	ICS 206 - M				J	20040000
Incident: MV Athos I	end with a second control of the second seco		red By:	Medical Uni	300 Co. 20 Co. 30 Co. 3	2004 09:00
Period: Period 7 (12/3/2004 06:0	0 - 12/4/2004 06:00)	Version	on Name:	Medical Pla	n	
	First Aid	d Stat				
Name	Location		EMT	(On-Site)	Phone	Radio
Sick Bay	MSO/GRP Philadelphia	E		No		
( T	ransportation (Ground an	nd/or A	Ambula <b>nc</b>			*
Name	Location			EMT	Phone	Radio
Thomas Jefferson University Hospital	Philadelphia, PA - Unit	ted S		Yes	(215) 955-6000	
Public Ambulance Service	Philadelphia, PA - Unit	ted S		Yes	911	
		pitals	)			
Name	Location	!	Helipad	Burn Center	Phone	Radio
Thomas Jefferson University Hospital	Philadelphia, PA - Unit	ted	Yes	No	(215) 955-6000	
Pennsylvania Hospital	Philadelphia, PA - Unit	ted	No	No	(215) 829-3000	
Methodist HospitalDiv, Thomas Jeffer	Philadelphia, PA - United		Yes	No	(215) 952-9000	
Hahnemann	Philadelphia, PA - United		No	No	(215) 762-7000	
St. Agnes Burn Treatment Center	Philadelphia, PA - United		No	Yes	(215) 339-4100	
University of Pennsylvania Hospital	Philadelphia, PA - United		Yes	No	(215) 662-3920	
Crozer Medical Center	Upland, PA		Yes Yes		(610)447-2000	ER (610)4
Cooper Hostipal University Medical C	Camden, NJ - United S	Sta <sup>-</sup>	Yes	No	(856-342-2345	
Christians Care Hospital	Wilmington, DE - Unite	ed (	Yes	No	(302) 733-1000	
St. Francis Hospital	Wilmington, DE - Unite	ed (	Yes	No	(302) 421-4590	
	Special Medical En	nerge	ncy Proce	edures )	•	
Document all incident related injuries Communicate any and all loss of deg					Commander (IC)	

ICS 206 - Medical Plan Printed: 12/2/2004 06:28 Page 1 of 1 © 1997-2004 dbSoft, Inc.

	10	CS 206 -	Medical Plan			
Incident Mississippi Canyon 252			Prepared By:	Pallavicini,	Sergio <b>at</b> 5/1/201	10 12:25
<b>Period:</b> Period 12 (5/2/2010 06:0	0 - 5/3/2010	06:00)	Version Name	: Period 12 -	Medical Plan	
		Medica	l Ald Stations	)		
Name	Location		Parame	edics (On-Site)	Phone	Radio
Venice Staging Area	Venice, LA			Yes	504-415-2125	
Acadian Ambulance	Venice, LA			Yes	504-432-8033	
Breton Sound	Venice, LA			Yes		
Cat Island	Venice, LA			Yes		
Pass a Loutre	Venice, LA			Yes		
Biloxi Staging Area	Biloxi, MS			Yes	662-719-9528	
AMR Ambulance	Biloxi, MS			Yes		
US Enviromental Services	Biloxi, MS			Yes	601-955-4298	
Biloxi Point Cadet	Biloxi, MS			Yes	504-382-1375	
Mobile Staging Area	Mobile, AL	Mobile, AL		Yes	251-455-6833	
Pascagoula Staging Area	Pascagoula	a, MS		Yes	228-623-0550	
Pensacola Staging Area - US Naval /	Prensacola	Prensacola,FL		Yes	727-214-4025	
BOA Sub C	MC 252	MC 252		Yes	0114751406850 ext	
Horn Mountain Platform	MC 127	MC 127		Yes	979-230-4601	
Nakika Platform	MC 474			Yes	337-735-4001	
( Tra	ansportation	(Ground a	nd/or Air Ambula	ances Services)		*****
Name	Location		Pa	ramedics	Phone	Radio
Dispatch/Heliport for Cougar	Houma, LA	L		Yes	(337)735-5350	
Plaquemine Parish Ambulance	Port Sulphi	ur, LA		Yes	(985) 564-2761	
Acadian Ambulance	Houma, LA			Yes	(800) 259-1111	155.295
University of South Alabama Hospital	Mobile, AL	5 5 7		Yes	(251) 460-6101	
Lafourche Parish Ambulance	Galliano, L	Α		Yes	(985) 632-7191	
Grand Isle Volunteer Fire Dept.	Grand Isle,	LA		Yes	(985) 787-2777	
	•	Ho	spitals )		•	
Name	Location		Helipad	Burn Center	Phone	Radio
Venice, LA Area Hospitals						
Ochsner Baptist Medical Center	New Orlear	ns, LA	No	No	(504) 899-9311	
West Jefferson Medical Center	Marrero, LA	<b>\</b>	Yes	Yes	(504) 347-5511	
East Jefferson General Hospital	Metairie, LA	Ą	Yes	No	(504) 454-4377/400	
Ochsner Medical Center - Kenner	Kenner, LA		No	No	(504) 468-8600	
LSU Medical Center	Baton Roug	je, LA			(225) 358-1000/106	
Thibodaux Regional Medical Center	Thibodaux,	LA	Yes	No	(985) 447-5500	
Terrebonne General Medical Center	Houma, LA		Yes	No	(985) 873-4141	
Lady of the Sea General Hospital	Cut Off, LA		Yes	No	(985) 632-6401	
Baton Rouge General Medical Cente	Baton Roug	je, LA	Yes	Yes	(225) 387-7000	
Occ. Med. Services, Dr. Davis	Grand Isle,	LA	No	No	(985) 223-0032	
Pascagoula, MS Area Hospitals						

