RDC FY13 Project Portfolio
3rd Quarter Update
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UNCLAS/USCG Research & Development Center
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(Note: Highlighted projects indicate new starts.)
Evaluate Risk Associated with Port/Waterway Closures

Mission Need: A methodology to evaluate the risk of port/waterway closures and the economic impacts they may cause based on their duration.

**Project Objectives:**
- Develop a defensible and repeatable methodology to evaluate the risk of port/waterway closures that can be applied to any port in the U.S., whether inland or coastal.
- Assess the local, regional and national economic impacts of port/waterway closures based on the duration of the shutdown.
- Recommend marine safety safeguards that can mitigate the consequences of port/waterway closures.

**Sponsor:** CG-5PW  
**Stakeholder(s):** LANT 09, LANT 54, DHS S&T (OUP)

**Key Milestone / Deliverable Schedule:**

| Project Start .............................................. | 8 Jan 13 ✔ |
| Status Stevens Institute Magello Product ............. | 8 Apr 13 ✔ |
| Collaborate w/ CREATE & OGA (DOT/VOLPE)… | 22 Apr 13 ✔ |
| Document Preliminary Risk & Data Models ….. | 31 May 13 ✔ |
| Compile Project Findings................................ | 28 Jun 13 ✔ |
| **Port/Waterway Closure Economic Risk Assessment Methodology**  | **Sep 13** |
| Present Findings & Determine Next Steps ........ | Nov 13 |
| Project End .................................................. | Dec 13 |

**Project #:** 5919  
**Tier:** 3  
**RDC POC:** Mr. Warren Heerlein  
860-271-2625  
**CG-926 Domain Lead:** LT Derek Storolis  
202-475-3492

**Expected Benefit:**  
Improve operational performance/efficiency/mission execution/resiliency

**Notes:**

Indicates RDC product.
**PROTECT and Other Deterrence Models**

**Mission Need:** Operational risk-based resource allocation decision models with attributes that incorporate the value of direct contact and virtual means to deterrence and prevention.

**Project Objectives:**

- Develop a tool based on game theory that will randomize patrol schedules weighted towards high-valued targets that maximizes deterrence.
- Develop a tool that will measure the deterrence impact value of CG mission operations.
- Leverage the previously completed security analytic research of DHS Centers of Excellence such as USC/CREATE.

**Sponsor:** DCO-81  
**Stakeholder(s):** LANT-73, DHS S&T (OUP), CG-MSR, CG-771

**Key Milestone / Deliverable Schedule:**

- Project Start: 23 Jun 10 ✓
- **Delivered 5 Prior Year Products**  
  Technology Transition Agreement Signed: 14 Dec 12 ✓
- **Deterrence and the United States Coast Guard:**  
  Enhancing Current Practice with Performance Measures: 22 Mar 13 ✓
- PROTECT Prototype Analytic Vis. Dev. Rpt: 13 Jun 13 ✓
- DIME Pilot Test, Evaluations and Findings Report: Mar 14
- Project End: May 14

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<td>Mr. Craig Baldwin 860-271-2652</td>
<td>LT Derek Storolis 202-475-3492</td>
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**Expected Benefit:**

- Improved Doctrine/CONOPs/TTPs

**Notes:**

- Indicates RDC product.
Develop ARMOR Fish Patrol Schedule Model

Mission Need: Patrol scheduling efficiency and effectiveness improvements.

**Project Objectives:**
- Develop ARMOR model to improve effectiveness and efficiency of CG fishing patrols in support of LMR mission areas.
- Deliver a Final Report of the findings, results, and recommendations for future work using the ARMOR model.

**Sponsor:** CG-MLE  
**Stakeholder(s):** LANT-7, PAC-7, D8, and D1

**Key Milestone / Deliverable Schedule:**

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<tr>
<td>Model for chosen CG Cutters in a District</td>
<td>Feb 14</td>
</tr>
<tr>
<td>Model Constraints Application</td>
<td>May 14</td>
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<tr>
<td>Brief Sponsor/ Viability</td>
<td>May 14</td>
</tr>
<tr>
<td><strong>Final Report of ARMOR Fish Model</strong></td>
<td>Dec 14</td>
</tr>
<tr>
<td>Project End</td>
<td>Jan 15</td>
</tr>
</tbody>
</table>

**Project #:** 7523  
**Tier:** 2  
**RDC POC:** Mr. Sam Cheung  
(860) 271-2673  
**CG-926 Domain Lead:** LT Derek Storolis  
202-475-3492

**Expected Benefit:**
Improve operational performance/ efficiency/ mission execution/ resiliency

**Notes:**
Analysis in Support of Transition

Mission Need: A process to transfer a good idea or COTS tool to CG-wide use.

