



Why Do We Need Resource Advisors and Roles and Responsibilities of the Resource Advisor

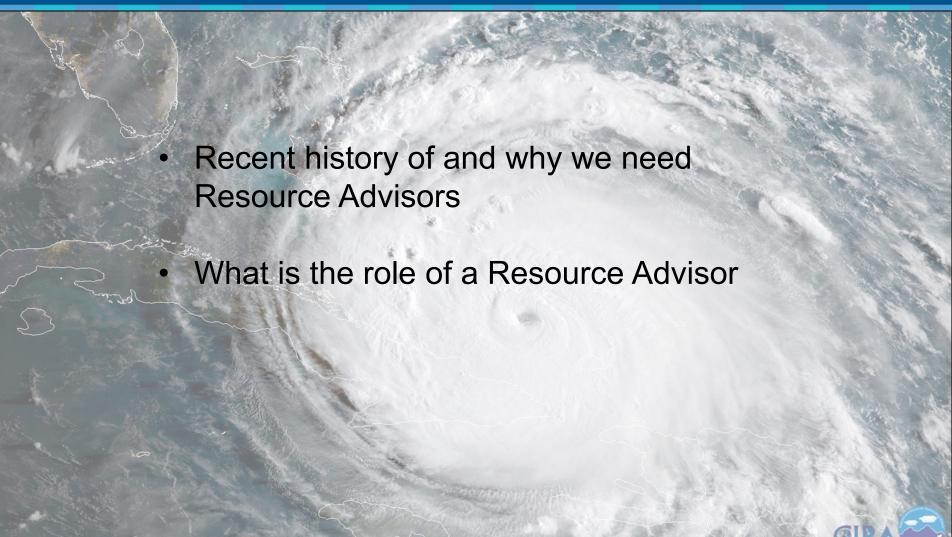
Southeast Resource Advisor Training

August 30 and 31, 2021

Steve Werndli, FKNMS Enforcement Coordinator

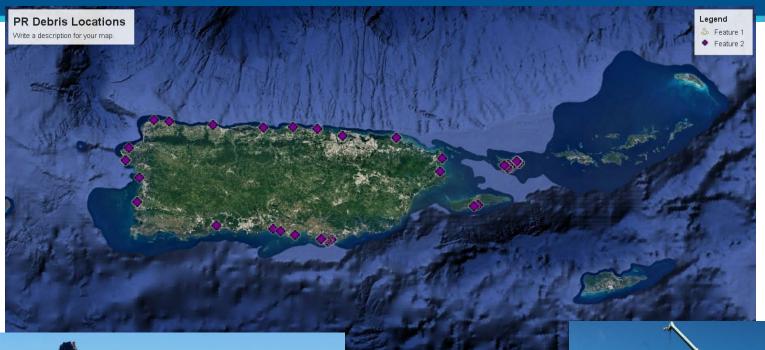
Summary





Resource Advisor Program







Emergency Support Function 10 (ESF-10)



Mission is to mitigate pollution threats from vessels displaced by storms

- Unified Command
 - United States Coast Guard
 - Environmental Protection Agency (dependent on type of debris and location)
 - State Resource Management Agency



ESF-10 Environmental Unit



10 November 2017.v4

REGULATORY REQUIREMENTS AND BEST MANAGEMENT PRACTICES (BMPs) HURRICANE IRMA USCG ESF-10 RESPONSE FLORIDA

Avoid and minimize disturbance to all wildlife and fisheries species and their habitats including: nesting and migratory birds (seabirds, shorebirds,

Avoid and minimize disturbance to sensitive shoreline and benthic habitats including: mangroves, salt marshes, beaches, tidal flats, natural rocky

wading birds, etc.), marine mammals, land mammals, marine and coastal reptiles, fish, shellfish, and other marine and coastal invertebrates.

Sensitive Habitats, Wildlife, and Fisheries Resources

shorelines, seagrasses, hard-bottom reefs, coral reefs, and oyster beds.

Miccosukee Tribe of Indians of Florida - additional guidance may be forthcoming.

