MSRC in the New Millennium

A Case Study -- Responding to the Changing Needs of Customers

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by
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Topics:

- MSRC Today: Executive Summary
- Consolidation with U.S. Regional Oil Spill Cooperatives
- Enhanced Capabilities
  - Mechanical Equipment Recapitalization
  - Dispersants
- Global Response Network
- Hurricane Response Operations: 2005
- MSRC “Then & Now”
- Summary

MSRC Today: Executive Summary

- MSRC is the largest, dedicated standby emergency response company operating in the United States
- Operational since 1993
  - Operational Area: Continental U.S., Hawaii, & U.S. Caribbean
- Core Values:
  - Commitment to:
    - Operational Excellence
    - Commercial Efficiency
    - Total Customer Satisfaction

MSRC Today: Executive Summary (continued)

- Extensive capability to meet U.S. federal, State (California and Washington) and local oil spill response planning requirements
- Can respond to spills of all sizes
- Available 24 hours a day/365 days a year
- Local, dedicated "first-strike" units (personnel, equipment)
  - In event of a larger spill, additional resources are "cascaded" to the response site, as needed or required.
- Additionally, can assist in response to other types of emergencies
  - Natural Disasters
  - Emergency tanker lightering
  - Telecommunications disruptions
  - Hazardous materials responses

MSRC Today: Executive Summary (continued)

- High levels of owned, controlled, and dedicated personnel and equipment
  - 84 Equipment sites nationwide
    - 22 Manned sites
  - ~400 personnel nationwide
    - (including dedicated navigation crews)
  - Extensive shallow water and open ocean recovery capability
    - 68 shallow water barges
    - 241 skimming systems
    - 580,000 ft. of boom
    - 47 Oil Spill Response Vessels (OSRVs)
      - 15 Responder Class
      - Self-propelled skimming vessels
    - 19 Ocean-going barges
  - Dedicated dispersant and in-situ burning resources
  - Extensive emergency telecommunications

MSRC "Responder" Oil Spill Response Vessel (OSRV)

- 15 - 210 foot (64m) Oil Spill Response Vessels (OSRVs)

MSRC Shallow Water Response Barges

- 68 First Strike Shallow Water barges
  - Ready-transportable on trailers or in-water
  - Skimming, booming operations, hard-to-get-at areas

MSRC Dedicated Oil Spill Response Barges

- 19 large oil recovery barges

MSRC in 2006

Oil Spill Co-Operatives Consolidations

- Most significant change was the 2004-2005 consolidations with major oil spill co-operatives:
  - Clean Bay
    - San Francisco Bay, California area
      - 1 January 2004
  - Clean Coastal Waters
    - Los Angeles, California area
      - 1 July 2004
  - Clean Casco Bay
    - Portland, Maine area
      - 1 January 2005
  - Clean Sound
    - Seattle, Washington area
      - 1 April 2005
- Consolidation Objective: Reap economies of scale & recognize operational efficiencies

MSRC: Equipment Reinvestment

- 3 New construction 47 foot "Fast Oil Spill Response Vessels"
- 42 Shallow Water Response Workboats
- Skimmer Upgrades
- Telecommunications Upgrades

MSRC: 47' Fast Oil Spill Response Boat

- Objective:
  - Quick, Initial Response
- Locations (3):
  - All Delivered in 2005
    - San Juan, Puerto Rico;
    - Tampa, Florida;
    - Corpus Christi, Texas
- Speed: 26 knots
- Skimmer: Lamor Brush
- Temporary Storage:
  - 50-barrels
- Dispersant Capable: Yes
- Builder:
  - Rozema Boatworks

MSRC: Shallow Water Response Boats

- 42 New Construction, Purpose Design Boats
- Multi-Mission Objective:
  - Push Shallow Water Response Barges
  - Logistical Support
- Speed: 12 knots
- Location: Nationwide
- Delivery: 2005-2008
- Builder:
  - Munson Co.

MSRC: Skimmer Purchases & Upgrades

- New Skimmer & Skimmer Upgrades
  - Lamor GT-185 Brush Adapter (30)
  - Queensboro Drum & Brush skimmer (38)
- Objective: Maximize limited temporary storage

MSRC: Telecommunications Upgrades

- Planned Placeholder to Upgrade Communications Capabilities
  - Satellite Connectivity
    - Hardware
    - Increased Bandwidth
  - Radios
    - Marine
    - Aviation
  - Internet Access
- Program Will Be Finalized in Spring 2006

Interior of MSRC Mobile Communications Suites

MSRC DISPERSANT PROGRAM

- Scope of Services Include:
  - Small Aircraft – First Strike
  - Large Aircraft
  - Maintain Dispersant Inventory
  - Program Management Services
    - Manage onsite dispersant operations during a spill
    - Manage dispersant stockpiles and logistics
    - Manage dispersant training and exercise program
    - Provide oil spill observation aircraft and trained spotters and observers
- Effective: Commencing 2006

MSRC DISPERSANT PROGRAM:
International Air Response, Inc.