**Project Objectives:**
- Develop a user-friendly, repeatable checklist on how to transition good ideas to the CG.
- Develop a process to identify a “Champion” for projects to support funding and transition of those projects to CG-wide implementation.

**Sponsor:** CG-926  
**Stakeholder(s):** CG-6, CG-7, CG-9

**Key Milestone / Deliverable Schedule:**
- Project Start .............................................. 11 Dec 12 ✓
- Identify Example Cases................................. 20 May 13 ✓
- Identify Lessons Learned................................ Jul 13
- **Transition Support Roadmap.................... Dec 13**
- Project End ............................................... Jan 14

**Expected Benefit:**
Inform follow-on acquisition/enterprise deployment

**Notes:**

 Indicates RDC product.
Ergonomics Analysis of Communications Centers (COMMCENs)

Mission Need: Improve COMMCEN performance through ergonomic design.

**Project Objectives:**
- Conduct ergonomics analysis of COMMCENs to identify issues.
- Identify constraints on solution set.
- Develop recommendations to provide improved ergonomics and COMMCEN performance.
- Test and evaluate selected recommendations.

**Sponsor:** CG-7412
**Stakeholder(s):** CG-761, CG-933, D8/Mobile, DOT (VOLPE)

**Key Milestone / Deliverable Schedule:**
- Project Start ......................................................... 16 Jan 13 ✔
- Initial Site Visits: Overview of Ergonomics Issues .... Sep 13
- **Briefing on Cursory Ergonomics Issues ............. Dec 13**
- FY14 Study, Recommendations, and Testing .......... Jul 14
- **Briefing on FY14 Results .................................... Sep 14**
- FY15 Study, Recommendations, and Testing .......... Jul 15
- **Briefing on FY15 Results .................................... Sep 15**
- Project End ............................................................. Sep 15

**Expected Benefit:**
Improve operational performance/efficiency/mission execution/resiliency

**Notes:**

**Project #:** 9364  **Tier:** 3
**RDC POC:**
Dr. Anita Rothblum
860-271-2847

**CG-926 Domain Lead:**
Mr. Jaurin Joseph
202-475-3493
Acquisition Support & Analysis (ASA) Branch

Mission Need: Maintain RDC Branch competency and knowledge; provide rapid response; and provide external liaison.

**Project Objectives:**
- Maintain and enhance Branch competencies (HIS, Acquisition Analysis, Cost Modeling, and Risk Analysis).
- Provide CG-9 a core competency for analysis approaches that provide more efficacy and efficiency for acquisition decision-making.
- Provide CG-095 a core competency to supplement their options for conducting strategic analysis.

**Sponsor:** CG-926  
**Stakeholder(s):** CG-095

**Key Milestone / Deliverable Schedule:**
- Project Start ....................................................... 12 Dec 07 ✔
- Sponsor Performance Gap Meetings............. As Required
- **Develop a Life Cycle Cost Estimate............** 9 Apr 13 ✔
- **Develop Mission Analysis Report ..............** 20 Jun 13 ✔
- New Project PEPs/Proposals......................... As Required
- Technology Conferences.............................. As Required
- Project End ......................................................... TBD

**Expected Benefit:**
Add to general R&D knowledge base

**Notes:**

---

**Post-9/11** Focus:
Improved CG Mission Effectiveness
- Additional PWCS Capabilities
- Additional PWCS Capacities

**Post-2012** Focus
Improved CG Mission Efficiency
- Multi-mission Capabilities
- Reduced Capacities

- Requirements Analysis
- Analysis of Alternatives
- Acquisition Decision Support

- Efficiency Scoping Studies
- Risk/Cost Trade-space
- Divestment Analysis

**Project #:** 9995  
**Tier:** 3  
**RDC POC:** Mr. Tim Hughes  
860-271-2726

**CG-926 Domain Lead:**  
LT Derek Storolis 202-475-3492

---

*Indicates RDC product.*
Develop Search Sweep Width Data For Search Objects On Ice

Mission Need: Search planning data for search objects on ice

**Project Objectives:**

- Develop lateral range curves and sweep widths for visual search via MH-65C helicopters and SPC-22 airboats against SAR search objects on ice.
- Use lessons learned during testing to develop recommendations for search employment techniques using current D-9 winter SAR assets.