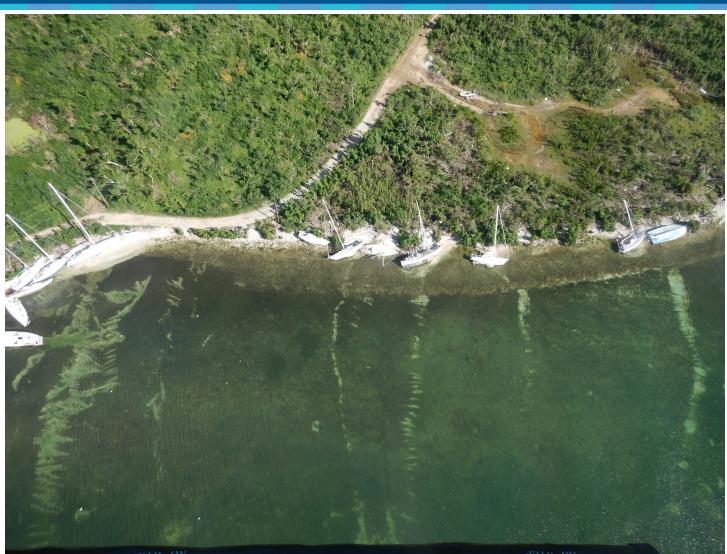
JSACE	Section 404 Clean Water Act and Section 10 Rivers and Harbors Act Permits
	No significant disturbance of sediment required for the removal of debris or vessels (permit required otherwise, contact the Environmental Unit/EU).
lorida	DEP Environmental Resource Permitting
	No filling of wetlands or other surface waters, or dredging that creates or expands surface waters (permit required otherwise, contact EU). All material
	removed must be deposited on self-contained uplands and managed in accordance with FDEP rules or provisions of the current Emergency Order.
Man	groves:
	Incidental trimming or alteration of mangroves may occur to perform vessel removal and pollution recovery activities associated with ESF-10 FL
	operations. No separate authorization pursuant to Sections 403.9321-403.9333, Florida Statutes (Mangrove Trimming and Preservation Act) is required.
	All operations shall be conducted in accordance with the FDEP Emergency Field Authorization #0358553-001-EE and Job-Aid for Hurricane Irma ESF-10
	Vessel Removal Operations in Mangroves and Adjacent to Sensitive Shallow Habitats.
	Consult with the EU and/or NRA to assist with vessel removal operations from mangroves as needed.
AAO	Florida Keys National Marine Sanctuary General Permit
	All above and below resource protection requirements and BMPs apply.
	All materials associated with the response must be removed from the seafloor within 15 days of the completion of operations.
lorida	sHPO Section 106 National Historic Preservation Act
	Cease all activities involving subsurface disturbance, and immediately contact the EU, if prehistoric/historic artifacts, such as pottery or ceramics,
	projectile points, dugout canoes, metal implements, historic building materials, or any other physical remains that could be associated with Native
	American, early European, or American settlement are encountered at any time (and leave all artifacts in place). Response activities shall not resume
	without verbal and/or written authorization. In the event that unmarked human remains are encountered during response activities, stop all work
	immediately and report to the Unified Command (UC) and EU through your chain of command.
	Contact the EU prior to conducting any removal or recovery efforts that require substantial ground disturbance beyond the initial disturbance caused by
	the disaster event (additional SHPO coordination required).
Tribal (Coordination
	Seminole Tribe of Florida – the same BMPs above from the Florida SHPO apply for the Seminole Tribe of Florida's THPO (coordinate with both).
	Seminole Nation of Oklahoma – no recommendations/concerns.

Environmental Unit

- Identify resources at risk
- Conduct required consultations
- Develop Best Management Practices

Special Places





Irma ESF-10 Florida Environmental Unit



Environmental Unit

- Guidelines for removal operations in sensitive shallow habitats
- Guidelines for removal operations in mangrove areas
- Obtain field authorizations for removal activities exceeding established thresholds
- Develop the Resource Advisor Program



Resource Advisors



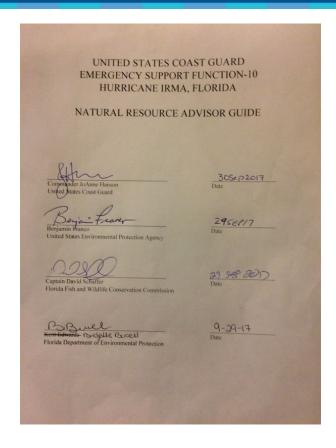


Irma ESF-10 Florida Resource Advisor Program



Environmental Unit - Resource Advisor (RA) Program

- Established operating procedures for RA
- Address RA safety
- Create Job-Aids
- Provide training



What Is A Resource Advisor



Provide guidance that supports the response, while considering impacts to sensitive to natural, cultural, and other resources.

- Communicate specialized resource management knowledge to response personnel in dynamic and often fluid situations (not science speak).
- Perform the same or similar duties as your regular job, but in the incident response environment.
- Function as a generalist when not an expert on a topic. It is essential that you
 are able to provide input on resources outside your area of expertise by
 contacting SMEs, rapidly investigating a topic, or ordering the necessary
 personnel.
- Ability to work in a challenging environment (weather extremes, potentially hazardous assignments, remote locations).





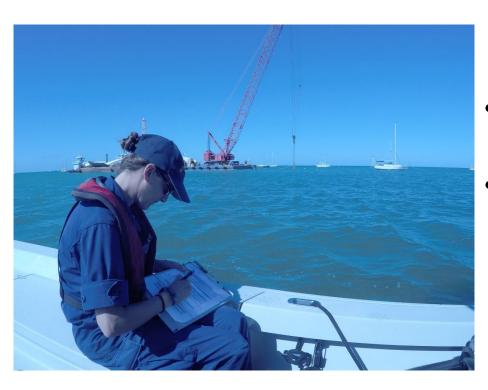
- Provide professional knowledge and expertise for protecting natural and cultural resources.
- Provide recommendations during planning for operations.
- Coordinate with local specialists to identify potential impacts.
- Identify potential resource issues that may occur.





- Provide real-time field recommendations.
- Interpret Best Management Practices (BMP) and their application.
- Identify tactical approaches to minimize impacts.
- Anticipate resource impacts as operations evolve.