- C-130A
- Home based: Coolidge, AZ
- Payload: ~3,250 gallons
- Planning Assumptions:
  - Wheels Up within 4-hours
  - Can fly throughout MSRC's Operational Area
- Operational Date:
  - July 2006

MSRC DISPERSANT PROGRAM:
DYNAMIC AVIATION, INC.

- BE-90A Aircraft
  - Operational 1/01/06
    - Presently based in Los Angeles
    - Relocate to Gulf of Mexico July 2006
  - Twin engine aircraft
    - operated with pilot and co-pilot
- Serves as spray aircraft (~425 gallons)
- Serves as spotter & observer aircraft
- Planning Assumption: Ready to take-off within 4-hours of notification

Global Response Network

Global Response Network

- What is it?
  - Network of industry funded, not-for-profits, with a substantive area/international remit
  - Members must be willing to share resources with no financial gain to the contributing party
- What are our objectives
  - Enhanced utilization of resources
  - Co-ordination of response where beneficial
  - Sharing of best practices to promote and enhance industry standards

Global Response Network:

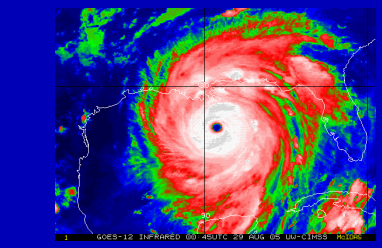
- Membership today consists of:
  - Alaska Clean Seas
  - AMOSC
  - Burrard Clean
  - CCA
  - ECRC
  - MSRC
  - OSRL/EARL
- How does it work?
  - Enhanced use of industry resources for training, during response, exercises, information exchanges
  - Sharing of "best practices" and helping establish good industry standards
    - Safety
    - Personnel Training
    - Aviation issues

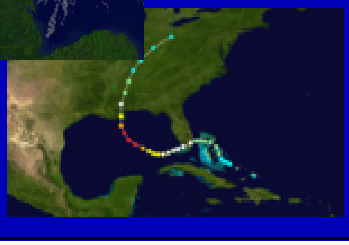
- Initially developed in 2005
- Still in formative stages

2005 Hurricane Season Responses

MSRC Responses to Hurricanes "Katrina," "Rita," and "Wilma"

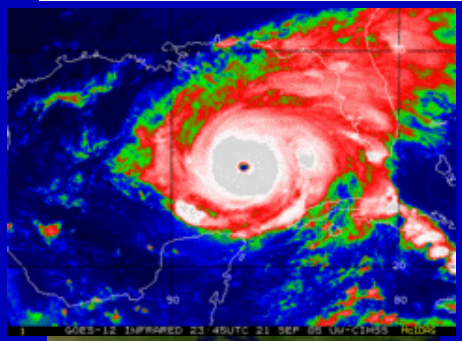
Hurricane “Katrina”:

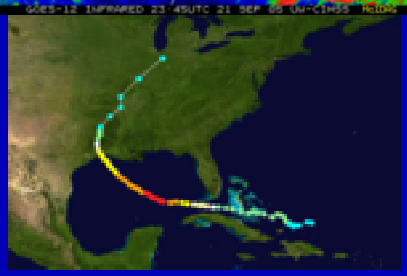




- Landfall: 29 August 2005
- Location of Primary US Landfall:
  - South East of New Orleans, LA & Mississippi
- Size: Category “3” to “5”
  - Landfall Wind Speed: 125 MPH
    Category: 3
  - Offshore: 175 MPH
    Category: 5
- Storm Surge:
  - ~34 feet (~10.4m)
- Damage:
  - 1,400 Deaths (estimated)
  - US$75 Billion in Damages
    - (estimated)
  - Significant impact to U.S. Oil Industry & MSRC

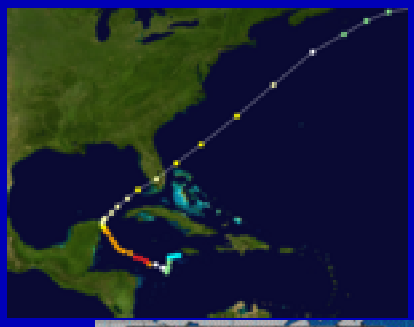
Hurricane “Rita”:





- Landfall:
  - 24 September 2005
    - 26-days after landfall of “Katrina”
- Location of US Landfall:
  - South Western Louisiana
- Size: Category “5”
  - Wind speed: 175 MPH
- Damage:
  - US$9 Billion in Damages
    - (estimated)
  - Significant impact to U.S. Oil Industry
  - Direct impact to MSRC Lake Charles Regional Response Center