Incident		[(	CS 206 - N	Medical Plan			
	Mississippi Canyon 252	Prepared By:	Pallavicini,	Sergio <b>at</b> 5/1/20	10 12:25		
Period:	Period 12 (5/2/2010 06:0	0 - 5/3/2010	06:00)	Version Name:	Period 12 -	Medical Plan	
			Hos	pitals )			
Name		Location		Helipad	Burn Center	Phone	Radio
Singing Riv	er Hospital	Pascagoula	a, MS	Yes	No	228-809-5000	
Ocean Spri	ngs Hospital	Ocean Spri	ngs, MS	Yes	No	228-818-1111	
Biloxi, MS A	Area Hospitals	Ti-					
Biloxi Regio	onal Medical Center	Biloxi, MS		No	No	228-432-1571	
Mobile, AL	Area Hospitals						
Providence	Hospital	Mobile, AL		No	No	251-633-1000	
University of	of South Alabama Hospital	Mobile, AL		Yes	Yes	(251) 460-6101	
Pensacola,	FL						
West Florid	a Hospital	Pensacola,	FL	Yes	No	850-494-4702	
	· ·	( Specia	al Medical E	mergency Proce	edures )	•	- <del>1</del>
-	um (		urse lurse	Lo Hous Hous	ocation ton, TX ton, TX vette, LA	83	Phone -380-8416 2-563-6886 7-278-1614