- Monitor and document the implementation of BMPs.
- Document potential and actual resource impacts and the rationale for unavoidable impacts.



- The Resource Advisor role is to provide high quality, concise and consistent guidance that supports incident response operations, while considering impacts to sensitive to natural, cultural, and other resources.
- Although protection of resources is a priority, when that cannot be fully accomplished, the Resource Advisor should make recommendations to reduce and minimize those impacts, especially within the context of the established BMPs.
- The Resource Advisor documents the actions taken, including the implementation of BMPs and the avoidance and minimization of resource impacts.
- If Resource Advisors observe significant resource impacts or a failure to follow and implement BMPs, they are to contact the Resource Advisor Leader immediately.

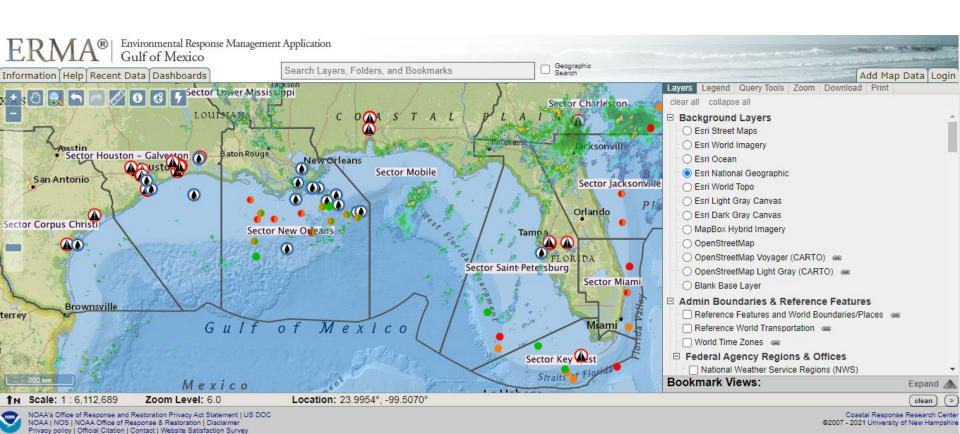
The Resource Advisor is an <u>advisor</u>, not the decision maker.

Poll Question: Following Best Management Practices, Yes or No?







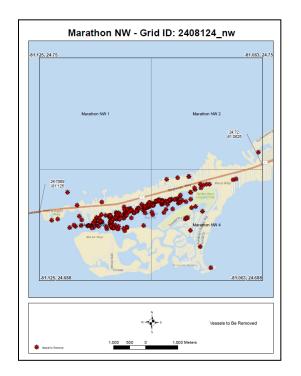


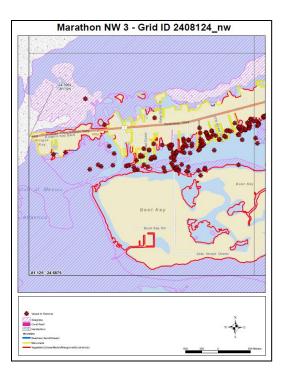




KW - Middle Keys (Lower Matecumbe Key to Marathon Key) 10/4/2017

Assessment and Removal Grid Packages

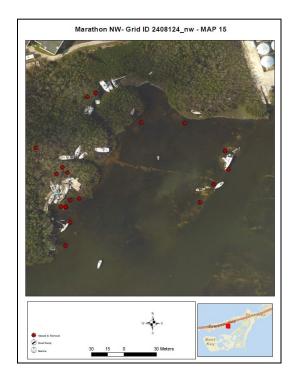








Assessment and Removal Grid Packages



Resources at Risk:

Grid ID: Marathon NW (2408124_nw)

T&E Species (FE = Federally endangered, FT = Federally threatened, SE = Florida State endangered, ST = Florida State threatened):

Birds: Black Skimmer (ST), Florida Burrowing Owl (ST), Least Tern (ST)

Fish: Key silverside (ST), Smalltooth sawfish (FE), Nassau grouper (FT)

Plants: Garber's spurge (FT, SE)

Terrestrial Invertebrates: None

Marine Mammals: West Indian manatee (FT)

Reptiles: Green sea turtle (FT), Hawksbill sea turtle (FE), Kemp's ridley sea turtle (FE), Leatherback sea turtle (FE), Loggerhead sea turtle (FT)

Terrestrial Mammals: None

Corals: Elkhorn coral (FT), Staghorn coral (FT)

itical Habitat:

- Elkhorn and staghorn corals Nearshore Atlantic waters
 Loggerhead sea turtle Atlantic waters
- V--- 5h ---- 1h --- 14------ 5--- 5---

Key Shoreline: Mangroves, Salt marshes

Benthic: Seagrass, Hardbottom

Management Areas:

Florida Keys National Marine Sanctuary

Best Management Practices (BMPs) For Field Assessments (see attached checklist): Sensitive Shoreline Habitats

Mangroves - avoid or minimize disturbance to mangrove habitats.

Salt marsh – avoid or minimize disturbance to salt marsh habitats.

Sand beaches – be aware of potential sea turtle nesting on the supratidal portions of beaches (upper drier portion of beaches, above normal high tide line); avoid disturbing marked nests, eggs, and hatchlings. Be aware of the potential for unmarked nests.