**Sponsor:** CG-5RI

**Stakeholder(s):** LANT-7, D9

**Key Milestone / Deliverable Schedule:**

- **Project Start:** 7 Nov 11 ✓
- **Phase 1 Go/No-Go:** 29 Dec 11 ✓
- **Phase 1 Testing:** 1 Mar 12 ✓
- **Interim Brief: Lessons Learned and Preliminary Test Planning Guidance for Searches on Ice:** 31 May 12 ✓
- **Decision Point for Phase 2 Testing:** 29 Jun 12 ✓
- **Phase 2 Testing:** 22 Feb 13 ✓
- **Final Report: Preliminary Search Planning Guide for Search Objects on Ice:** Sep 13
- **Project End:** Sep 13

**Expected Benefit:**

- Improved Doctrine/CONOPs/TTPs

**Notes:**

Indicates RDC product.
SAR Distress Signaling Methods and Alternatives

Mission Need: Improved distress signal device.

**Project Objectives:**
- Determine suitability of potential alternatives to pyrotechnic visual distress signals.
- Document and validate key distress signal characteristics.
- Update carriage requirements to eliminate ineffective devices.

**Sponsor:** CG-5RI
**Stakeholder(s):** CG-BSX, CG-ENG

**Key Milestone / Deliverable Schedule:**

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<tr>
<td>1 Nov 10</td>
<td>30 Feb 11</td>
<td>9 Nov 11</td>
<td>31 Jan 12</td>
<td>Jan 14</td>
<td>May 14</td>
<td>Jun 14</td>
<td>Sep 14</td>
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**Project #:** 1101  
**Tier:** 3  
**RDC POC:** Mr. M. Lewandowski  
860-271-2692  
**CG-926 Domain Lead:** LCDR Anthony Erickson  
202-475-3748

**Expected Benefit:**
Influence international standards

**Notes:**
Automated Target Detection for CG FMV Sensors

Mission Need: Automatic target detection aids to support mission execution and EO/IR sensor capabilities.

**Project Objectives:**
- Baseline any current CG full motion video (FMV) automatic target detection capabilities.
- Conduct market research on available technologies and software algorithms to exploit automatic target detection from FMV.
- Evaluate potential costs and benefits of automated detection systems.
- Recommend automated FMV target detection technologies for CG demonstration and evaluation.

**Sponsor:** CG-761  
**Stakeholder(s):** CG-926, CG-711

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<thead>
<tr>
<th>Key Milestone / Deliverable Schedule:</th>
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</thead>
<tbody>
<tr>
<td>Project Start ..................................................</td>
<td>19 Apr 12 ✓</td>
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<tr>
<td>CG Baseline Automated Target Detection......</td>
<td>10 Oct 12 ✓</td>
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<tr>
<td>Release and Analyze Request For Information.....</td>
<td>28 Feb 13 ✓</td>
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<tr>
<td><strong>Automated Target Detection for Full Motion Video</strong></td>
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</tr>
<tr>
<td><strong>Interim Report..................................................</strong></td>
<td>8 May 13 ✓</td>
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<tr>
<td><strong>Apply Auto-Detect Technology to FMV Data.........</strong></td>
<td>Sep 13</td>
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<tr>
<td><strong>Computer-based Evaluation of FMV Auto-Detect...............</strong></td>
<td>Jan 14</td>
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<tr>
<td>Project End ..........................................................</td>
<td>Feb 14</td>
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<tr>
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<th>RDC POC:</th>
<th>CG-926 Domain Lead:</th>
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<tr>
<td>7607</td>
<td>3</td>
<td>Dr. Andrew Niccolai 860-271-2670</td>
<td>CDR Albert Antaran 202-475-3049</td>
</tr>
</tbody>
</table>

**Expected Benefit:**
Improve operational performance/efficiency/mission execution/resiliency

**Notes:**

Indicates RDC product.
Vertical Take-Off and Landing (VTOL) Unmanned Aerial System (VUAS) Flight Demonstration Off the National Security Cutter (NSC)

Mission Need: Expand CG research and operational experience w/ UAS capabilities in a maritime environment.

**Project Objectives:**
- Procure all major Fire Scout system subcomponents except air vehicle.
- Execute flight deck certification, engineering and airspace processes involved in order to operate Vertical Unmanned Aerial System (VUAS) off the National Security Cutter (NSC). Install and test Fire Scout system from an NSC.
- Conduct analysis and report on effectiveness of VUAS to contribute to NSC mission performance.

**Sponsor:** CG-931
**Stakeholder(s):** CG-926, CG-711, CG-751, CG-932, RNWC

**Key Milestone / Deliverable Schedule:**

- **Project Start** …………………………………………………. 1 Oct 09 ✓
- **Reinitiate Project** …………………………………………. 8 Feb 12 ✓
- **Select Candidate NSC for Test**…………….. 30 Nov 12 ✓
- **GCS System Acceptance Test**………………… Dec 14
- **NSC Installation and Test**…………………………… Feb 15
- **Final Rpt “Evaluation of Fire Scout for Use on NSC”**…………………………….. Aug 15
- **Project End**………………………………………………. Sep 15

**Project #:** 7802  **Tier:** 1  **RDC POC:** Dr. Andrew Niccolai 860-271-2670  **CG-926 Domain Lead:** CDR Albert Antaran 202-475-3049

**Expected Benefit:**

Inform follow-on acquisition/enterprise deployment

**Notes:**

- Includes funding from FY10 UAS Earmark.
- Includes funding from FY12 UAS Earmark.
Shipboard Small UAS Capability Demonstration

Mission Need: Identify the risks, benefits, and limitations of operating small UAS off the National Security Cutter (NSC).

