

Mine Warfare

Preparing to Win, Today and Tomorrow



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Brief is unclassified



Agenda



- **A Force in Transition....**
- **Improving Current Readiness**
- **Future Battlespace Preparation**



Preparing to Fight – Today and Tomorrow

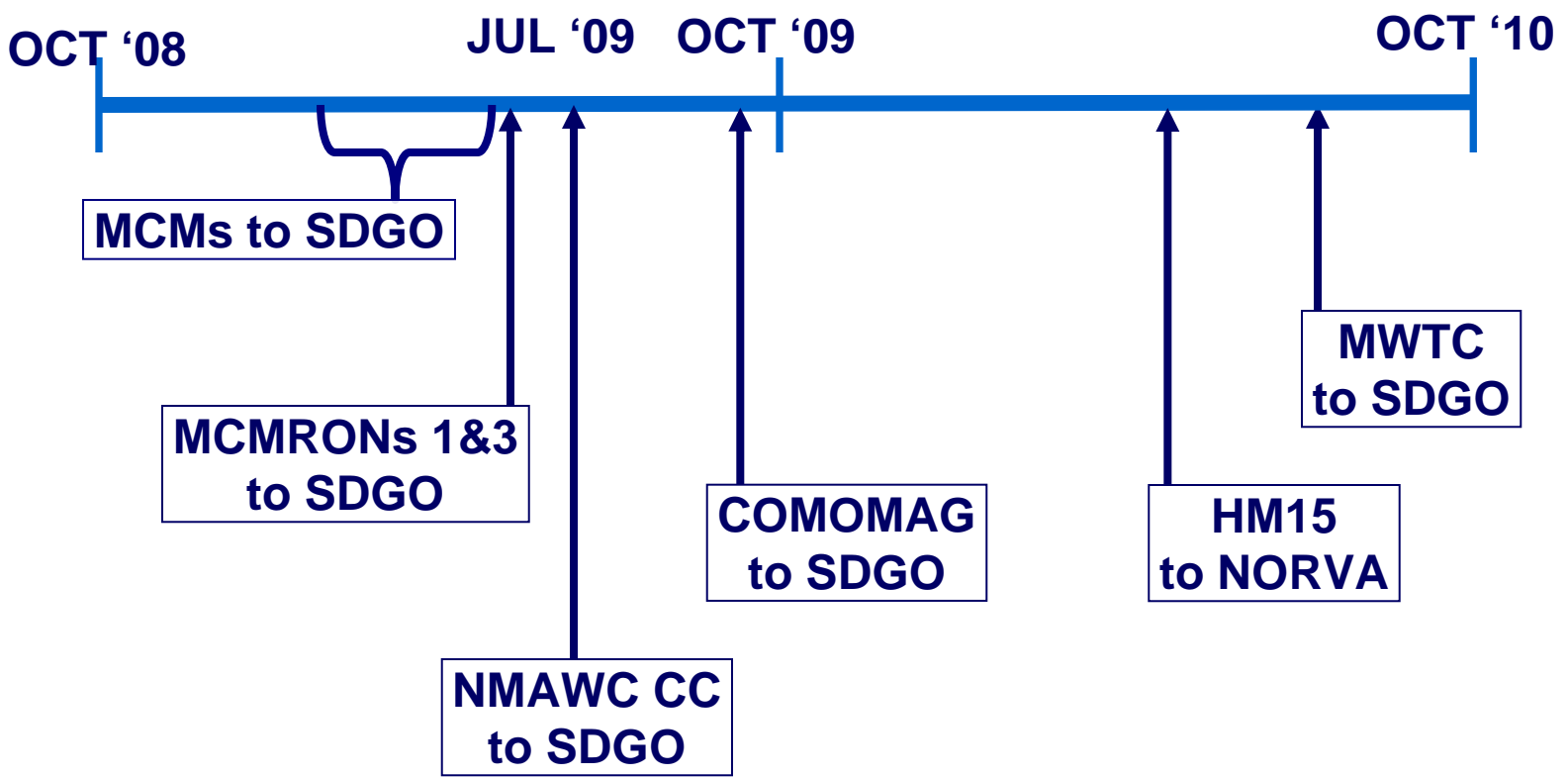


- **Force in transition**
 - NMAWC merger, BRAC, MHC decomms, LCS uncertainty
 - ADCON from USFFC to CPF/C3F, OPCON from C2F to C3F
 - Significant doctrinal changes
- Theater / MHS requirements and footprint allowances are diverse, demanding and evolving
- Tomorrow's warfighting structure dependent on force decision re. organic vs stand-alone capabilities
- Future MIW C2 architecture must be part of larger Force Net and support “plug-and-play” into MHQ w/MOC
- Investigating force posture options (5th and 7th Fleets)