		RILL						
1. Incident Name	2. Operational Per	iod (Date / Time)		T		MEDIC	AL PI	AN
SONS 2010-NNE-Exercise	From: MAR 25 1	10 06:00 To: MAR 26 10 0	6:00		,		206	
3. Medical Aid Stations								
Name		Location		Contac	ct #		arame	
Bug Light Sound ME	Bug Light solund ME( Nort	h east mobile health)	207-	772-4459		-	YES	
Old Orchaard Beach ME	Old orchard Beach ME (no			207-772-4459			YES	
Camp Ellis ME	Camp Ellis ME (Northeast	Mobile Health)	207-	772-4459			YES	3
Pierce Island NH	Pierce Island NH (Portsmo	uth Fire Dept.	603-	427-1515			YES	;
Hamptons Co-op NH	Hamptons Co-op (AMR Ne	Hamptons Co-op (AMR Newbruyport)						5
Salisbury Beach MA	Salisbury Beach ME (AMR	Salisbury Beach ME (AMR Newburyport)						3
Wells Beach ME	Wells Beach (Northeast Me	obile health)	207-	772-4459		1	YES	
4. Transportation	***************************************							
Ambulance Service		Address		Contac	ct #		arame Board	
AMR	25 Walker St. Kittery ME 0	25 Walker St. Kittery ME 03904					YES	,
North East Mobile Health	24 Washington Ave Scarbo	24 Washington Ave Scarborough ME 04074					YES	-
AMR	438 High st Somersworth,	438 High st Somersworth, NH 03878					YES	
Portland Fire Dept.	308 Congress St. Portland	ME 04101	207-	874-8400			YES	į.
S. Portland Fire Dept.	20 Atthoine st. S. Portlan	20 Atthoine st. S. Portland ME 04106				i i	YES	
Portsmouth Fire Dept	170 Court St. Portsmouth	NH 03801	603-	603-427-1515			YES	;
AMR	3 Boston Way Newburypor	t MA 01950	800-	427-0471	27-0471		YES	
5. Hospitals								
Hospital Name	Add	Iress	Contac	#	Air	me (hrs) Ground	Burn Ctr?	Heli- Pad?
Mercy Hospital	144 State St Portland, ME	04101	207-879-3000	-3000		0.20		
Portsmouth Regional Hospital	333 Borthwick Ave, Suite 1	00 NH 03801	(603) 436-511	36-5110		1.00	$\boxtimes$	$\boxtimes$
Maine medical Center	131 Chadwick St. Portlann	ME 04102	(603) 778-731	11		0.20		
South Maine medical Center	1 medical center dr Biddfor		207-2830700			0.50		
York Hospital	15 Hospital Dr York ME 03	909	207-363-4321			0.75		
Lifeline of Maine	300 Main St Lewiston ME,	04240	1-888-421-42	28	0.30			$\boxtimes$
Boston Med Flight	1727 Robins St. Bedford N	AA 01730	1-800-233-98	89	0.30		$\boxtimes$	$\boxtimes$
6. Special Medical Emergency Proceds ADDITONAL AID STATION Gloucester MA State pier, AMR (Newbury Rye Beach NH (AMR Newburyport, MA)  Notify the Safety Officer as soon as practi Make note of which applicable hospital and	oport, MA) cal regarding accidents or injuried ambulatory service once on sce	ene at your locations.					Ress, W.	el teologia
*When staging 1st aid station makes the on 207-535-4045, with information regarding Hospital being transported to.						medical	service	es at
***911 response will have paramedic pers	sonnel asigned , some rehab stat	ions will also have parametic	c personnel ass	igned				
* Other resources American Red Cross of Southern Mai American Red Cross Greater Bay Cha			6-5440					
7. Prepared by: (Medical Unit Leader)	Date / Time	8. Reviewed by: (Safet	y Officer)		Date / Ti	me		
the state of the s		The second secon						
Logistics	MAR 24 10 14:19							

Incident Name: PEPCO Swans	on Creek Location	: Aquasco, Maryland
Inc	ident Action Plan No	14
	Medical Emergency Pla	an
First Aid Stations:		
Geographic Location	Group(s) Served	Phone/Radio
West bank of Patuxent River	All operational zones	
East bank of Patuxent River	All operational zones	
Ground Ambulance Service(s):		
In the event of a medical emergency	, call the on-site ambulance a	at 972.797.2500.
Air Ambulance Service(s):		
Name	Group(s) Served	Phone/Radio
Hospitals:		
Name	Group(s) Served	Phone/Radio
Civista Hospital		301.609.4000
Calvert Memorial Hospital		301.475.8344
100 Hospital Road, Frederick, MD		
Southern Maryland Hospital		301.877.4500
7503 Surratts Road, Clinton, MD		
Summary of Medical Emergency P	rocedures:	
1. ALL injuries, no matter how slight,		Safety Officer and the Chalk Point
Station's Safety Coordinator (Delores		
2. All injuries must be treated immedi		coordinate medical treatment.
3. Dedicated ambulance services (3		
	,	
		,

## Medical Plan (ICS-206)

Incident Name: Ybor Channel Incident	Operational Period (start): 0700 hrs, Sept. 26, 2013	Operational Period (end): 0700 hrs, Sept. 27, 2013		
First Aid Stations:		č1		
Name	Location/Address	Telephone #	EMTs (y/n)	
Tampa Asphalt Terminal	500 N. 19th Street	81 3-xxx-xxxx	Yes	
TPA Berth 30	Lehman Street & Barton Avenue	81 3-xxx-xxxx	Yes	
Davis Islands Park	155 Columbia Drive	81 3-xxx-xxxx	Yes	
Ambulance Services:				
Name	Location/Address	Telephone #	EMTs (y/n)	
American Medical Response	4914 W. Knox Street	81 3-885-7722	Yes	
Hillsborough County Ambulance	2709 E. Hanna Avenue	81 3- 27 2-6688	Yes	
Transcare Ambulance Service	14901 Crisis Center Maza	81 3-964-1594	Yes	
Hospitals:				
Name	Location/Address	Telephone #	Travel Time	
Tampa General Hospital	1 Tampa General Circle	813-844-7000	< 10 min.	

