Interagency Coordinating Committee on Oil Pollution Research (ICCOPR)

Identifying the Nation's new oil spill research needs

Briefing to OSPR/Chevron Technology Workshop
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ICCOPR MEMBERSHIP

- **Chair**
  - U.S. Coast Guard
- **Rotating Vice Chairs**
  - Bureau of Safety and Environmental Enforcement
  - U.S. Environmental Protection Agency
  - National Oceanic and Atmospheric Administration
- **Additional Agencies**
  - Bureau of Ocean Energy Management
  - Department of Energy
  - Maritime Administration
  - National Aeronautical and Space Administration
  - National Institute of Standards and Technology
  - Pipeline & Hazardous Materials Safety Administration
  - U.S. Arctic Research Commission
  - U.S. Army Corps of Engineers
  - U.S. Fish & Wildlife Service
  - U.S. Fire Administration
  - U.S. Navy

ORGANIZATIONAL INVESTMENTS

- **ICCOPR Reactivated in 2009**
- **Established a New Charter**
  - Rotating Vice Chair positions to encourage key participation
- **Arctic Research Commission added as member**
  - Provides an Arctic focus to ICCOPR discussions
- **Executive Director Position established**
  - Full Time support to ICCOPR operations
  - Increased outreach
- **ICCOPR Website established**
  - Valuable resource used by industry, public, and academia

BETTER ICCOPR MEETINGS

- **Quarterly meetings reestablished**
  - Well attended (~25 – 35 attendees)
  - Full day meetings, with a day and a half for FY15 first quarter
- **Information Sharing Sessions/Presentations**
  - Gulf of Mexico ecosystem science programs (RESTORE, NAS, GoMRI)
  - API Subsea Dispersant Injection Joint Industry Task Force updates
  - PHMSA pipeline leak detection and rail safety programs
  - Oil spill modeling approaches and capabilities
  - Airborne assessments of blowouts
  - Transportation of diluted bitumen assessment studies
- **Member R&D Coordination Sessions**
  - R&D Status Updates and reporting of results
  - Identifying coordination/collaboration opportunities

EXAMPLE MEMBER COLLABORATION

- **Ohmsett "Ice Month" Equipment Studies**
  - BSEE, Navy, and Coast Guard
- **Environmental Response Management Application**
  - NOAA, BSEE, and Coast Guard
- **Arctic Shield Demonstrations**
  - Coast Guard, NOAA, NASA, Navy, industry
- **Improved Modeling Capabilities**
  - NOAA and BSEE
- **Unconventional Oil & Gas Research**
  - DOE, EPA, and DOI

EXTERNAL COORDINATION/OUTREACH

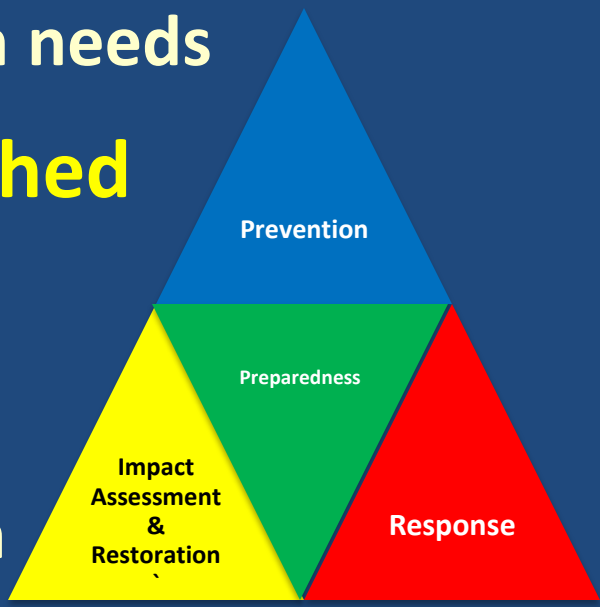
- Gulf of Mexico Research Initiative (GoMRI)
- NAS Gulf Research Program (GRP)
- Gulf Ecosystem Science Coordination Forum
- Prince William Sound RCAC
- International Tanker Owners Pollution Federation
- Industry Technical Advisory Committee
- Norwegian Coastal Administration
- Pacific States/British Columbia Oil Spill Task Force