**Project Objectives:**
- Prepare for a sUAS installation on an NSC to include ECP, Interim Flight Clearance, Topside Analysis and other prerequisites.
- Execute two-phased Small Unmanned Aircraft System (sUAS) demonstrations from National Security Cutter (NSC).
- Analyze and report on potential sUAS contributions to NSC mission capabilities and impact on ship and crew operations.

**Sponsor:** CG-711

**Stakeholder(s):** CG-926, CG-931, CG-751, CG-932, RNWC

**Key Milestone / Deliverable Schedule:**

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<thead>
<tr>
<th>Event</th>
<th>Date</th>
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<tbody>
<tr>
<td>Project Start</td>
<td>27 Sep 11 ✓</td>
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<tr>
<td>Configuration Control Board Approval</td>
<td>14 Apr 12 ✓</td>
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<tr>
<td>Shore Side Test</td>
<td>6 May 12 ✓</td>
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<tr>
<td>Phase I Demonstration off USCGC Stratton</td>
<td>18 Aug 12 ✓</td>
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<tr>
<td><strong>sUAS Interim Report and Recommendations</strong></td>
<td>14 Nov 12 ✓</td>
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<tr>
<td>Phase 2A Demonstration off USCGC Bertholf</td>
<td>31 May 13 ✓</td>
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<td>Phase 2B Demonstration off USCGC Bertholf</td>
<td>Feb 14</td>
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<tr>
<td><strong>sUAS Final Report and Recommendations</strong></td>
<td>Jul 14</td>
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<tr>
<td>Project End</td>
<td>Aug 14</td>
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</table>

**Expected Benefit:**
Inform follow-on acquisition/enterprise deployment

**Notes:**
Includes funding from FY10 UAS Earmark.
Aviation Branch Support

Mission Need: Maintain RDC Branch competency and knowledge; provide rapid response; and provide external liaison.

**Project Objectives:**
- Maintain/develop Branch technical competencies and infrastructure in CG-relevant aviation/T&E technology.
- Support Aviation SIT.
- Report on development & test of Thermal Oscar target.
- Report on analysis of USCG airborne spill surveillance.
- Seek opportunities to support CG/DHS aviation programs that close capability gaps and improve mission performance.

**Sponsor:** CG-926  
**Stakeholder(s):**

**Key Milestone / Deliverable Schedule:**

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<th>Project Start</th>
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<tr>
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<tr>
<td>Potential Project Field Visits</td>
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<tr>
<td>New Project PEPs &amp; Proposals</td>
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<tr>
<td>Technology Demos</td>
<td>As Required</td>
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<td>Technology Conferences</td>
<td>As Required</td>
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<td>Project End</td>
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</table>

**Project #:** 9992  
**Tier:** 3  
**RDC POC:** Mr. William Posage 860-271-2688  
**CG-926 Domain Lead:** CDR Albert Antaran 202-475-3049

**Expected Benefit:**
Add to general R&D knowledge base

**Notes:**
Coastal Surveillance System (CSS)
Mission Need: IOC Segment I (WATCHKEEPER) integration of sensor information.

**Project Objectives:**
- Integrate the SIMON/OMS Sensor Management System (SMS) at selected USCG, IOC Sectors (LA/LB, ST PETE, SD….).
- Integrate sensor into SIMON/OMS and test continuity of data collection into WATCHKEEPER from air & surface assets.
- Conduct data flow assessments at test sites to ensure CG & DHS spectrum of contacts/targets meet IOC – ORD req.

**Sponsor:** CG-9333  
**Stakeholder(s):** CG-741, CG-761, DHS S&T (BMD)

**Key Milestone / Deliverable Schedule:**

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<th>Due Date</th>
<th>Milestone</th>
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<td>Project Start</td>
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<td>Complete Data Assessments on Sensor-SMS WATCHKEEPER</td>
<td>TBD+12 Mos.</td>
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<td>Final Report on Segment II Efforts of CSS</td>
<td>TBD+12 Mos.</td>
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<td>TBD+23 Mos.</td>
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**Expected Benefit:**
Inform follow-on acquisition/enterprise deployment

**Notes:**
- Indicates RDC product.

**Project #:** 2013.036  
**Tier:** 1  
**RDC POC:** LTJG Kevin Sorrell 860-271-2727  
**CG-926 Domain Lead:** CDR Tung Ly 202-475-3011

7/11/2013
Boat Crew Communication Capabilities Study

Mission Need: An effective and reliable internal-external communications capability for Small Boat crews.