#### Summary of Emergency Medical Procedures:

- 1. Report all injuries to the Safety Officer, Group Supervisor, and Division Manager.
- 2. Minor injuries shall be treated on-site (basic first-aid). For slightly more serious injuries, but the injured person is conscious and able to walk by himself/herself, they may be driven to the nearest medical facility by another worker. For any significant injuries (broken arm, cut requiring stitches, etc.), call 911 or local ambulance service (see above) to arrange an ambulance rendezvous for medical attention at the appropriate medical facility. EMTs from the ambulance service shall identify the appropriate medical facility.
- 3. A minimum of two (2) CPR/first-aid qualified persons shall be on-site during all work activities to handle minor injuries/illnesses.
- 4. A small boat will be readily available at all times to transport injured personnel (any medical situation beyond the capabilities of on-site basic first-aid) to rendezvous with a land-based ambulance at either the Tampa Asphalt Terminal, TPA Berth 30, or Davis Islands Park. The ambulance shall provide patient transportation to the appropriate medical facility (see above).

Prepared By: (MEDL)	ICS Position/Assignment:	Preparation Date/Time:
Stephanie Richards	Safety Officer	1345 hrs, Sept. 25, 2013



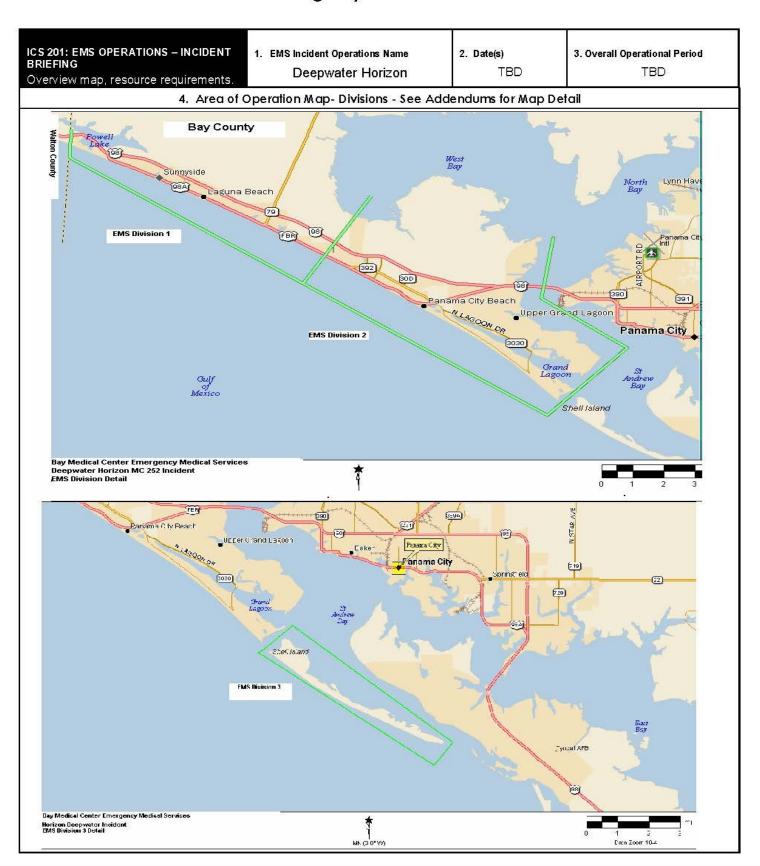
# Bay Medical Center Emergency Medical Services

# **Deepwater Horizon MC-252**

# MEDICAL INCIDENT ACTION PLAN

Revised 06/19/2010 Version 1.6

## Bay Medical Center Emergency Medical Services



ICS 202: EMS OPERATIONS	Name of Event	<u>Date of Event</u>	Operational Period
Objectives, Communications, Treatment, Safety, Weather	Deepwater Horizon	TBD	TBD

#### General Control Objectives for the Incident

- 1. To safely operate throughout the incident.
- 2. To safely provide medical care to those workers assigned duties on the beaches of Bay County in response to the Deepwater Horizon MC-252 incident and oil spill clean-up operations.
- 3. To coordinate medical resources across 30 miles of Bay County coastline during oil spill clean-up operations.
- 4. To provide ALS first response services to those workers assigned beach duties.
- 5. To facilitate rehabilitation and minor emergency care to those workers assigned beach duties.
- 6. To provide Advanced Life Support and transportation to the appropriate hospital when necessary.