Mines are a serious and widespread threat to DoD access



BRAC Timeline





MIW Warfighting Drivers



- **Global MIW CONOPS**
- **MIW Mainstreaming**
- **MHQ w/ MOC “universal” construct**
- **SMCM Decom & LCS rollout**
- **MH-53 EOS & MH-60S FOC**
- **New Technology (such as RMS) capabilities**
- **Continued 3 & 4 Star interest (\$\$\$)**

“It is now conventional wisdom in the PLA Navy that relative to other combat mission areas, [the U.S. Navy’s] mine warfare capabilities are extremely weak.”



Alternate Warfighting Paths



Organic

- LCS part of CSG / ESG
- MIWC / MCMC capability embedded within CSG / ESG staffs
- Technology & tactics advance to support integration

Stand-alone

- LCS operates indep from CSG / ESG
- Requires MCMC support (MCMRON)
- Limited organic systems

Requires battlespace dominance or force protection



Transition to Organic MIW

	<u>Now</u>	<u>Next?</u>
• MIWC:	Battle Staff	Theater CTF or SG CDR
• MCMC:	MCMRON	SG Warfare CDR
• SMCMC:	MCMDIV	N/A
• SMCM:	MCM, MHC	LCS
• AMCM:	MH-53	MH-60S
• UMCM:	EOD Det	EOD Det
• MINING:	P-3 TACAIR STRATAIR SSN	MPRA TACAIR STRATAIR



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Holistic Approach to Improving Readiness