Hurricane “Wilma”:



- Landfall:
  - 24 October 2005
- Location of US Landfall:
  - South Western Florida
- Size: Category “3”
  - Wind speed: 120 MPH
- Damage:
  - Continued disruption to U.S. Oil Industry
  - Direct impact to MSRC Miami response center

Hurricanes “Katrina,” “Rita” & “Wilma”: Executive Summary

- Largest response effort in history of MSRC
- Significant impact to local infrastructure and industry
- Significant impact to MSRC infrastructure & personnel
  - Many employees suffered damage to homes & property
  - Many had to be relieved to attend to personal issues.
    - Key Issue: how do you respond to a Customer’s incident when your first tier of responders have been directly impacted?
  - Four (4) MSRC Facilities were damaged
- MSRC Response Operations:
  - Seven (7) Oil Spill Response Vessels (OSRVs) utilized
  - Two (2) large ocean-going barges used for recovered oil
  - Numerous other smaller boats, skimmers and support equipment
  - Substantial Telecommunications support
  - Approximately 180 company personnel involved.
  - Oversight of numerous contractors

MSRC 2005 Hurricane Responses

- Nature of MSRC response operations:
  - Recovered oil from leaking tank farm
  - Recovered oil from severed pipelines & Marshy areas
  - Recovered oil from well blow-out
  - OSRVs also utilized for command and control and “floating hotels” in areas with no power or accommodations
  - Telecommunications
  - Temporary power
  - Management assistance to various customer Incident Command Systems (ICS)
- Operations were primarily Lower Mississippi River and offshore Louisiana
- Safety & Health were key Management concerns.
  - MSRC expended over 84,000 man-hours (and still counting) with only one (1) minor accident.

Hurricane Responses

- Significant Damage & Flooding

Hurricane Responses

- Widespread Damage

Hurricane Responses

- Infrastructure was dislocated.

Industry Damage

Industry Damage

- Example of an offshore operation:
  - Before…..

Industry Damage

- After……

Hurricane Responses

- With lack of infrastructure, response efforts were marine asset intensive

Oil Recovery Operations

Oil Recovery Operations

Responder Safety was a Key Issue:

- Displaced wildlife caused a major Responder safety concern

Telecommunications

- General Status: Telecommunications infrastructure was significantly damaged or destroyed
- MSRC provided an unprecedented level of telecommunications support to our Customers
  - All Six MSRC owned & dedicated mobile telecommunications suites deployed to Gulf of Mexico
    - all operated simultaneously via dedicated satellite bandwidth
  - Each of the Seven (7) Oil Spill Response Vessels (OSRVs) provided a floating command structure with a telecommunications requirement
- Through this dedicated capability, MSRC provided satellite, voice, data, internet and radio capabilities necessary for today's communication requirements

Hurricane Responses: Telecomm

One of Six (6) MSRC Telecommunication Suites at work

Hurricane Responses: Remote Operations

- **Forward Communications Suite to microwave telecommunications to offshore operations & oil production capability**

Hurricane Responses

- **Logistics:**
  - Overall, infrastructure was severely damaged
- **Accommodations:**
  - With no hotels available, MSRC purchased 26 mobile trailers to support:
    - Effected personnel & families, and
    - Response Operations
- **Food, Water & Fuel:**
  - Needed to be self sufficient

Preliminary Lessons Learned

- **Attention to Personnel Needs:**
  - Any Natural Disaster is a traumatic experience.
    - Many in our Southern Region were personally effected by the Hurricanes & needed to attend to family obligations.
    - Having adequate personnel who could relieve response operations was key.
  - Fatigue: with many long days without adequate infrastructure, you must rotate people out to ensure a safe & effective operation
  - Attention to safety, health and environmental issues was a key success factor for this and every operation.
- **Telecommunications capability was key success factor:**
  - Without Communications hardware, software & personnel, you will not achieve your objective in event of major disaster
- **Knowledge of Customer's Expectation:**
  - We know our Customer's operations & expectations and were able to work within their organizations
- **Be prepared to make decisions quickly:**
  - Numerous players are competing for limited resources
  - If you *feel* you will need something, you should contract it and ensure its availability…. Or it may be gone when you call back for it!