#### Radios/Communications

- 1. All EMS communications regarding oil spill EMS operations will be conducted on 800-mhz EMS Tactical Channel 2.
- 2. The EMS Communications Center may also be directly contacted on Marine Channel 22-A.
- 3. Communications structure:
  - a. All communications related to incident events will be coordinated by EMS Communications.
  - b. Any patient transports will be coordinated by EMS Communications.
  - c. Command Staff is designated as the on-duty Shift Commander (EMS 2)
- 4. Alternate communications in the event of 800-mhz failure is Med 12 or landlines.

#### Treatment of beach workers:

- 1. On arrival or at time of contact, obtain patient's last name and notify EMS Communications.
- Treat the patient and transport to the nearest Medical Aid Station if minor to moderate illness or injury appears critical in nature, notify EMS Communications and request the nearest ALS Transport Unit for rendezvous.
- 3. After treatment and if the worker refuses transport, complete the usual paperwork for a refusal and notify EMS Communications of the worker's last name and the fact that they will be continuing work.

#### General Safety Message

- 1. Most Bay County beach areas are only accessible by 4WD. Use caution when operating on beaches and watch for pedestrians, oil product and other debris.
- 2. Use caution while moving in and out of beach areas and traffic. Always use a spotter while backing.
- 3. Stay hydrated while working outside. Seek shade and air conditioning whenever not actively involved in patient care.

#### Long-Term Weather Forecast:

Long-term forecasts indicate temperatures in the upper nineties, heat indices exceeding 100° and potentially severe afternoon thunderstorms.

Attachments								
V	ICS 201: Briefing	$\sqrt{}$	EMS Division 1 & 2 Detail		MSDS for Weathered Crude Oil			
V	ICS 202: Objectives		EMS Division 3 Detail	X	MSDS for Dispersant			
V	ICS 206: Ambulance Destination	$\sqrt{}$	Overview of Illness/Injury					

### RESOURCES / COMPONENTS

#### Required EMS Task Force Components For Each Deployed Land-Based "Medical Aid Station":

- -4-Wheel Drive PUT, Paramedic level equipped, Quick Response Vehicle
- -Shared ALS Transport Unit per Division
- -Air Conditioned Tent or Camper Trailer
- -Physician Medical Control (On Line & Standing Orders)
- -EMS Command Staff (On Line)

Component Detail	Asset Agency	ETA	Number Required	Description
4-Wheel Drive Pick-Up Truck: Advanced Life Support Quick Response Vehicle (QRV)	Undetermined	TBD	One per	BMC EMS will equip each 4WD PUT with supplies and equipment necessary to respond to potential patients at the Advanced Life Support Level. Each 4WD PUT will be staffed with a minimum of one (1) Florida certified Paramedic and one (1) Florida certified Emergency Medical Technician.  BMC EMS will also equip each 4WD PUT with immobilization equipment and manual stretcher equipment which will provide the capability to transport a patient off of a beach area, transporting to a deployed Medical Station or to rendezvous with an ALS Transport Unit on the nearest hard road.
Shared Advanced Life Support Transport Unit	BMC EMS	TBD	One per EMS Division	Staffed with one Florida certified Paramedic and one Florida certified EMT to provide immediate ALS transport to patients from the beaches or transport from Medical Station tents to an appropriate hospital.
		TBD		Each air conditioned tent or camper trailer will be capable of rehabilitation and treatment of 5 to 10 minor to moderately ill or injured patients at any given time.
Air Conditioned Tent or Camper Trailer	Undetermined			Each air conditioned tent or camper trailer will be staffed with, at a minimum, one (1) Florida licensed Registered Nurse to provide basic and intermediate care.
				Should it be determined that the needs of the patient are beyond the capabilities provided by the Registered Nurse within the Medical Station, the shared ALS Transport Unit will transport the patient to the appropriate hospital.
Physician Medical Control	Bay Medical Center	TBD	24/7 Available to all	The BMC EMS Medical Director will provide deployed Paramedics, EMTs and Registered Nurses with standing orders/protocols in the event of illness or injury to workers.
. II) Sicial Madical Collid	Tay Modical Come	130		In addition, Bay Medical Center Emergency Department Physicians will be available by telephone and radio 24 hours per day for consultation for the duration of the operation.
EMS Command Staff/Administrative	BMC EMS	TBD	24/7 Available to all BMC deployed assets	BMC EMS will provide deployed Paramedics, EMTs and Registered Nurses with command, control and logistical assistance 24 hours per day for the duration of the operation.