Sensitive Benthic Habitats

Seagrasses – avoid or minimize disturbance of seagrass habitats.

Hardbottom - avoid or minimize disturbance of hardbottom habitats.

4. Prepared by: (Deputy Planning Section Chief)

LT Joshua Weidman

Critical Information Requirements



Incident Name IRMA ESF-10 Florida	Operational Period (Date/Time) From: 01 NOV 17 0800 To: 03 NOV 17 0800	Critical Information Requirements ICS 202B	
3. Critical Information Requirements: mmediately notify UC of: Loss in accountability of personnel. Fatalities and/or injuries beyond first aid. Discovery of remains within Branch oper Conditions that warrant suspension of or		n warrant s	suspension of operations.
Environmental resource damages resulti Any release or discharge resulting from	 Environmental 	resource	damages resulting from response actions.
Wildlife impacts resulting from response Cultural/historical/tribal impacts and/or c Vessel removed from a marina or private	- Any release or	discharge	resulting from response actions.
Natural Resource Advisor (NRA) concern Proposals to alter work hours at any Braz Requests for information or stated conce	- Wildlife impac	s resulting	from response actions.
Interactions between the public and responses of MA ceiling.	- Cultural/histor	ical/tribal i	mpacts and/or concerns.
Commercial purchases greater than \$10K PRFAs greater than \$25K. BOAs greater than \$50K.	- Vessel remove	d from a m	arina or private dock.
	 Natural Resour 	rce Adviso	(NRA) concerns over Best Management Practices (BM

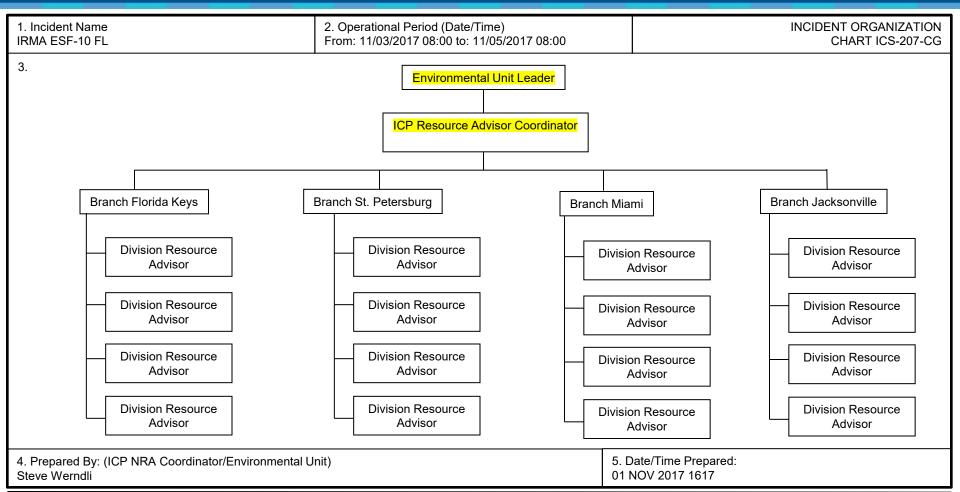
Date/Time

31 OCT 17 0700

ICS 202B (rev 07/2012)

Where Do Resource Advisors Work





INCIDENT ORGANIZATION CHART ICS-207-CG (Rev. 01/07)

Where Do Resource Advisors Work





Where Do Resource Advisors Work





How Do Resource Advisors Report To Work



Affiliation	Contact # (s)
USCG	(609) 694-4881
0000	[003 034-406
USCG	(251) 425-2348
	12011 720-2070
USCG	(267) 221-6468
1122	
USCG	(410) 375-1523
	Affiliation USCG USCG USCG USCG