MSRC: “Then” (2000) and “Now” (2006)…

MSRC - Then and Now - Spill Response Resources

	January 1, 2000	January 1, 2006	Increase Quantity	Increase Percentage
Quantity of inspected vessels owned by MSRC	16	26	10	63%
Chartered vessels	0	2	2	
Number of Fast Response Boats	0	3	3	
Quantity of inspected barges (in barrels)	17	19	2	12%
Storage capacity of inspected barges (in barrels)	753,200	765,203	12,003	2%
Quantity of Boom (in feet)	325,885	579,452	253,567	78%
Quantity of Skimmers	134	265	131	98%
Skimmer Effective Daily Recovery Capacity (barrels/day)	859,041	1,071,411	212,370	25%

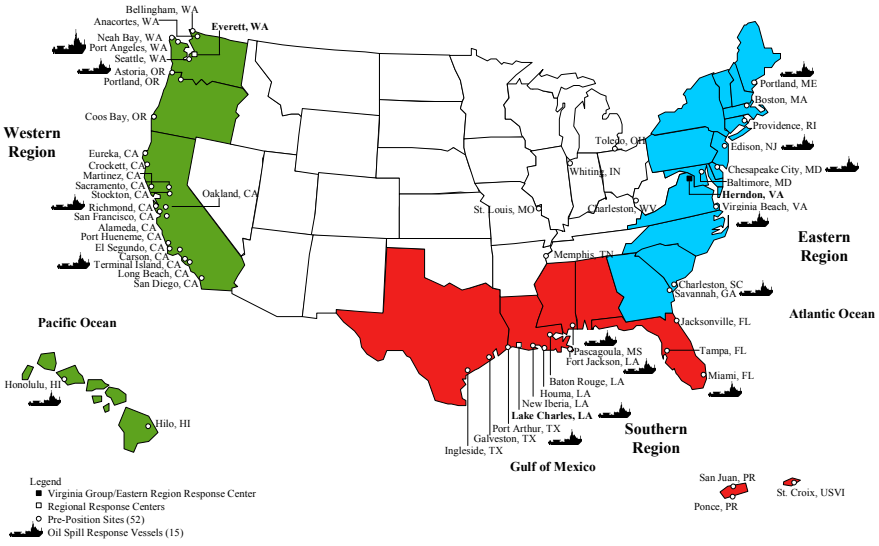
MSRC - Then and Now

	January 1, 2000	January 1, 2006	Increase Quantity	Increase Percentage
Number of MSRC Personnel (excludes OSRV crews)	183	283	100	55%
MSRC Regions	3 Eastern Southern Western	4 Eastern Southern California Pacific/NW		

MSRC "Then": January 1, 2000

Regional Response Centers and Areas of Operation

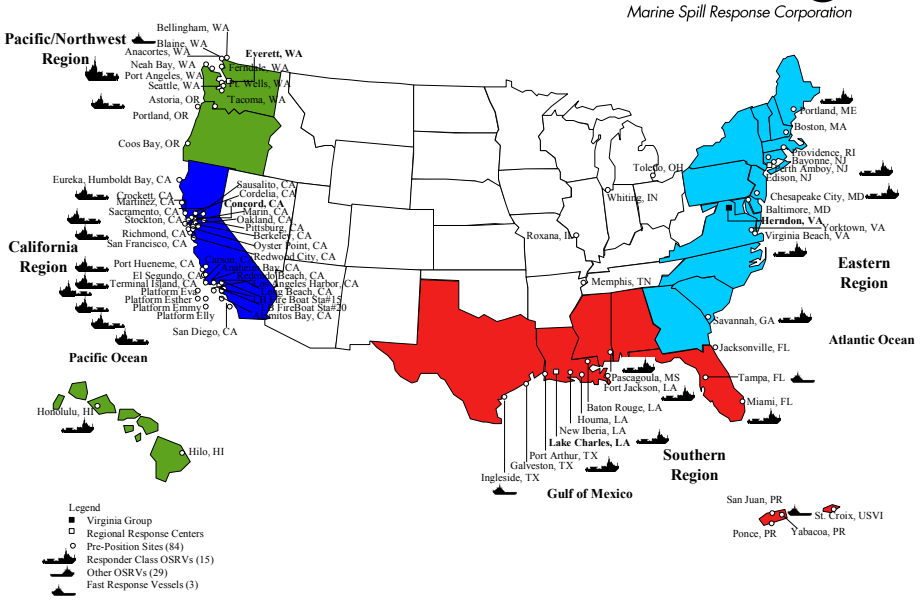
MSRC Marine Spill Response Corporation



MSRC "Now": January 1, 2006

Regional Response Centers and Areas of Operation

MSRC
Marine Spill Response Corporation



Summary: MSRC in the New Millennium

- Increasingly, MSRC's Mission has evolved to encompass a broader spectrum beyond "oil spill response"to that of "emergency response"
- Increasingly, MSRC has expanded into new response capabilities
  - Telecommunications
  - Aerial Dispersant
  - Smaller & Faster Response Vessels
- MSRC has consolidated with other U.S. Industry funded oil spill response organizations to achieve synergies & efficiencies
- MSRC is committed to continually change to meet the changing needs of our Customers
- All of this has been accomplished in a safe, effective manner