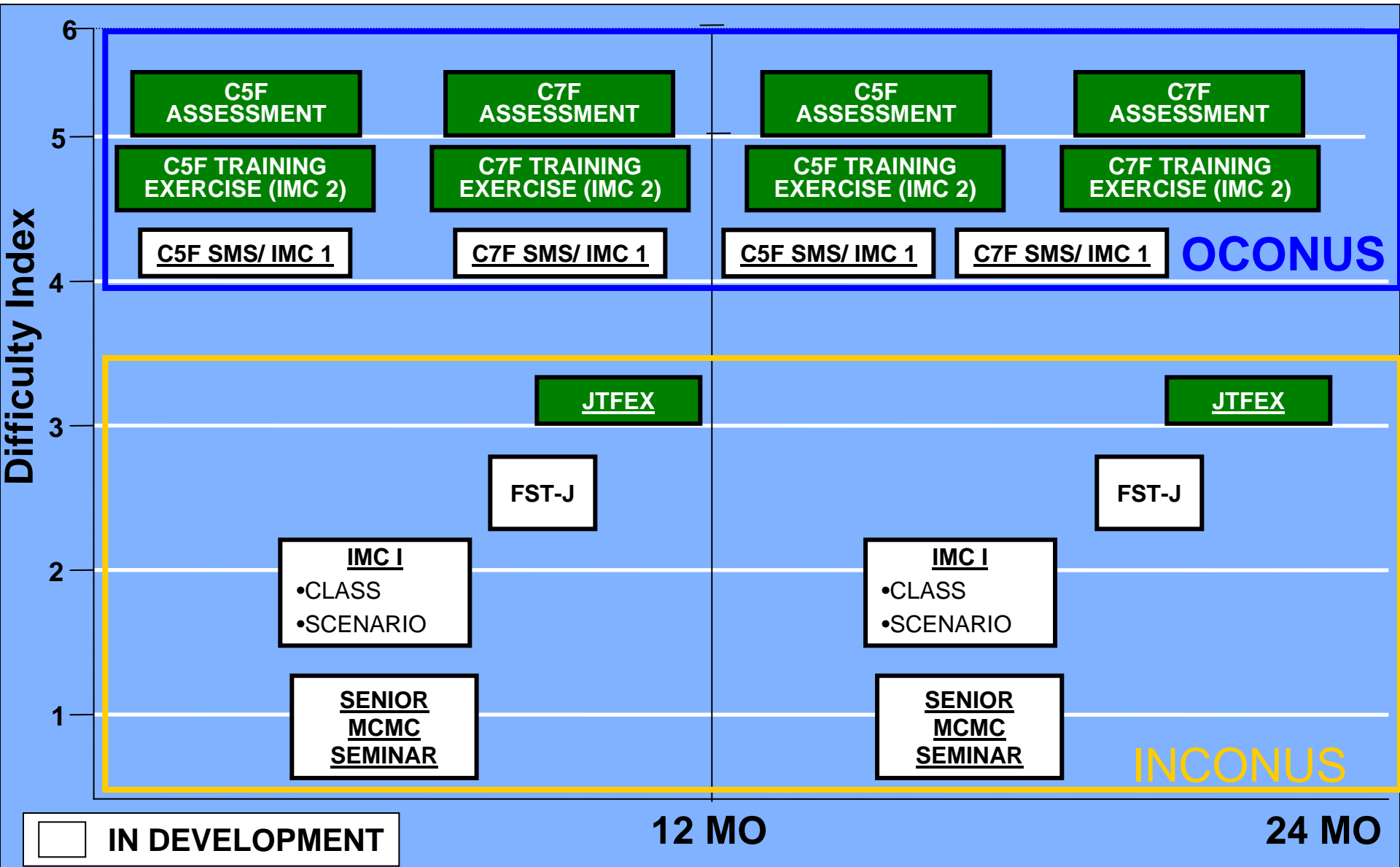


- **Integrated MIW training for both MIW forces and for deploying Strike groups**
- **MCO-level assessments of MIW capability and capacity used as a basis for significant force/fleet operational decisions**
- **Fleet performance trends that identify warfighting gaps and provide course changes in requirements, training and operations**
- **Fleet experimentation and testing program that provides timely analysis on TTP and systems that is useful to both fleet and shore staffs**

MIW Training, Assessment and Experimentation planned and conducted in an integrated and collaborative fashion



MCMRON Training Continuum





Strike Group Training



SG TRAINING & ASSESSMENT		
PRE-NMAWC	F RTP TRAINING	POST NMAWC
	INCREASED REQUIRED TRAINING	X
	SENIOR ASW SEMINAR	X
	INTEGRATED ASW CRX	X
	SYNTHETIC TRAINING	
	COMPTUEX	X
	JTFEX	X
X	FLEET CERTIFICATION	X