			al. POG: Matt Guiver (321) 462-7970
- Ensure FWC Officer and, if required, a	in NRA representative are presen	t during removal operation	ens.
 Ensure FWC Officer authorizes all rem 	loval operations in or near marine	s and document direction	on ICS 214.
 Monitor progress of all ESF-10 vessel Review and implement the resource present 	removal operations.	s and BMPs and coordin	ale with NRA POCe
The state of the s	regulatory resignation	and DMF sand Cooldin	ale WILLIAM POCS.
8. Special Instructions			
s. Special instructions			
Definition of Terms:			
Recovery: Refers to the removal of police	ition hazards from a vessel which	may include: oil, gas, ba	itteries, and any other items found on the vessel
that could present an environmental haz	eard.		
Removal: Refers to the recovery of polls	tants and the physical removal of	the vessel from the water	er and/or placement in an EWC consequed
Removal: Refers to the recovery of pollustaging or disposal area.	stants and the physical removal of	f the vessel from the water	er and/or placement in an FWC approved
Removal: Refers to the recovery of pollustaging or disposal area.	stants and the physical removal of	f the vessel from the water	er and/or placement in an FWC approved
staging or disposal area.			er and/or placement in an FWC approved
Removal: Refers to the recovery of pollustaging or disposal area. 9. Communications (radio and/or pho			er and/or placement in an FWC approved
staging or disposal area.			er and/or placement in an FWC approved
staging or disposal area. 9. Communications (radio and/or pho	ne contact numbers needed for		er and/or placement in an FWC approved
staging or disposal area. 9. Communications (radio and/or pho Assignment	ne contact numbers needed for Phone		er and/or placement in an FWC approved
9. Communications (radio and/or pho Assignment ESF-10 Safety Officer	ne contact numbers needed for <u>Phone</u> (251) 366-1450		er and/or placement in an FWC approved
staging or disposal area. 9. Communications (radio and/or pho Assignment ESF-10 Safety Officer ESF-10 Operations Section Desk	Phone (251) 366-1450 (305) 371-4295		er and/or placement in an FWC approved
Communications (radio and/or pho Assignment ESF-10 Safety Officer ESF-10 Operations Section Desk ESF-10 Situation Unit Desk	Phone (251) 366-1450 (305) 371-4295		er and/or placement in an FWC approved
Communications (radio and/or pho Assignment, ESF-10 Safety Officer ESF-10 Operations Section Desk ESF-10 Situation Just Desk Emergency Communications Medical, 911	Phone (251) 366-1450 (305) 371-4295 (305) 371-4294	r this assignment) Other	
O. Communications (radio and/or pho Assignment ESF-10 Safety Officer ESF-10 Onerations Section Desk ESF-10 Situation Just Desk Emergency Communications Medical 911 10. Prepared by: D.	Phone [251) 366-1450 [305) 371-4294 Evacuation 11. Reviewed by (P	r this assignment) Other	er and/or placement in an FWC approved 12. Reviewed by (OSC) Date/Time LTJG Samantha Cardoza 31 OCT 17 1600

How Do Resource Advisors Report To Work



1. Incident Name IRMA ESF-10 Forida			nal Period (Date/T DV 17 0800 To: 03		Assignment Lis ICS 204-C0
3. Branch Jacksonville - FEMA Branch II-III		4. Division/Group/Si Vessel Response	aging		
5. Operations Personnel	Name	Affiliatio	n	Contact # (s)	
Operations Section Chief: L1	TJG Samantha Cardoz	a USCG		(609) 594-4881	
Deputy Operations Section Chief: M	STC Sheridan McClell	en USCG		(251) 425-2348	
Branch Director: LT	Jessica Thornton	USCG		(267) 221-6468	
Deputy Branch Director: M	STCN Allen Garneau	USCG		(410) 375-1523	
6. Resources Assigned			X indicates 2	U4a attachment with add	tionalinstructions
Strike Team/Task Force/Resource Identifier	Leader	Contact Info. i	# Of Persons	Reporting Info/N	otes/Remarks
Vessel Response Team #1	MST1 Tonya Muhem	(757) 286-478	3	FWC POC: OFC Joi (904) 591-11	
Vessel Response Team #2	MST1 Robert Fous	(\$12) 604-720	3	FWC POC: OFC Mar (386) 481-39	
NRA Advisor	Scott Eastman	(904) 823-4516		Jax North and Centr	ral Division

6. Resources Assigned)	Indicates 20	4a attachment with additionalinstructio	ins
Strike Team/Task Force/Resource Identifier	Leader	Contact Info. #	#Of Persons	Reporting Info/Notes/Remarks	
Vessel Response Team #1	MST1 Tonya Muhem	(757) 286-4786	3	FWC POC: OFC Jon Culbreath (904) 591-1798	D
Vessel Response Team #2	MST1 Robert Feus	(912) 604-7209	3	FWC POC: OFC Mario Burtolami (386) 481-3936	×
NRA Advisor	Scott Eastman	(904) 823-4516	1	Jax North and Central Division	×

10. Prepared by: Date/Time 11. Reviewed by (PSC): Date/Time 12. Reviewed by (OSC): Date/Time LCDR Jeffrey Rubini (131 OCT 17 1600 LTJG Samantha Cardoza 31 OCT 17 1600

ASSIGNMENT LIST (ICS 204-CG)

How Do Resource Advisors Report To Work

Other

12. Reviewed by (OSC): Date/Time

LTJG Samantha Cardoza 31 OCT 17 1600

Date/Time 11. Reviewed by (PSC);

11. Reviewed by (PSC): Date/Time LCDR Jeffrey Rubini 31 OCT 17 1600

Emergency Communications

MSSR2 Shannon McGregor 31 OCT 17 1600

ASSIGNMENT LIST (ICS 204-CG)

Medical 911



Incident Name RMA ESF-10 Florida		2. Operational Per From: 01 NOV 17		2	Assignment ICS 2	
Branch cksonville - FEMA Branch II-III		4. Divis on/Group/Staging Vessel Response	9			
Operations Personnel	Name	Affiliation		Contact # (s)		_
Operations Section Chief: L	TJG Samantha Cardoz	a USCG		(609) 594-4881		
uty Operations Section Chief: M				(251) 425-2348		
Branch Director: L		USCG		(267) 221-6468		
Deputy Branch Director: N	MSTCN Allen Garneau	USCG		(410) 375-1523		
eeureee Assigned			x indicates	204a attachment with a	dditionalinstructio	ns I
e Team/Task Force/Resource Identifier	Leader	Contact Info. #	#Of Persons		/Notes/Remarks	+
/essel Response Team #1	MST1 Tonya Muhem	(757) 286-4786	3	FWC POC: OFC (904) 591		\boxtimes
Vessel Response Team #2	MST1 Robert Faus	(\$12) 604-7209	3	FWC POC: OFC N (386) 481		\boxtimes
NRA Advisor	Scott Eastman	(904) 823-4516	1	Jax North and Ce	entral Division	
7. Work As:						
Vessel Resp - Day 1 - Co	onse Tea ntinue ves mplete ve	m #1; North sel removal ssel removal	opera	ations for F	/V SWA	MAR
Vessel Resp - Day 1 - Mo - Day 2 - Co	bilize reso	m #2: Canav urces in Cap MAT recove	on Ca	naveral.		
Ctamina- 10 Situation Unit Desk	(305) 371-42	94				I