UPDATING THE R&T PLAN

- **Restarting the Research & Technology Plan**
  - Identify a new baseline of research needs and progress
- **Established a "Characterization Framework"**
  - Tool for tracking research activities and progress
  - Prevention, Preparedness, Response, and Restoration
- **Approved Federal Research Priorities**
  - 150 Priorities in 25 standing research areas
- **Established a six-year revision cycle**
  - Track progress through the cycle
  - Update R&T Plan to reflect latest needs and trends

Step 1: Categorize Research

- **Categorization Framework to provide:**
  - Common terminology
  - Ability to track research
  - Adaptability for emerging research needs
- **Four Research "Classes" Established**
  - Prevention
  - Preparedness
  - Response
  - Injury Assessment and Restoration
- **Standing Research Areas (SRAs) Identified**



Prevention	Preparedness	Response	Injury Assessment and Restoration
• Human Error Factors • Offshore Facilities & Systems • Onshore Facilities & Systems • Waterways Management • Vessel Design • Drilling • Rail/Truck Transport • Pipeline Systems	• Pre-spill Baseline Studies • Information Management and Decision Systems	• Structural Damage Assessment and Salvage • At Source Control and Containment • Chemical and Physical Behavior Modeling • Oil Spill Detection and Surveillance • In- and On-water Containment and Recovery • Shore Containment and Recovery • Dispersants • In-situ Burning • Bioremediation • Alternative Chemical Countermeasures • Oily Waste and Oil Disposal	• Environmental Impacts and Ecosystem Recovery • Environmental Restoration Methods and Technologies • Human Safety and Health • Sociological and Economic Impacts

ICCOPR Standing Research Areas (SRAs)
as of September 17, 2014

Tracking Oil Spill Research

- Research needs mapped to SRAs
- Research projects address a research need

Step 2: Identify Research Needs

- **Document/Literature Search**
  - Laws and regulations
  - After action reports
  - Workshop and conference reports
  - Agency input
- **Oil pollution research needs identified (>900)**
  - Categorized into SRAs and SRA subcategories
  - Deleted duplications, combined similar needs
  - ~570 unique research needs categorized

Step 3: Evaluating Research Needs

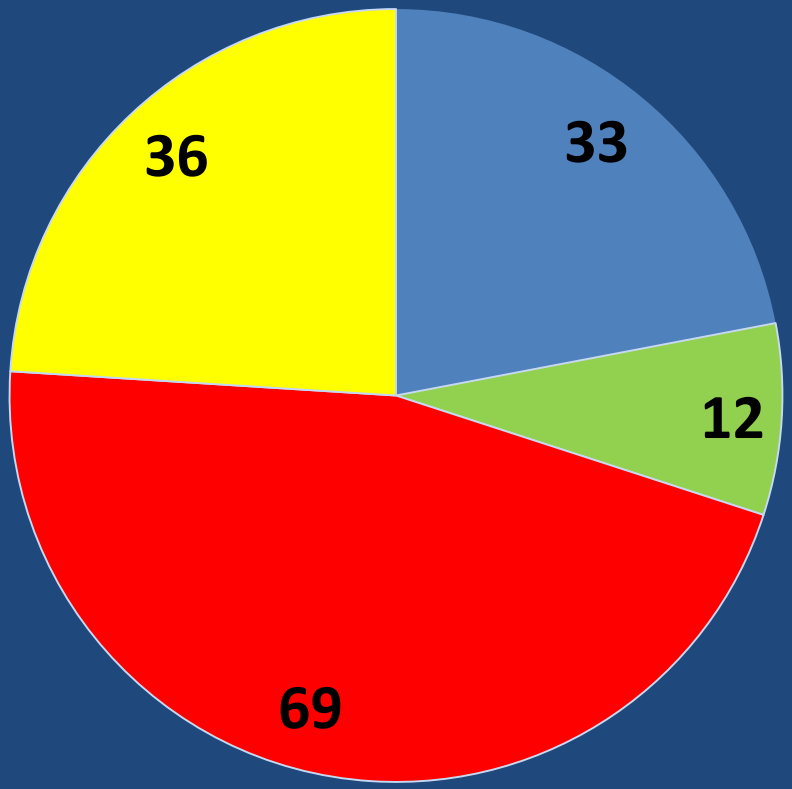
- **Develop a Survey Tool**
  - Questions on value of need to the SRA
  - Scoring scheme/weighting developed