Breaking new ground with deploying strike groups



Integrated Assessments

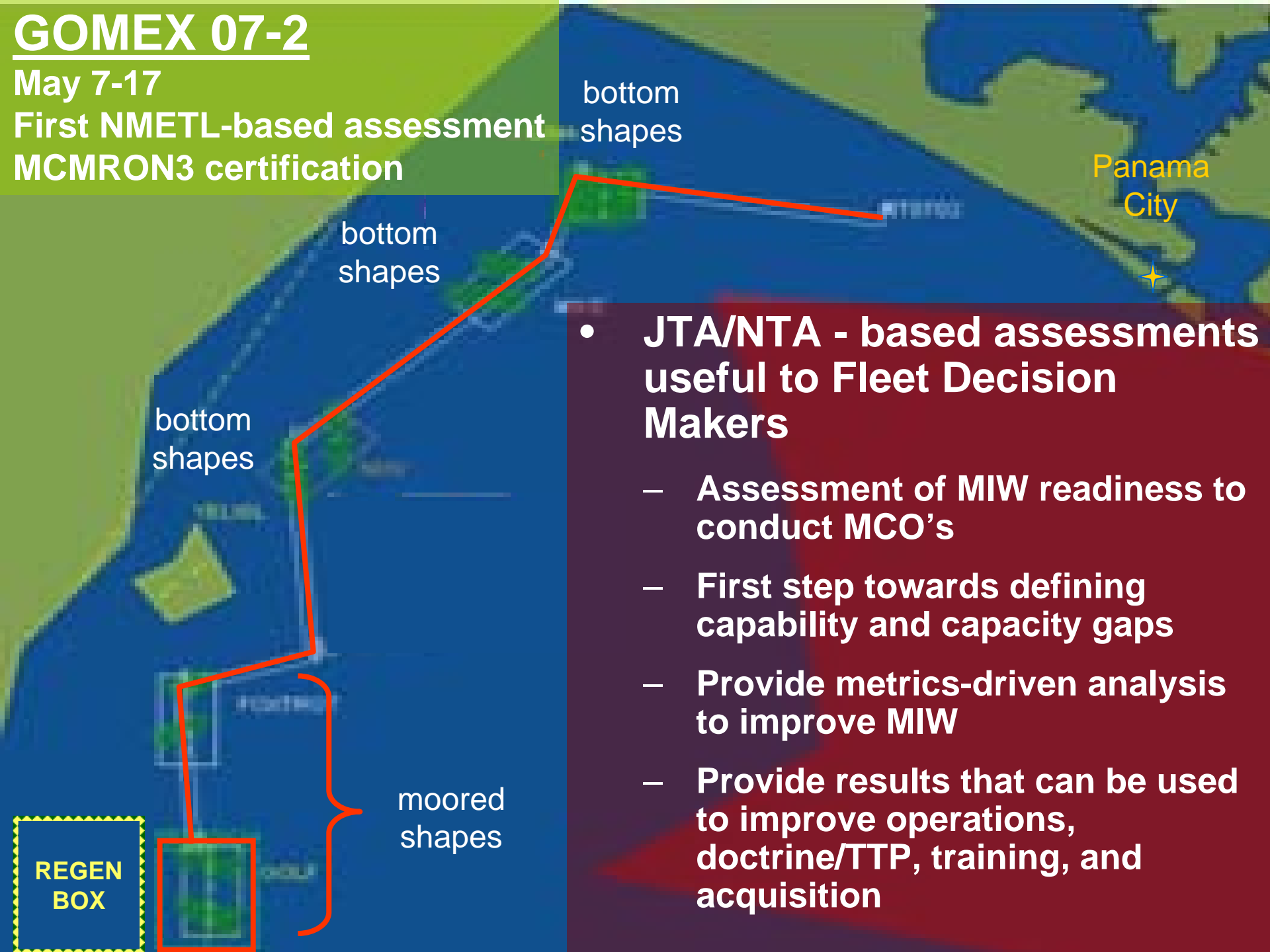
- **JTA/NTA - based assessments**
 - First step towards defining capability and capacity gaps
 - Provide metrics-driven analysis to improve MIW
 - Fleet implications and recommendations
- **End product**
 - Assessment of MIW readiness to conduct MCO's
 - Address MIW solutions through capability improvement strategies
 - Provide results that can be used to improve operations, doctrine/TTP, training, and acquisition
- **Final Assessments to CPF/C3F/C2F/C5F/C7F**

Assessments useful to Fleet Commanders

GOMEX 07-2

May 7-17

First NMETL-based assessment
MCMRON3 certification



- **JTA/NTA - based assessments useful to Fleet Decision Makers**

- **Assessment of MIW readiness to conduct MCO's**
- **First step towards defining capability and capacity gaps**
- **Provide metrics-driven analysis to improve MIW**
- **Provide results that can be used to improve operations, doctrine/TTP, training, and acquisition**



MIW Readiness Effectiveness Measurement (MIREM)



- **Measure the performance of MIW systems / sensors**
 - Effectiveness based – “gap analysis” focused
- **Identify and develop solutions for tactical problems connected with employment of MIW systems**
- **Produce recommendations for effective employment of MIW systems**
- **Validate and support development of TTP**
- **Establishment and maintain an empirical data base for MIW system measurement**

Provide Significant Products in accordance with Fleet Demand



MIREM Process

Technical ...

How Well Does it Work?

- Systems
- Sensors
- Weapons
- Command and Control
- Systems Integration

Training ...

Do we know how to operate it ?

- Systems
- Sensors
- Weapons
- Command and Control
- Systems Integration

Tactical ...

How is it Employed Against the Threat ?