### RESOURCES / COMPONENTS

## Required EMS Task Force Components For Each Deployed Water-Based "Medical Aid Station":

- -ALS Transport Unit Based at Panama City Marina
- -Air Conditioned Boat Capable of Housing All Worker Assigned to Shell Island Anchored at Shell Island
- -Physician Medical Control (On Line & Standing Orders)
- -EMS Command Staff (On Line)

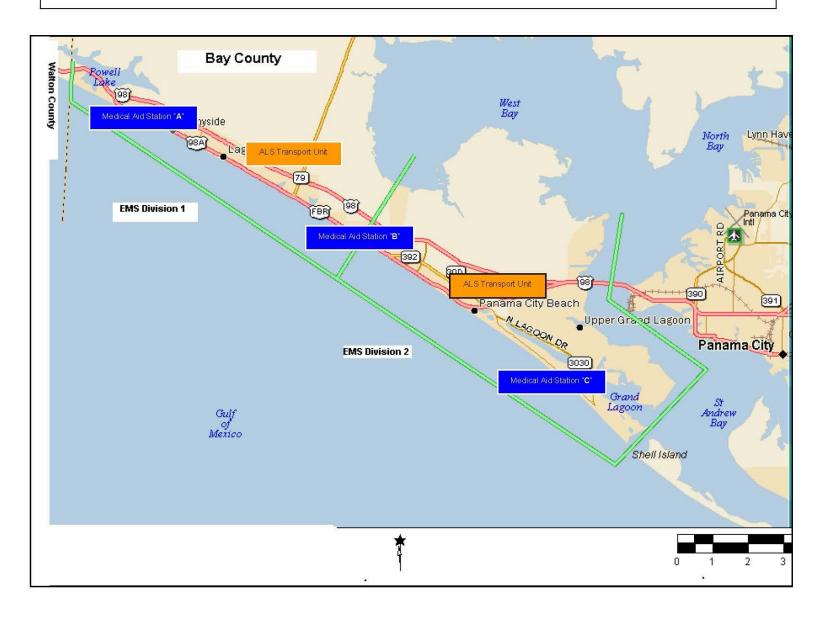
Component Detail	Asset Agency	ETA	Number Required	Description
Advanced Life Support Equipped Paramedic	BMC EMS	TBD	One per deployed Medical Aid Station	BMC EMS will equip each Medical Aid Station Boat with supplies and equipment necessary to respond to potential patients at the Advanced Life Support Level. Each Medical Aid Station Boat will be staffed with a minimum of one (1) Florida certified Paramedic.  BMC EMS will also equip each Medical Aid Station Boat with immobilization equipment and manual stretcher equipment which will provide the capability to transport a patient off of the island and rendezvous with an ALS Transport Unit at the Panama City Marina.
Advanced Life Support Transport Unit	BMC EMS	TBD	One Staged at Panama City Marina	Staffed with one Florida certified Paramedic and one Florida certified EMT to provide immediate ALS transport to patients from the beaches or transport from Medical Stations to an appropriate hospital.
Air Conditioned Boat	Undetermined	TBD	One per deployed Medical Aid Station	Each air conditioned boat will be staffed with, at a minimum, one (1) Florida certified Paramedic to provide basic and intermediate care.  Should it be determined that the needs of the patient are beyond the capabilities provided by the Medical Aid Station, the patient will be transported by boat to the Panama City Marina to rendevous with the staged ALS Transport Unit which will transport the patient to the appropriate hospital.
Physician Medical Control	Bay Medical Center	TBD	24/7 Available to all BMC deployed assets	The BMC EMS Medical Director will provide deployed Paramedics, EMTs and Registered Nurses with standing orders/protocols in the event of illness or injury to workers.  In addition, Bay Medical Center Emergency Department Physicians will be available by telephone and radio 24 hours per day for consultation for the duration of the operation.
EMS Command Staff/Administrative	BMC EMS	TBD	24/7 Available to all BMC deployed assets	BMC EMS will provide deployed Paramedics, EMTs and Registered Nurses with command, control and logistical assistance 24 hours per day for the duration of the operation.