**Project Objectives:**
- Determine performance needs and gaps in CG internal-external Integrated Communications Systems (ICS) across boat classes.
- Resolve BCCS Problems Documented in DHS IG Report
- Optional: Conduct field test and assessment of representative standardized ICS.

**Sponsor:** CG-7311  
**Stakeholder(s):** DOG, CAIT-SC

**Key Milestone / Deliverable Schedule:**

- Project Start ........................................... 27 May 10 ✓
  - BCCS Capability Gaps and System Test Recommendations Briefing ..................16 Jun 11 ✓
  - IG Resolution Testing Expanded from Sta NLON to MSST Kings Bay .................. 30 Apr 12 ✓
  - BCCS Briefing on IG Resolution .................. 14 Sep 12 ✓
  - Project End ........................................... 12 Oct 12 ✓

**Expected Benefit:**
Direct Product Line/Core Technology Support (Tech refresh, DMS, etc)

**Notes:**

**Project #:** 5203  
**Tier:** 3  
**RDC POC:** Ms. Judi Connelly 860-271-2643  
**CG-926 Domain Lead:** CDR Tung Ly 202-475-3011

★ Indicates RDC product.
Non-Compliant Vessel (NCV) Video Recorder

Mission Need: CG OTH platforms ability to capture video imagery of operations or surroundings.

Project Objectives:
- Evaluate a range of technical capabilities a video system can provide in support of OTH operations and missions.
- Support and validate operational requirements and Key Performance Parameters (KPPs).
- Collect quantitative data points that can be used to determine the range of technical performance for various systems.

Sponsor: CG-761
Stakeholder(s): LANT-7, CG-731

Key Milestone / Deliverable Schedule:

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<th>Key Milestone / Deliverable</th>
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<td>Project Start</td>
<td>20 Oct 11</td>
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<td>Non-Compliant Vessel Video</td>
<td>20 Jun 12</td>
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<td>Technology Options Brief</td>
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<tr>
<td>Initial Evaluation</td>
<td>16 Dec 12</td>
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<td>Extended Evaluation</td>
<td>Ju1 13</td>
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<td>Technology Transition</td>
<td>Sep 13</td>
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<td>Agreement (TTA) Approval</td>
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<td>Non-Compliant Vessel Video</td>
<td>Sep 13</td>
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<td>Recorder: Final Report</td>
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<td>Project End</td>
<td>Sep 13</td>
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Expected Benefit:
Improve operational performance/efficiency/mission execution/resiliency

Notes:

Project #: 5704
Tier: 3
RDC POC: LTJG Kevin Sorrell
860-271-2727
CG-926 Domain Lead: CDR Tung Ly
202-475-3011

Indicates RDC product.
Non-Compliant Vessel (NCV) Contraband Marker

Mission Need: A method to effectively tag and track jettisoned contraband for later recovery.

**Project Objectives:**

- Evaluate a range contraband marker systems to support OTH LE activities and boat marking systems for adrift and abandoned boats.
- Collect quantitative data points that can be used to determine the range of technical performance for various systems.
- Generate, support, and validate operational requirements and Key Performance Parameters (KPPs) for a potential future acquisition.

**Sponsor:** CG-761  
**Stakeholder(s):** LANT-7, CG-731

### Key Milestone / Deliverable Schedule:

<table>
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<tr>
<th>Event</th>
<th>Date</th>
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<tr>
<td>Project Start</td>
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<tr>
<td>Non-Compliant Vessel Contraband Marker:</td>
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<tr>
<td>Technology Selection Briefing</td>
<td>20 Jan 13</td>
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<tr>
<td>Initial Evaluation</td>
<td>Jul 13</td>
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<td>Extended Evaluation</td>
<td>Nov 13</td>
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<td>Technology Transition Agreement (TTA)</td>
<td>Dec 13</td>
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<tr>
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<td>Feb 14</td>
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<td>Project End Phase 1/ Phase 2 Start</td>
<td>Apr 14</td>
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<td>Develop &amp; Test Abandoned Vessel Tracking</td>
<td>Feb 15</td>
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<td>Abandoned Vessel Tracking: Final Report</td>
<td>Jun 15</td>
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<tr>
<td>Project End Phase 2</td>
<td>Aug 15</td>
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**Project #:** 5707  
**Tier:** 3  
**RDC POC:** LTJG Kevin Sorrell  
860-271-2727  
**CG-926 Domain Lead:** CDR Tung Ly  
202-475-3011

**Expected Benefit:**

Improve operational performance/efficiency/mission execution/resiliency

**Notes:**

- Indicates RDC product.
Alternative Precise Network Timing

Mission Need: A precise timing alternative in the event GPS becomes unavailable.