What Items To Bring With You



Here are some basic items to consider packing as you prepare for deployment as a Resource Advisor

- Incident Management Handbook
- PFD as appropriate
- Wide brimmed hats
- Hard hats
- Safety glasses
- Gloves
- Multiple pairs of footwear to match your duties: work boots, rubber boots, etc., (<u>DO NOT show up to a barge</u> or work site in open toe shoes)
- Personal Floatation Device
- Sunscreen
- Insect spray
- Foul weather gear
- Clothing 7 day supply of comfortable clothing
- Hygiene/Shower items and other personal items to last two weeks minimum.
- Medicines (aspirin, antihistamine, antacids as a minimum) and prescription medicines to last two weeks minimum
- Copies of training certificates (ICS courses, HAZWOPER, etc.)

Training You May Need



ICS-100 Introduction to Incident Command System (2 hours):

https://training.fema.gov/is/courseoverview.aspx?code=IS-100.c

ICS-200 ICS for Single Resources and Initial Action Incidents (4 hours):

https://training.fema.gov/is/courseoverview.aspx?code=IS-200.c

ICS-700 ICS An Introduction to the National Incident Management System (3.5 hours):

https://training.fema.gov/is/courseoverview.aspx?code=IS-700.b

ICS-800 National Response Framework, An Introduction (3 hours):

https://training.fema.gov/is/courseoverview.aspx?code=IS-800.d

Hazardous Waste Operations and Emergency Response (HAZWOPER):

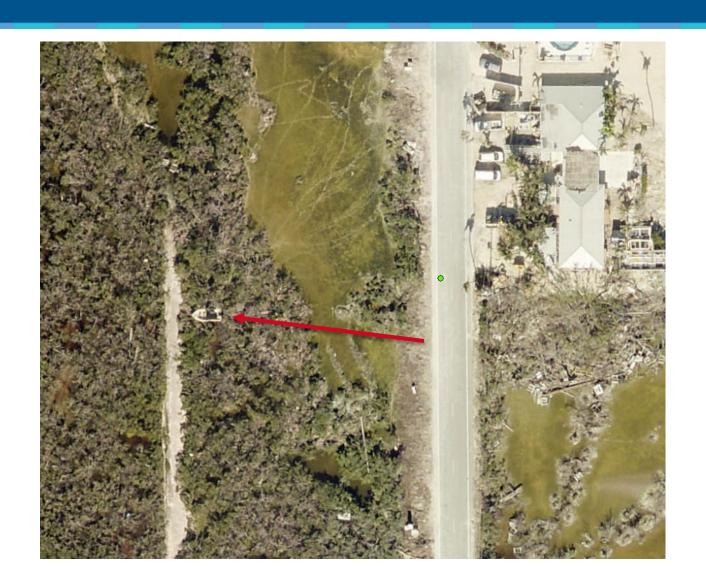
https://www.osha.gov/emergency-preparedness/hazardous-waste-operations/faq-hazpower (USCG will require 24 hr. HAZWOPER for federally funded ESF-10 deployments)

Department of the Interior is in the process of updating basic, intermediate, and advanced Resource Advisor online training that will be available through DOI Talent:

https://www.doi.gov/doitalent/nondoi learners

Best Management Practices Gone Right





Best Management Practices Gone Right





Best Management Practices Gone Right



USCG Irma ESF10 Na	tural Resource	Advisor Site			
Monitoring Report (P.	APER) v1.0				12/22/17
*Grid ID: (e.g. 240812		USCG Sector: (a r highlight)	ircle	*Te	am ID:
2408122_SW_KW_VSL_	011017-1851	KW MI SP	JХ	Florid	da Keys Branch Unit, Marathor
*Team Agency/Organi	zation: (circle	or highlight all th	at apply)	
USCG EPA FWC	FDEP FKNN	S Other (speci	fy):		
*Team Member Name	s:				Target Sticker#:
Lauri MacLaughlin/NOAA/SE Robert Pereira/USCG/MST2 Phillip McLeod/USCG					Sticker #: 3281
Target Location Place	Name:	Latitude: (dec degrees)	imal		Longitude: (decimal legrees)
Long Beach Blvd, I	Big Pine Key	24.647	7*N		-81.332*W
Target Type: (circle or	highlight)				
Vessel Co	ntainer	Vehic	e		Debris Field
	rintion/Comm				
"Key Deer check conducted, n *11:50-12:50p: fuel & water ta "Attempted contact with FDEF " USCG Branch Unit got Unit (*1:00-2p: Vessel turned bow fr	via tow truck cable, ot present or seen nk pumped out, offl for permission to o Command permission orward, towed slow	6-12 Red mangroves pre- or post-Ops oad to lighter vessel, ut mangroves substar on to pull vessel, w/no y out path of least im	orevent HA ntially (>BN mangrove pact, appro	AZMAT MP limit e trim ox. SE;	spills is) mangrove impacts minimized
Removal Method Desc Plan: Tow vessel to road bed, "Key Deer check conducted, n. "11:50-12:50p: fuel & water total "Attempted contact with Fore" " USCG Branch Unit got Unit of "10:02-p: Vessel turned bow fi by repositioning tow cable to no community was limited to app 2-2:30p: Vessel retrieved in go placed on trailer flatbed, trans'	via tow truck cable, tot present or seen nk pumped out, offil for permission to Command permission nward, towed slowledirect extraction ro oximately 10-15 ya ood condition (no ob ferred; Ops ended a ferred; Ops ended a	6-12 Red mangroves pre- or post-Ops pad to lighter vessel, ut mangroves substa- on to pull vessel, w/no y out path of least impute, to avoid taller pla rds. vious damage to the vious damage to the round 2:35 pm.	orevent H/A ntially (>BI mangrove pact, appro nts; distar hull), then	AZMAT MP limit e trim ox. SE; noe tow raised	spills (s) mangrove impacts minimized ed through mangrove
Plan: Tow vessel to road bed, "Key Deer check conducted, 11:50-12:50: fuel & water, 1 "Attempted contact with FDEF 10:0-2p: Vessel turned bow for by repositioning tow cable to normunity was limited to apple 2-2:30p: Vessel retrieved in gplaced on trailer flatbed, trans	via tow truck cable, of present or seen nk pumped out, offi for permission to o Command permission and toward, towed slowledirect extraction roximately 10-15 ya cod condition (no obtered: Ops ended ampleted. No further	6-12 Red mangroves pre- or post-Ops pad to lighter vessel, ut mangroves substa- on to pull vessel, w/no y out path of least impute, to avoid taller pla rds. vious damage to the vious damage to the round 2:35 pm.	prevent H/ htially (>Bit mangrow pact, appro nts; distar hull), then	AZMAT MP limit e trim ox. SE; noe tow raised	spills s) mangrove impacts minimized ed through mangrove with two tow truck oranes,
Plan: Tow vessel to road bed, "Key Deer check conducted, r "1:50-12:50p: fuel & water ta "Attempted contact with FDEF " USCG Branch Unit got Unit "1:00-2p: Vessel turned bow fo by repositioning tow cable to r community was limited to app 2-2:30p: Vessel retrieved in ge placed on trailer flatbed, trans' Conclusion: This project is co BMPs Implemented	via tow truck cable, ot present or seen in k pumped out, offi for permission to command permission and command permission and command permission of comman	6-12 Red mangroves pre- or post-Ops oad to lighter vessel, ut mangroves substar on to pull vessel, winch yout path of least impute, to avoid taller plards. So the pull vessel, which work is required. Proport & Explanatio and SWS Environment to mangroves trees tiller, mature plants be filloading with a mangroves trees the pull vessel will be form spilling into var and Phillip MoLec aspects of the extractived in far less injuny to the start of the strate of the	orevent HA titially (>B) mangrow act, appro nts; distan hull), then dect closed n of BM intal Servi , propagi y selectin, ted very g all hose wetlands a d were exitands to plants to plants	AZMAT MP limit on the property of the property	spills s) mangrove impacts minimized ed through mangrove with two tow truck cranes, plied: ews did an excellent job of etlands plants and mud flats. vegetated route for sionally, water tank offload to demobilization, road bed. facilitators and partners, made to turn the vessel
Plan: Tow vessel to road bed, "Key Deer check conducted, r "11:50-12:50p: fuel & water ta "11:50-12:50p: fuel & water ta "14:methed contact with FDEF " USCG Branch Unit got Unit "1:00-2p: Vessel turned bow fo by repositioning tow cable to r community was limited to applaced on trailer flatbed, trans' placed on trailer flatbed, trans' Conclusion: This project is co BMPs Implemented (circle or highlight):	via tow truck cable, ot present or seen in k pumped out, offi for permission to command permission and command permission and command permission of comman	6-12 Red mangroves pre- or post-Ops oad to lighter vessel, ut mangroves substar on to pull vessel, winch yout path of least impute, to avoid taller plards. So the pull vessel, which work is required. Proport & Explanatio and SWS Environment to mangroves trees tiller, mature plants be filloading with a mangroves trees the pull vessel will be form spilling into var and Phillip MoLec aspects of the extractived in far less injuny to the start of the strate of the	orevent HA titially (>B) mangrow act, appro nts; distan hull), then dect closed n of BM intal Servi , propagi y selectin, ted very g all hose wetlands a d were exitands to plants to plants	AZMAT MP limit on the property of the property	spills s) mangrove impacts minimized ed through mangrove with two tow truck oranes, plied: ews did an excellent job of etlands plants and mud flats, vegetated route for sionally, water tank offload to demobilization, road bed. facilitators and partners, made to turn the vessel ontributed to their success in