# EMS Division 1 & 2

#### **Required Division Resources**

#### Segment Operational Period: TBD

- Three (3) Land-Based Medical Aid Station "Packages"
- Two (2) ALS Transport Units

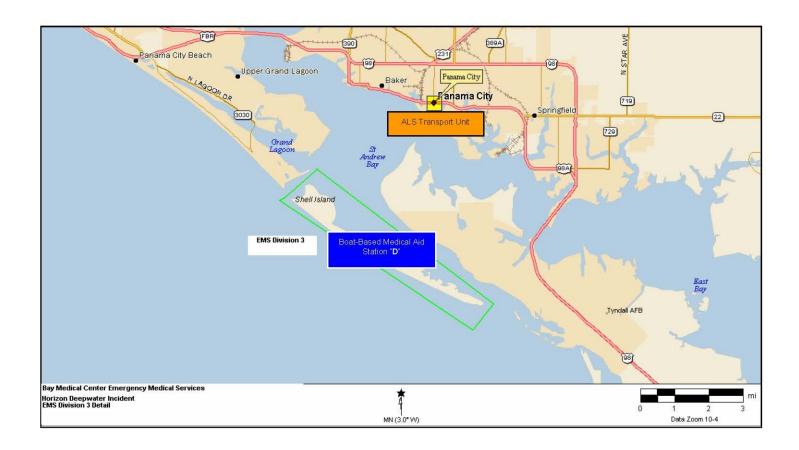


# **EMS Division 3**

### **Required Division Resources**

#### Segment Operational Period: TBD

- One (1) Water (Boat)-Based Medical Aid Station "Package"
- One (1) ALS Transport Unit



ICS 206: EMS OPERATIONS	1. Incident Ambulance Operation	ons Name	Date Prepa	red Time Prepared	1	Operati	onal Perio	od				
AMBULANCE DESTINATION PLAN	DEEPWATER HORIZ	ON	06/19/1	0 1640		ТВІ	)					
	Incident Medica	al Aid Statio	ns									
Identifier		Location										
Medical Aid Station "Alpha"	Front Beach Road & 14 <sup>th</sup> Av	Front Beach Road & 14 <sup>th</sup> Avenue										
Medical Aid Station "Bravo"	Front Beach Road at Count	Front Beach Road at County Pier										
Medical Aid Station "Charlie"	Thomas Drive at Richard St	elzer Park										
Medical Aid Station "Delta"	Water (boat)-based, anchor	ed at NW c	orner of She	ll Island								
Disaster Me	dical Assistance Teams (DMAT)	al Assistance Teams (DMAT) / State Medical Response Teams (SMRT)										
Identifier	Location	n		Contact Phon	e or Ra	adio Fre	equency	/				
	Area Full-Service R	eceiving Ho	spitals									
Name	Address	Addross Travel Time			Phone Helipad Beds							
Hame	71000	Air Ground			Yes	No	Total	Avail.				
	A40.047 LOOPE OLL L	N1/0	40.00	(050) 700 0044	\ \ \		450					
Gulf Coast Medical Center	449 West 23 <sup>rd</sup> Street	N/A	10-30 Minutes	(850) 769-8341	X		150					
	Panama City, FL 32405		iviiriules									
	615 North Bonita Avenue	N/A	10-30	(850) 769-1511	X		340					
				2 2								
Bay Medical Center	Panama City, FL 32401		Minutes									
Bay Medical Center	Panama City, FL 32401		Minutes									
Bay Medical Center	Panama City, FL 32401		Minutes									
•	Panama City, FL 32401 3801 E. HWY 98		Minutes	(850) 229-5600	x		25					
Sacred Heart on the Gulf		N/A		(850) 229-5600	X		25					
_	3801 E. HWY 98	N/A	10-30	(850) 229-5600	X		25					
_	3801 E. HWY 98	N/A	10-30	(850) 229-5600	X		25					

## Overview: Medical Injuries/Illnesses of Beach Clean-up Workers

The majority of daily issues will be heat related. These workers will present with a variety of symptoms of fatigue, muscle cramping, dizzy, nausea/vomiting, syncope, etc. The spectrum of heat illness is a continuum from a mild case of Heat Cramps to Heat Stroke. Management of these patients involves the ABC's, VS including Core Temperature. Histories in addition to symptoms (any vomiting/diarrhea?) and urine output, should be directed towards possible underlying medical conditions, medications, and fluid replacement during the course of treatment. Offer sips of fluid, Gatorade/water and foods like potato chips or pretzels or start an IV if orthostatic and/or can't tolerate oral rehydration.