- **Subject Matter Expert Survey**
  - 280 experts identified
  - Assigned to one of the 50 SRAs or Subcategories
  - ~230 responses
  - Raw and weighted scores tabulated
  - Needs ranked under each SRA
  - Missing needs identified

Step 4: Determining Priorities

- **R&T Plan Working Group Meetings**
  - USCG, BSEE, EPA, NOAA, and DOE representatives
- **Ranked needs for each SRA and subcategory**
  - Survey results as starting point
  - Missing needs considered
  - Rewording/consolidation
  - Three top priorities per SRA/SRA subcategory
- **ICCOR vote/approval on September 17, 2014**

Distribution of Research Priorities
by Research Class



- **Prevention**
  11 SRAs & Subcategories
- **Preparedness**
  4 SRAs & Subcategories
- **Response**
  23 SRAs & Subcategories
- **Injury Assessment & Restoration**
  36 SRAs & Subcategories

Prevention Class Priorities

- **Pipeline Systems**
  - Leak Detection/Materials
  - Integrity
- **Drilling**
  - Deepwater Drilling/Technology
  - Reservoir Characterization
- **Onshore Facilities**
  - Inspection, Operations, & Design
  - Emerging Issues

Preparedness Class Priorities

- **Pre-spill Baseline Studies**
  - Habitat and species baselines
  - Oceanographic/Geologic baselines
  - Environmental Baseline Planning
- **Information Management & Decision Systems**

Response Class Priorities

- **Dispersants**
  - Cold Weather/Ice conditions
  - Behavior
  - Impacts
  - Efficacy & Effectiveness
  - Fate
  - Subsurface application
- **Chemical/Physical Behavior Modeling**
  - Arctic Behavior Modeling
  - Oil Behavior Modeling
  - Transport Models
  - Oceanographic Models
  - Emerging Crude Oils

Response Class Priorities

- **Detection & Surveillance**
  - Remote Detection
  - Monitoring
  - Submerged Oil Detection
- ***In Situ* Burning**
  - Effectiveness and Impacts
  - Planning & Technology
- **In/On Water Containment & Recovery**
  - Control and Recovery Technology
  - Recovery Operations and Testing