- Tactics Techniques and Procedures

Acquisition/
Procurement

Fleet Synthetic
Trainer

Objective Based
Empirical Data

Analysis



MIREM Next Steps



- **MIWIP FCT developing a “strategic” REM plan**
 - Plan finalized within the next six months
 - REM results feedback into MIWIP and POM process
- **Possible Events:**
 - LOE – Measure CSG mining effectiveness (F/A-18)
 - LOE – Measure AQS-20 performance
 - LOE – Measure surface ship navigation precision ISO swept channel lane widths

**Significant demand for REM,
now and in the foreseeable future**



MIW Training and Assessment Way Ahead



- **MIW training provided to all Strike Groups**
- **Integrated Training & Assessments in FDNF**
 - **COMPTUEX-level integrated training (1 per theater per year)**
 - **MCO-level assessments (1 per theater per year)**
- **Integrated HLD / HLS training and assessment**
 - **COMPTUEX-level integrated training (1 per year)**
 - **Assessment of capability & capacity to support NORTHCOM requirements (1 per year)**
- **MIREM funding restored by CPF for FY08**
 - **Provide timely unit, system and TTP assessment and analysis that is useful to the fleet**



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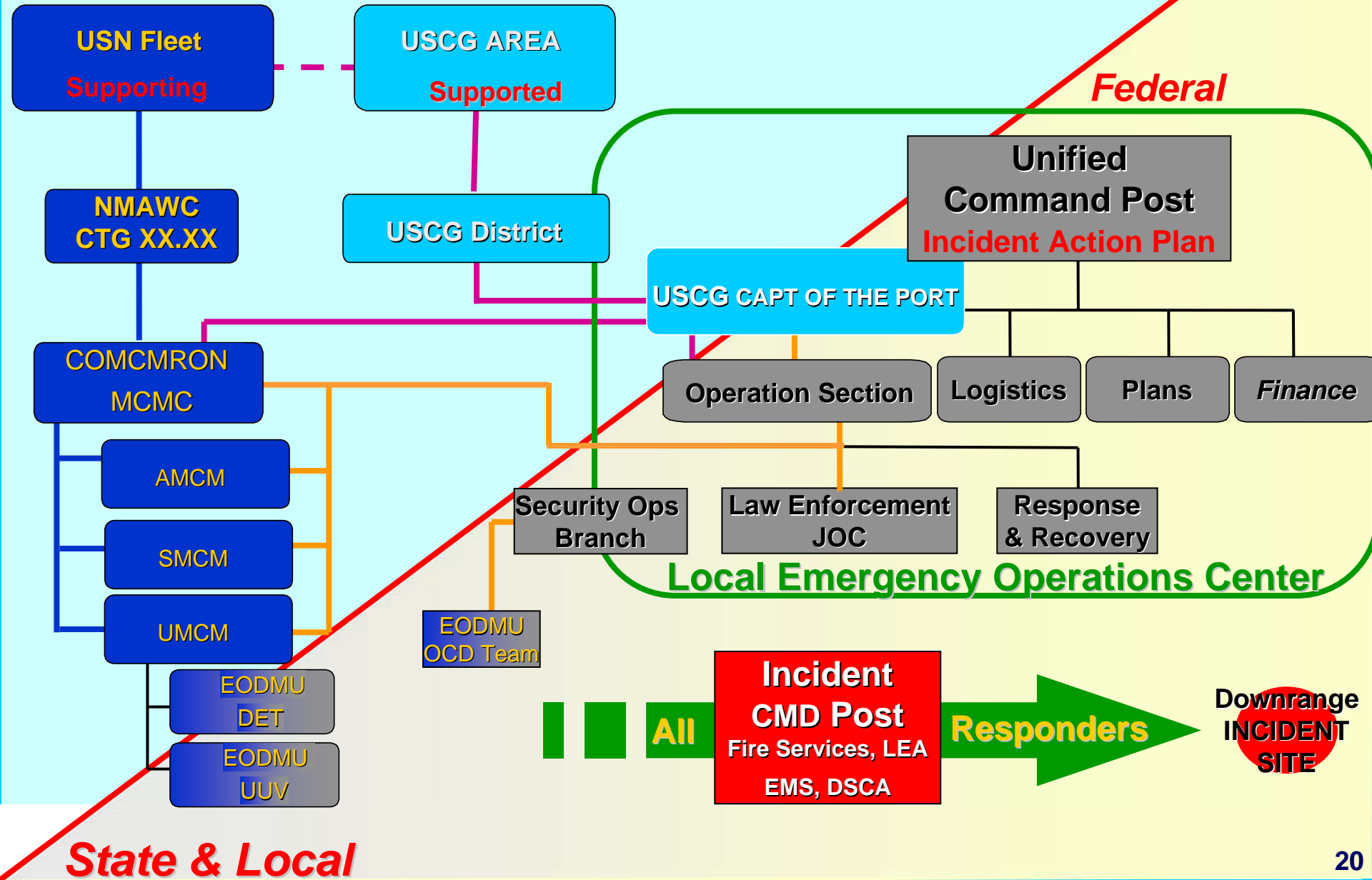
Maritime Homeland Security Recurring Wargaming Themes