Plan: Tow vessel to road bed, "Key Deer check conducted, r "11:50-12:50p: fuel & water ta "Attempted contact with FDEF " USCG Branch Unit got Unit v 1:00-2p: Vessel turned bow fo by repositioning tow cable to roommunity was limited to app 2-2:30p: Vessel retrieved in granch Conclusion: This project is co BMPs Implemented (circle or highlight): Yes / No	via tow truck cable, ot present or seen in k pumped out, offi for permission to command permission and command permission and command permission of comman	6-12 Red mangroves pre- or post-Ops oad to lighter vessel, jut mangroves substar on to pull vessel, winch yout path of least impute, to avoid taller plards. So will be subjected to avoid taller plards. When work is required. Pro on & Explanation and SWS Environment to mangroves trees iller, mature plants be filloading was condu P allowed for flushinel from spilling into vera and Phillip MoLeaspects of the extractured in far less injury seel. Injury to mangrise and to the singuing seel.	orevent H/A titially (>B) mangrow auct, appronts; distar hull), then ect closed an of BM ortal Servi , propagl y selectin, ted very g all hose wetlands a d were exition. The to plants ove comr	AZMAT MP limit on X. SE; when	spills s) mangrove impacts minimized ed through mangrove with two tow truck oranes, plied: ews did an excellent job of etlands plants and mud flats vegetated route for sionally, water tank offload to demobilization, road bed. facilitators and partners, made to turn the vessel ontributed to their success in
Plan: Tow vessel to road bed, "Key Deer check conducted, r "Key Deer check conducted, r "11:50-12:50p: fuel & water "Attempted contact with FDEF " USCG Branch Unit got Unit v "1:00-2p: Vessel turned bow f by repositioning tow cable to r community was limited to app 2-2:30p: Vessel retrieved in g placed on trailer flattled, trans Conclusion: This project is co BMPs Implemented (circle or highlight): Yes / No IF VESSEL	via tow truck cable of present or seen in k pumped out, off for permission to a command permission moved in the command permission to a command permission of the command permission	6-12 Red mangroves pre- or post-Ops oad to lighter vessel, jut mangroves substar on to pull vessel, winch yout path of least impute, to avoid taller plards. So will be subjected to avoid taller plards. When work is required. Pro on & Explanation and SWS Environment to mangroves trees iller, mature plants be filloading was condu P allowed for flushinel from spilling into vera and Phillip MoLeaspects of the extractured in far less injury seel. Injury to mangrise and to the singuing seel.	orevent H/A titially (>B) mangrow auct, appronts; distar hull), then ect closed an of BM ortal Servi , propagl y selectin, ted very g all hose wetlands a d were exition. The to plants ove comr	AZMAT MP limit with the trim w	spills spills spills mangrove impacts minimized ed through mangrove with two tow truck oranes, plied: ews did an excellent job of etlands plants and mud flats, vegetated route for sionally, water tank offload to demobilization, road bed. facilitators and partners, made to turn the vessel ontributed to their success in was minimized significantly.
Plan: Tow vessel to road bed, "Key Deer check conducted, r "Key Deer check conducted, r "11:50-12:50p: fuel & water "Attempted contact with FDEF " USCG Branch Unit got Unit t "1:00-2p: Vessel turned bow f by repositioning tow cable to r community was limited to app 2-2:30p: Vessel retrieved in g placed on trailer flattled, trans Conclusion: This project is oo BMPs Implemented (circle or highlight): Yes / No IF VESSEL Vessel Type:	via tow truck cable of present or seen in k pumped out, off for permission to a command permission moved in the command permission to a command permission of the command permission	8-12 Red mangroves pre- or post-Ops cad to lighter vessel, jut mangroves substan on to pull vessel, wind yout path of least impute, to avoid taller plards. So will be subjected to avoid taller plards. When work is required. Pro on & Explanation and SWS Environment to mangroves trees liller, mature plants be filloading was condup allowed for flushine el from spilling into vera and Phillip MoLeaspects of the extractured in far less injury seel. Injury to mangrich and the seed of the strategies o	orevent H/A tially (>B) mangrov auct, apprentis; distar hull), then ect closed n of BM ental Servi; propagi y selectin, cted very g all hose vetlands a d were ey to plants to plants to plants vove comm	AZMAT MP limit to trim which is the trim which is the trim raised of out. Ps apple so the trim raised of out. Ps apple so the trim raised which is the trim raised of out. Ps apple so the trim raised which is the trim raised with raised which is the trim raised with raised withing with raised with raised with raised with raised with raised w	spills spills spills mangrove impacts minimized ed through mangrove with two tow truck oranes, plied: ews did an excellent job of etlands plants and mud flats vegetated route for sionally, water tank offload to demobilization, road bed. facilitators and partners, made to turn the vessel ontributed to their success ir was minimized significantly. Registration Number:



Questions?



Steve Werndli

Florida Keys National Marine Sanctuary

P.O. Box 1083

Key Largo, FL 33037

Phone: 305-434-9371

Stephen.Werndli@noaa.gov

http://floridakeys.noaa.gov