Project Objectives:
- Research, evaluate, and document at least one promising wireless technical approach for passing precise time using LORAN and dGPS frequencies.

Sponsor: CG-5PW
Stakeholder(s): CG-6

Key Milestone / Deliverable Schedule:
- Project Start .......................... 5 Dec 11 ✓
- Statement of Obligation for CRADA .......... 23 Dec 11 ✓
- CRADA Signed by Both RDC and UrsaNav .... 11 Jan 12 ✓
- Testing at LORAN Station Wildwood, NJ ....... 12 Apr 13 ✓
- Testing at LORAN Station Las Cruces, NM .......... Jul 13
- Results of Alternative to GPS Timing Tech......... Sep 13
- Briefing of Alternative to GPS Timing Tech to HQ … Sep 13
- Project End .................................................. Sep 13

Expected Benefit:
Add to general R&D knowledge base

Notes:
Project includes use of a CRADA.

Project #: 6206
Tier: 3
RDC POC: LT Mike Grochowski 860-271-2815
CG-926 Domain Lead: CDR Tung Ly 202-475-3011

Indicates RDC product.
Arctic HF Communications Technology Assessments

Mission Need: Increased communications capability in the Arctic to improve performance.

**Project Objectives:**
- Survey, evaluate, and document the capabilities of existing USCG and non-USCG maritime Arctic comms technologies.
- Develop and demonstrate the feasibility of connecting shipboard mobile AIS transponders on Class A vessels to existing Iridium satellite links, to include an initial system architecture for extended ranges.
- Observe HF and satellite coverage in the Arctic Region and compare with modeled coverage.
- Provide initial Life Cycle (technical and cost) information to support implementation decisions.

**Sponsor:** CG-761  
**Stakeholder(s):** CG-6xx, C3CEN, DHS S&T (BMD)

### Key Milestone / Deliverable Schedule:

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<th>Deliverable</th>
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<tr>
<td>As-Is vs. Alternative System Performance</td>
<td>Nov 13</td>
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<tr>
<td>Arctic Communications Technology Recommendations and Path Forward</td>
<td>Feb 14</td>
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<tr>
<td>Observe HF and Satellite Coverage in the Arctic Region</td>
<td>Jul 14</td>
</tr>
<tr>
<td>Develop &amp; demonstrate feasibility of shipboard mobile AIS transponders on Class A vessels</td>
<td>Oct 14</td>
</tr>
<tr>
<td>Lifecycle Information Report (Technical and Cost)</td>
<td>Feb 15</td>
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**Notes:**

**Expected Benefit:**
Expansion of communications and domain awareness in the Arctic Region.

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**Project #:** 6208  
**Tier:** 3  
**RDC POC:** Ms. Elizabeth Weaver  
860-271-2732  
**CG-926 Domain Lead:** CDR Tung Ly  
202-475-3011

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**Indicates RDC product.**
Alternative Asset Iceberg Reconnaissance Demonstration

Mission Need: Determine if the IIP’s mission can be accomplished by using alternative assets.

Project Objectives:
- Perform a baseline comparison of iceberg surveillance and detection using alternative assets.
- Optimization of algorithms used to process data from alternative assets to improve surveillance and detection capabilities.
- Perform a side-by-side comparison of iceberg limit modeling to determine the operational effectiveness of alternative assets conducting iceberg surveillance and modeling.

Sponsor: CG-WWM-3
Stakeholder(s): CG IIP, CG-257

Key Milestone / Deliverable Schedule:

|---------|---------------|-------------------------------|-----------------------|-------------------------------------------------|-------------------------------|-------------------------------------------------|------------|

Project #: 6502
Tier: 3
RDC POC: LT Jeffrey Young 860-271-2679
CG-926 Domain Lead: CDR Tung Ly 202-475-3011

Expected Benefit:
Improve operational performance/efficiency/mission execution/resiliency

Notes:
Mobile Asset Tracking and Reporting Device

Mission Need: A flexible ad hoc interoperable communication/information system to enhance the Coast Guard’s ability to respond to Incidents of National Significance.

**Project Objectives:**
- Prototype a flexible interoperable communication/information system, processes, and procedures to enhance the USCG’s ability to transfer information that will assist personnel responding to an IONS (e.g., oil spill).
- The system, processes, and procedures should make use of the equipment the responders are expected to bring to the incident such as smartphones, tablet computers, and laptops.
- Utilize CRADA where applicable and IAA for Lincoln Labs.