- **MCM forces cannot clear port / approaches within acceptable timeline**
- **Response will benefit from inter-agency CONOPS**
- **Prioritization of Ports and response protocols require coordinated National (NSC/DHS/DOC) and DOD guidance**
- **Port Folders for priority ports, complete with pre-event surveys and IPE, should be completed without delay**
- **Emerging technology requires doctrine and TTP**

Mines / UWIEDs = Credible Threat to Maritime Commerce

DoD supports a complex inter-agency C2 structure



State & Local

Port Prioritization?

Many important ports, few MCM assets

- Seattle, WA
- Tacoma, WA
- Portland, OR

- Oakland, CA
- San Francisco, CA

- Los Angeles, CA
- Long Beach, CA
- San Diego, CA



Anchorage, AK

- Honolulu, HI
- Kawaihae, HI
- Kahului, HI
- Hilo, HI

- Houston, TX
- Galveston, TX
- Corpus Christi, TX

- Baton Rouge, LA
- New Orleans, LA
- Pascagoula, MS

- Mobile, AL

- Tampa, FL
- Palm Beach, FL
- Miami, FL

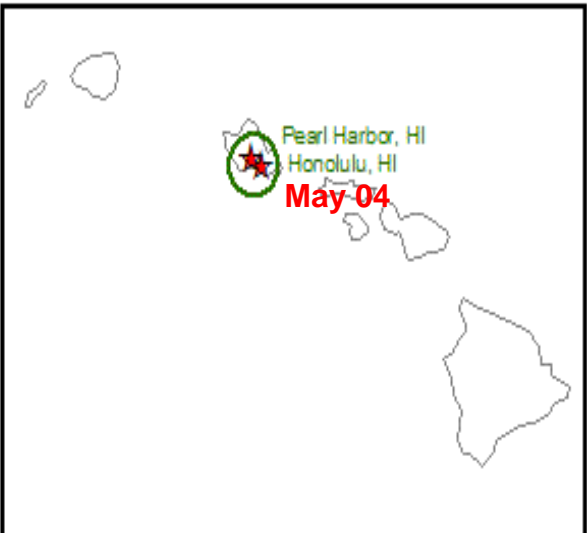
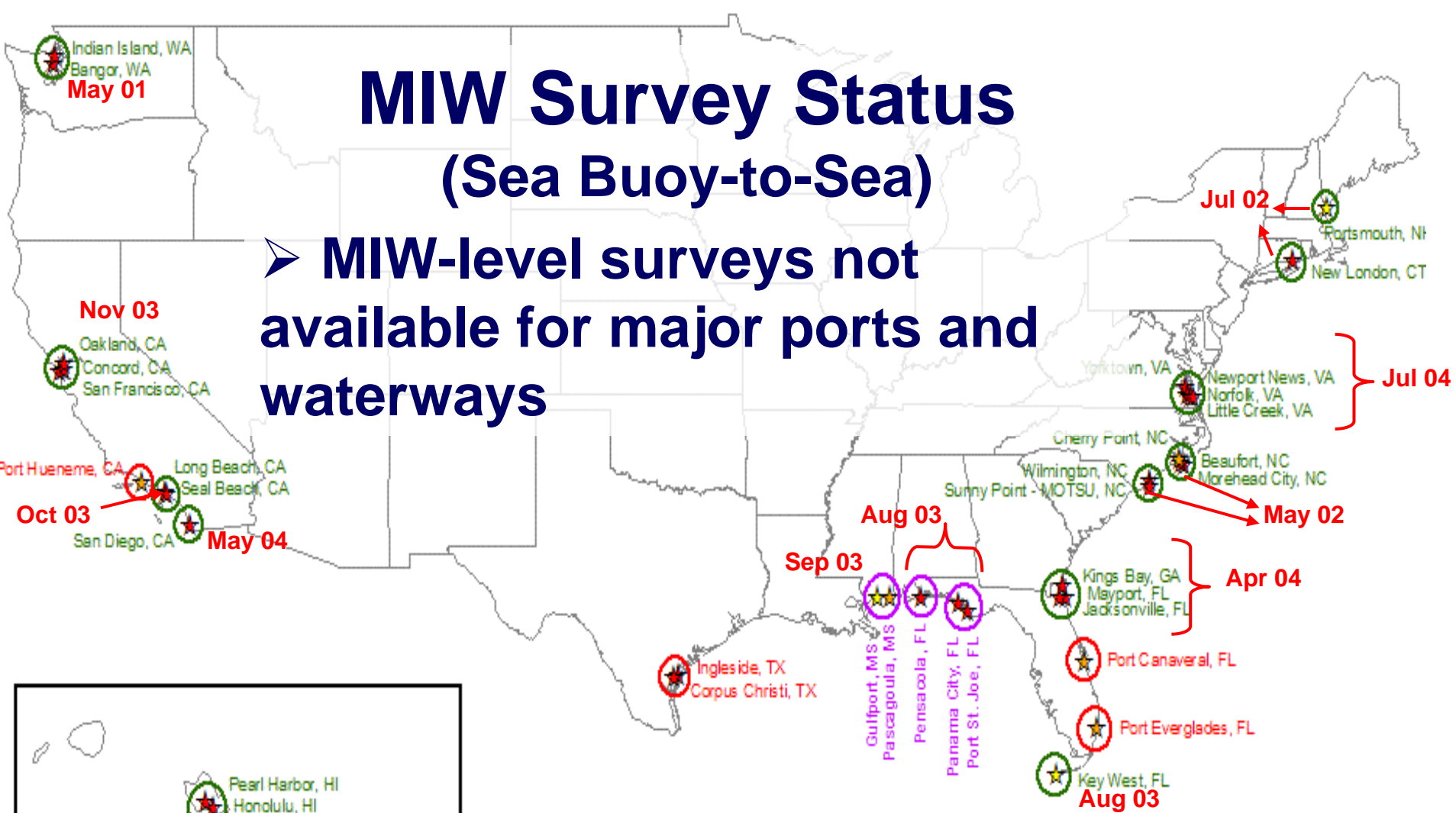
- Jacksonville, FL
- Brunswick, GA
- Savannah, GA
- Charleston, SC
- Wilmington, NC

