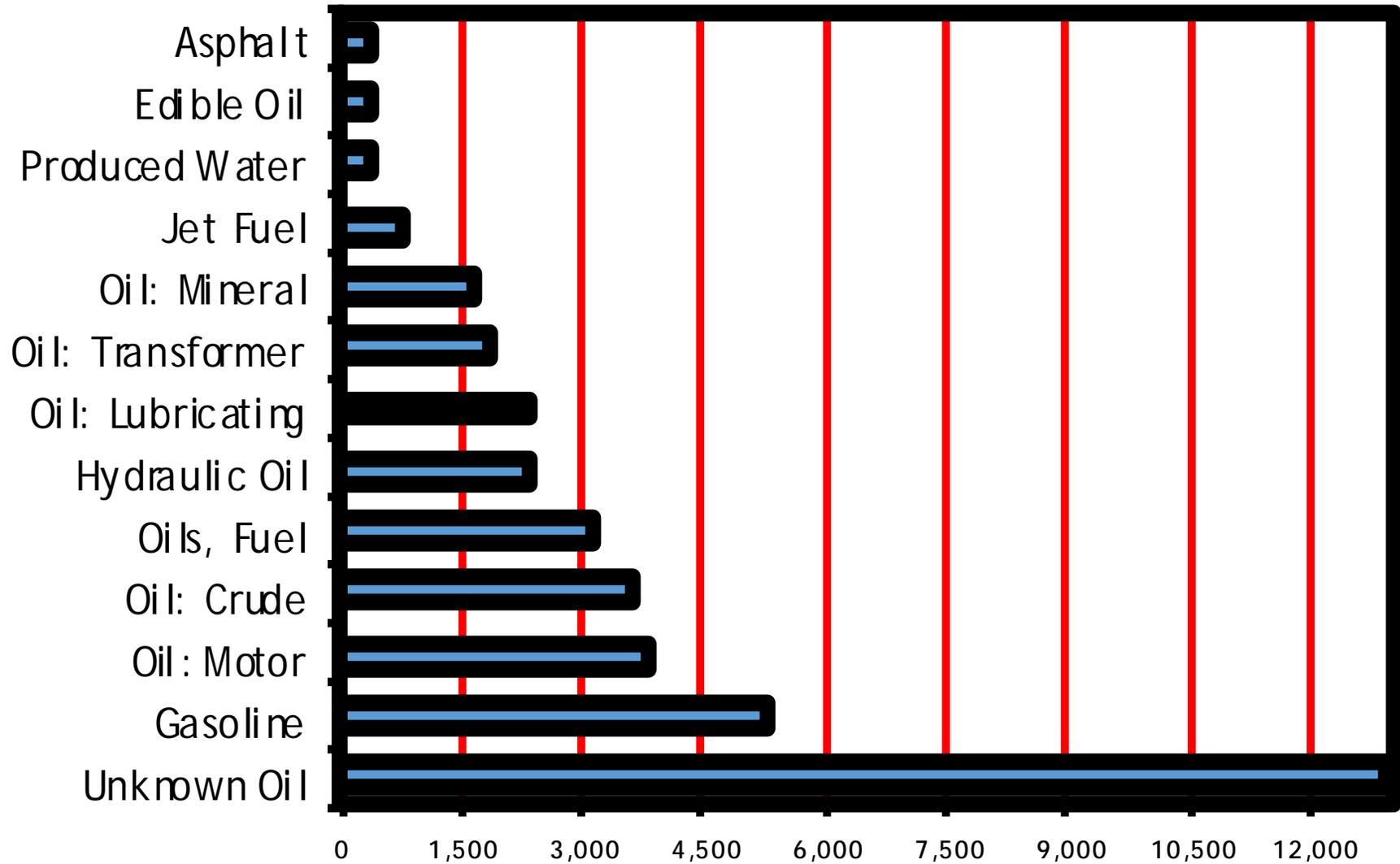




The substances listed below account for 56 % of all hazardous substance release reports nationally since 2012



The oil / oil products listed below account for 88 % of all oil / oil product releases nationally since 2012



The materials listed below account for 90 % of all other material releases nationally since 2012