**Sponsor:** CG-761  
**Stakeholder(s):** CG-CPE, CG-6, DHS S&T (OIC)

**Key Milestone / Deliverable Schedule:**
- **Project Start** …………………………………………… 19 Aug 11 ✓
- **CRADA Signed (RDC and General Dynamics)** ……… 26 Apr 12 ✓
- **Technical Assessment Brief for Mobile Asset Tracking and Reporting Device…………………. 9 May 13 ✓**
- **Key Decision Point for Prototype Completion….. 30 May 13 ✓**
- **Technology Demonstrations …………………………Oct 14**
  - Build Prototypes
  - Conduct Technical Demonstrations
- **Mobile Asset Tracking and Reporting Device: IONS System Test Results and Recommendations………. Dec 14**
- **Interagency ICS Software Tool Suite Test Results and Recommendations…………………… Jan 15**
- **Project End …………………………………………… Feb 15**

**Expected Benefit:**
Improve operational performance/efficiency/mission execution/resiliency

**Notes:**
- Includes funding from FY11 Oil Spill Research Earmark.
- Project includes use of a CRADA.
- Project Includes FY14 Idea 128 and 125
## Analysis of Solid State Marine RADAR

**Mission Need:** Assess the characteristics of newer solid state marine RADAR.

### Project Objectives:
- Investigate new advances in marine RADAR, including solid state developments.
- Investigate problems associated with low-power RADARs.

### Sponsor:
CG-257

### Stakeholder(s):
CG-64, CAIT-SC

### Key Milestone / Deliverable Schedule:

<table>
<thead>
<tr>
<th>Project #</th>
<th>Tier</th>
<th>RDC POC</th>
<th>CG-926 Domain Lead</th>
</tr>
</thead>
<tbody>
<tr>
<td>8106</td>
<td>3</td>
<td>LT Jeff Young 860-271-2679</td>
<td>CDR Tung Ly 202-475-3011</td>
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<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Nov 11</td>
<td>Project Start</td>
</tr>
<tr>
<td>25 Apr 12</td>
<td>Define and Scope of Solid State RADARs for CG</td>
</tr>
<tr>
<td>15 Jun 12</td>
<td>RFI to Industry</td>
</tr>
<tr>
<td>27 Jul 12</td>
<td>Market Research Complete</td>
</tr>
<tr>
<td>31 Aug 12</td>
<td>Compare Solid State Radar to CG Systems</td>
</tr>
<tr>
<td>28 Nov 12</td>
<td>(U) Comparative Analysis on CG Capability against Solid State Marine RADAR</td>
</tr>
<tr>
<td>19 Dec 12</td>
<td>Project End</td>
</tr>
</tbody>
</table>

### Expected Benefit:
Direct Product Line/Core Technology Support (Tech refresh, DMS, etc)

### Notes:

★ Indicates RDC product.
Roadmap for Ozone Widget Framework/ Joint C2 Common User Interface Implementation Plan

Mission Need: A Roadmap of CG and DoD CUI Application development process that accomplishes Joint Agency Certification and Accreditation of Coast Guard One View and follow on developed applications.

**Project Objectives:**
- Provide a High Level Brief on the Scope of work required to migrate the C2 IT enterprise and applications to meet Joint Agency Interoperability requirements.
- Provide a Roadmap to guide CG C2 IT application development and migration.
- CG1V releases vs. CG C2/OWF Roadmap to show relationship and potential schedule issues.
- Provide CG C2/OWF Roadmap with AGILE Development.

**Sponsor:** CG-761  
**Stakeholder(s):** CG-2, Joint Agency, C3CEN, C4IT, TISCOM

**Key Milestone / Deliverable Schedule:**
- **Migration of the C2 IT enterprise and application Agency to meet Joint Interoperability** ....... TBD+8 Mos.  
- **CG C2/OWF ROADMAP** ................. TBD+10 Mos.  
- **CG1V releases vs. CG C2/OWF Roadmap**... TBD+16 Mos.  
- **CG C2/OWF ROADMAP with AGILE Development** ................. TBD+20 Mos.  
- **Project End** ................. TBD+20 Mos.

**Project #:** 8108  
**Tier:** 3  
**RDC POC:** Ms. Val Arris  
860-271-2849  
**CG-926 Domain Lead:** CDR Tung Ly  
202-475-3011

**Expected Benefit:**  
Direct Product Line/Core Technology Support (Tech refresh, DMS, etc)

**Notes:**

Indicates RDC product.