- Hampton Roads, VA
- Norfolk, VA
- Richmond, VA
- Baltimore, MD
- Wilmington, DE
- Philadelphia, PA
- New York Harbor

- Boston, MA
- Newport, RI

MIW Survey Status (Sea Buoy-to-Sea)

➤ MIW-level surveys not available for major ports and waterways



PRIORITY ROUTES	
PriorityNo	
★	Mil 1 (NAVO)
☆	Mil 2 (NAVO)
☆	Mil 3 (NAVO)

○	Complete
○	In Progress
○	No Survey (Depth or Time Constraint)

IPE Enables Higher Fidelity Pre-event Response Planning



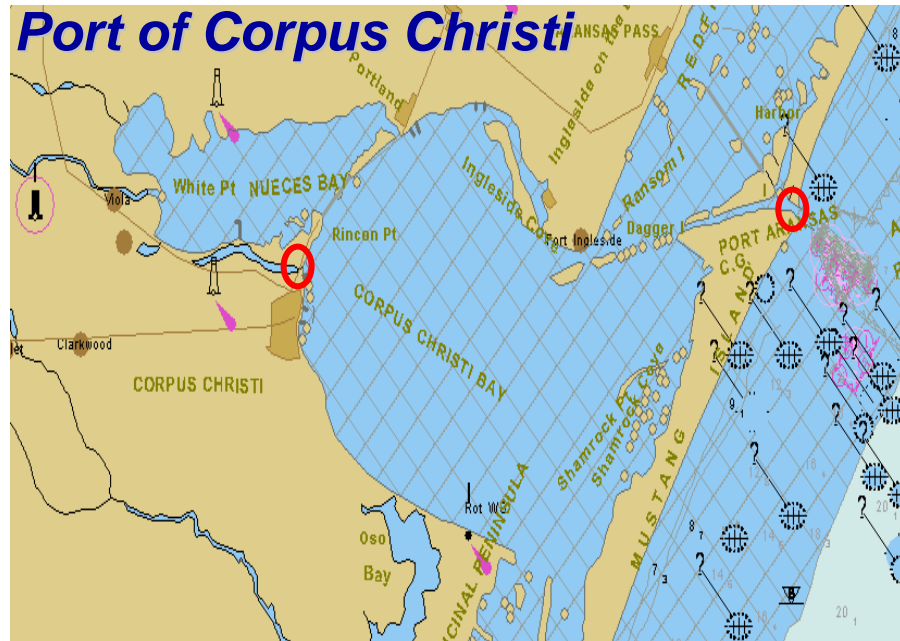
LOOP

Louisiana Offshore Oil Platform (LOOP) – enormous infrastructure considerations

- 5 connecting pipelines tie the LOOP to over 52% of US refining capacity in Texas, Louisiana, and the Midwest
- LOOP pumps 1.2 million barrels per day



“Port Folders” for Priority Ports



Port Infrastructure

Port Priorities (channels, piers, berths)

Environmental Effects

Local Law enforcement and response Capabilities

Key assets and critical infrastructure

Most likely Enemy Courses of Action

Response Gaps

Most effective Navy/MCM assets

In Progress

Extensive petroleum infrastructure

Value

Ranked 20th in foreign commerce trade

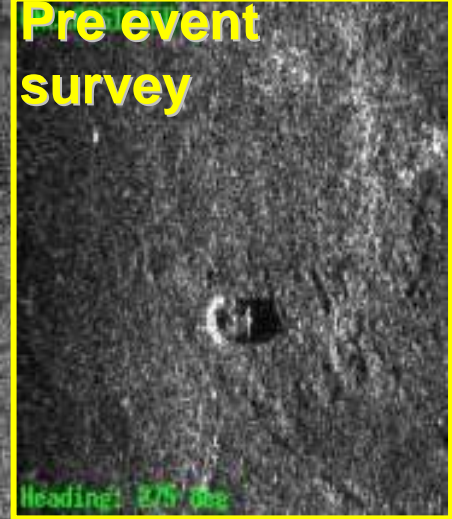
Military port and SPOE

Key refineries for aircraft fuel

Vulnerabilities

Numerous chokepoints along transit route and IVO port infrastructure





Inner Harbor
- 24 Positive Correlations
- 58 Negative Correlations

Angel's Gate
-103 Positive Correlations
- 2 Negative Correlations

Queen's Gate
-30 Positive correlations
-9 Negative correlations

Battlespace Preparation Accelerates MCM Timeline

- Leading discussions WRT port prioritization
- Working on first set of port folders
- Working with NOAA, NAVO to obtain port survey funding
- Conducting surveys with MCM assets in interim



Summary

- **Provide integrated MIW training for deploying Strike Groups**
- **Implement overarching plan for fleet MIW training, assessment and experimentation**
- **Provide MCO-level assessments of MIW capability and capacity**
- **Devise fleet experimentation and testing program that provides timely analysis on TTP and systems**
- **Reduce risk through port surveys and port folders**

**Improving current and future MIW Readiness
at every echelon, in every theater**



- **NMAWC – Naval Mine and Anti-submarine warfare command**
- **BRAC – Base Realignment and Closure**
- **MHC – Coast Mine Hunter**
- **LCS – Littoral Combat Ship**
- **ADCON – Administrative Control**
- **USFFC – U.S. Fleet Forces Command**
- **CPF – Commander Pacific Fleet**
- **C2F – Commander 2nd Fleet**
- **C3F – Commander 3rd Fleet**
- **MHS - message handling service, 2 message handling system**
- **MIW – Mine Warfare**
- **MHQ w/MOC - Maritime Headquarters w/Maritime Operations Center**
- **DoD – Department of Defense**
- **BRAC – Base Realignment and closure**
- **MCM - mine countermeasures ship**
- **MCMRON - Mine Countermeasures Squadron**
- **SDGO – San Diego**
- **COMOMAG - Commander Mobile Mine Assembly Group**
HM-15 - Helicopter Mine Countermeasures Squadron Fifteen
- **NORVA – Norfolk, Virginia**
- **MWTC – Mine Warfare Training Center**