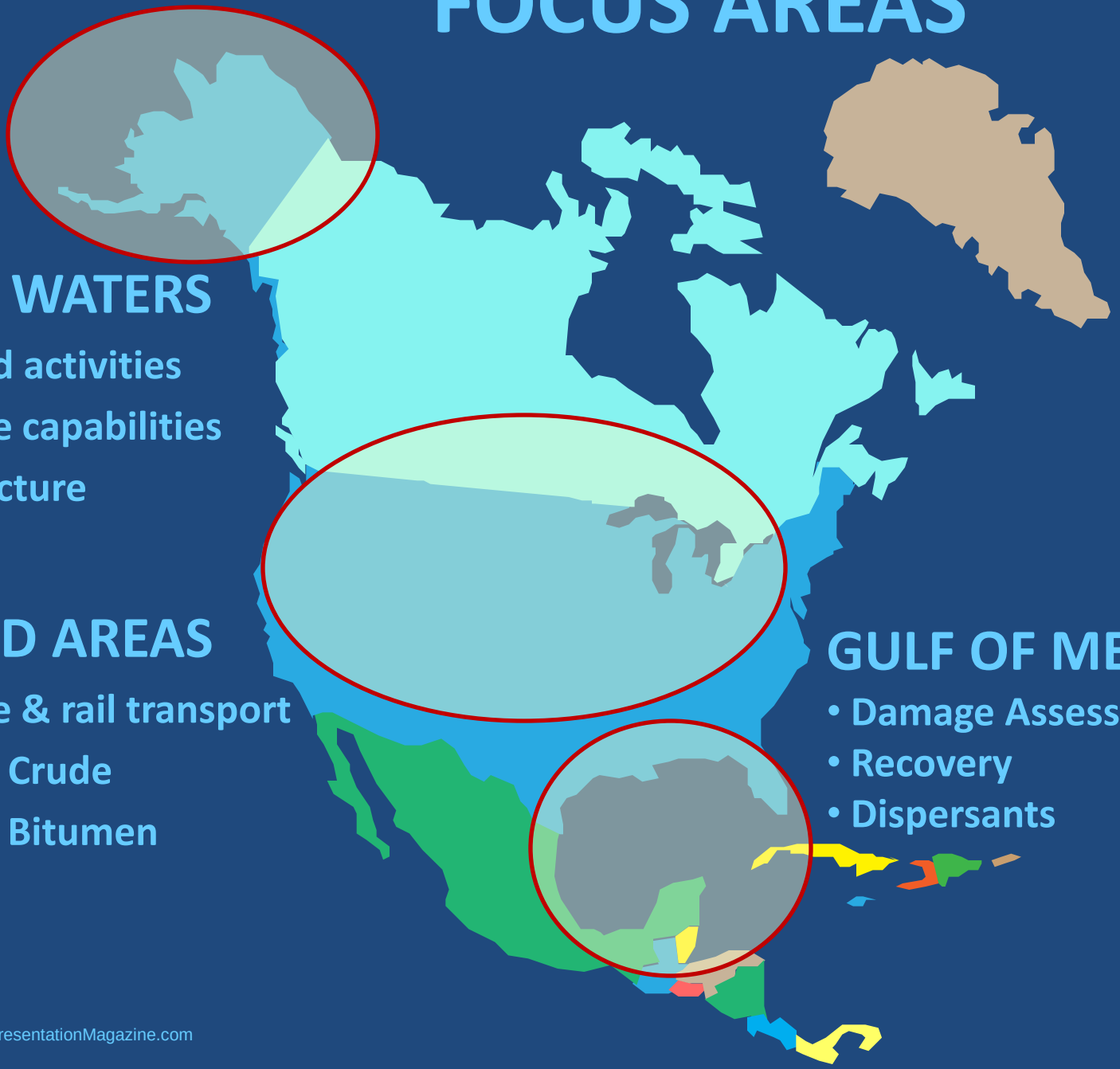
Injury Assessment & Restoration Class Priorities

- **Environmental Impacts & Recovery**
  - Species Impacts
  - Toxicological/Sublethal Impact
  - Sunken and Submerged Oil Impacts
  - Ecosystem/Habitat Impacts
  - Recovery
  - Risk Assessment/Impact Metrics

Injury Assessment & Restoration Class Priorities

- **Human Health Impacts**
  - Safety
  - Human Exposure
- **Sociological & Economic Impacts**
  - Community/Economic Impacts
  - Human Impacts

FOCUS AREAS



ARCTIC WATERS

- Increased activities
- Response capabilities
- Infrastructure

INLAND AREAS

- Pipeline & rail transport
- Bakken Crude
- Diluted Bitumen

GULF OF MEXICO

- Damage Assessment
- Recovery
- Dispersants

QUESTIONS?

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