**Heat Stroke** is associated with multi organ system failure. The metabolic heat produced by muscle during activity outpaces body heat transfer and causes the core temperature to rise to levels that disrupt organ function. Beach workers may present with fatigue, severe muscle cramping, vertigo, combativeness, disorientation, and possibly seizures.

**Heat Cramps** is the mildest form of heat illness and is purely due to dilutional hyponatremia.

Heat Exhaustion will present with cramping, lightheadedness and possibly nausea/vomiting.

<u>Difficulty Breathing/Asthma:</u> Beach workers may present with pulmonary symptoms. Most common presentations include dyspnea (difficulty breathing i.e. air hunger), cough, chest pain, chest tightness and/or wheezing. A differential diagnoses for such symptoms includes other pulmonary ailments such as Chronic Obstructive Pulmonary Disease (mainly in adults with a history of tobacco use), Vocal Cord Dysfunction and/or cardiac conditions. Asthma has increased over the past few decades and has been known to effect over 10% of the population. There are different severity categories for asthma; the most common is Activity Induced Asthma. Those presenting may be suffering from Activity Induced Asthma or uncontrolled asthma (symptoms occurring during and after heavy activity). Those suffering from an asthma flare may present with a variety of pulmonary symptoms, wheezing being is the most common. Asthma exacerbations may present with chest pain/tightness. In rare instances, when the asthma exacerbation may be severe enough to cause hypoxia, the worker may present with mental status changes and/or seizures.

**Renal Failure:** Causes of renal failure are vast, though includes trauma (such as with crash injuries) prolonged exercise (which may stem from complications such as heat exhaustion/hyponatremia). Certain factors may predispose workers (ie recent hx of ETOH consumption). Patients may present with muscle pains /aches /weakness /swelling. Tea colored urine may be a sign that myoglobin is being filtered leading to the diagnoses. Difficulty urinating may be a clue. On exam, muscle findings such as muscle tenderness on palpation, and discolored skin over the muscle may only be present in 4-15% of cases. Nonspecific complaints and failure to respond to IV fluids may be an indication that renal failure may be present.

**Spontaneous Pneumothorax:** Spontaneous pneumothorax is considered a rare event. Approximately 2000 cases occur each year in the US with about 10% associated with activity. It is more common in males in their late teens to late thirties. Individuals who are tall and slender built are more at risk factor for pneumothorax. Spontaneous pneumothorax can be further divided into primary or secondary, depending whether or not lung disease is present or absent. Both spontaneous and traumatic pneumothorax can present to EMS. Pneumothorax clinical presentations may vary. Usually individuals present with dyspnea, pleuritic chest pain (in 80-90% of cases) or cough. Some are asymptomatic.

**<u>Dermatology:</u>** There are a variety of skin conditions that may present during the course of this incident. The following conditions are the most common:

- 1. Blisters: Occurs from friction between skin and outside surface, such as clothing or Shoes.

  Treatment: Avoid bursting vesicle, though if needed to relieve pain/pressure, Use a sterile needle, keep the skin intact, and apply a porous plastic coated Gauze pad and bandage.
- 2. Friction Burns (i.e. heatburn/scrapes/road rash/abrasian) involves damage to the epidermis (outer layer of skin) from trauma. Many nerve fibers are present within the epidermous thus can be very painful. Treatment: Removal of dirt/debris from area, clean area well with .9% NS. Apply a Semi Permeable dressing (ie tagaderm/bioocclusive) to the area. Have patient keep area moist with saline and change area few times daily for the next few days.
- Bruise (Ecchymosis, Contussion) Bleeding beneath the skin. If excessive may develop hematoma. This is caused
  by tearing of the subcutaneous blood vessels.
  - Treatment: Ice Packs
- 4. Laceration/Tear: Tear of the skin that can be superficial (confined to the dermis) or more extensive (extending into the subcutaneous tissue).
  - Treatment: rule out risk of infection (if soiled, dirty, occurs from an animal bite, open for more then 1 hour, over 5 cm in length).