Mission Need: Explore improvement of wide-area surveillance capability using Tactical Data Links

Project Objectives:

• Demonstrate enhances CG TCPED cycle through increased persistency against contacts/targets of interest.
• Demonstrate the wide area surveillance and tactical data dissemination amongst NORAD/AFNORTH/FleetForces and D1/D8/D5 using MILSTD 6016D for tactical data links
• Demonstrate the sharing of C2/SA information to non-C2 platforms and amongst USCG air/surface and land assets.

Sponsor: CG-761
Stakeholder(s): LANTAREA; D1/D8; Sector Boston, Sector Miami

Key Milestone / Deliverable Schedule:

Project Start .............................................. 1 Apr 13 ✓
Kickoff Mtgs .............................................. 1 May 13 ✓
Contract/CRADA Award ............................ 8 May 13 ✓
Phase I – Surface Demo of TDL ...................... Jul 13
★ Joint Technology Demo Phase I Brief ......... Sep 13
Phase II – Surface/Air Demo Tactical Data Links .... Feb 14
★ Joint Technology Demo Phase II Brief .......... Apr 14
★ Joint Technology Demo Final Report .......... May 14
Project End ............................................... Jun 14

Expected Benefit:

Improve operational performance/efficiency/mission execution/resiliency.

Notes:

• The project is governed by a CRADA with Engility Corporation
This effort uses their product Joint Range Extender (JRE) for Tactical Data Link Connectivity

Project #: 8109
Tier: 2
RDC POC: Ms. Judi Connelly 860-271-2643
CG-926 Domain Lead: CDR Tung Ly 202-475-3011

Phase I - Surface

UNCLAS/USCG Research & Development Center
**Advanced Communications Intelligence (COMINT) Technology**

**Mission Need:** Process, exploit, and disseminate (PED) signals of interest as part of shipboard collections platforms to support advanced surveillance, identification, classification, and interception.

**Project Objectives:**
- Evaluate COMINT capabilities on CG vessels and compare performance against mission needs and requirements.
- Identify candidate systems that have the potential to meet requirements.
- Conduct demonstrations to validate candidate technical solutions for CG requirements.

**Sponsor:** CG-257

**Stakeholder(s):** CGCG, CG-761, CAIT-SC

**Key Milestone / Deliverable Schedule:**
- Project Start .................................................. 8 Nov 11 ✔
- Technology Research........................................ 29 Mar 13 ✔
- Tech Review & Gap Analysis............................. 5 Jun 13 ✔
- Identify Solutions ............................................ 5 Jun 13 ✔
- Conduct Demonstrations ................................. Jul 13
- **Advanced CG COMINT Capabilities: Next Step**
  - Shipboard Capabilities.................................... Oct 13
- Project End ................................................... Dec 13

**Project #:** 8305  
**Tier:** 3  
**RDC POC:** Mr. Jay Spalding  
860-271-2687  
**CG-926 Domain Lead:** CDR Tung Ly  
202-475-3011

**Expected Benefit:**
Direct Product Line/Core Technology Support (Tech refresh, DMS, etc)

**Notes:**

[Indicates RDC product.]
C4ISR Branch Support
Mission Need: Maintenance of RDC Branch competency and knowledge; provide rapid response; and provide external liaison.

Project Objectives:
• Maintain RDC competency in understanding present and future CG Mission Performance Gaps relating to Command, Control, Computers, Communications, Intelligence, Surveillance and Reconnaissance.
• Maintain RDC competency in technologies that currently or potentially could be used to eliminate or reduce Mission Performance Gaps across multiple CG Offices/Missions.
• Support the development of proposals for the TST & TENCAP Programs.

Sponsor: CG-926
Stakeholder(s):

Key Milestone / Deliverable Schedule:
Project Start……………………………………… 3 Dec 07 ✔
Sponsor Performance Gap Meetings………… As Required
Potential Project Field Visits………………….. As Required
New Project Execution Plans (PEP’s)………… As Required
New Project Proposals………………………… As Required

Technology Demos – Mobile Apps…………… May 13
Technology Conferences……………………… As Required
Project End……………………………………… TBD

Expected Benefit:
Add to general R&D knowledge base

Notes:

Project #: 9991 Tier: 3 RDC POC: Dr. Jack McCready 860-271-2738
CG-926 Domain Lead: CDR Tung Ly 202-475-3011

Indicates RDC product.
Risk Assessment Methodology to aid USATON Design Changes

Mission Need: Updates to the design standards of the U.S. Maritime Aids to Navigation System (USATONS) based on emergent and current e-Navigation technology.

**Project Objectives:**
- Determine current and proposed carriage requirements for e-Navigation components.
- Determine to what degree mariners rely on visual ATON.
- Develop comparative risk model to support changes to USATONS design standards which incorporate e-Navigation components.
- Determine impacts to user groups affected by USATONS design standard changes.

**Sponsor:** CG-5PW
**Stakeholder(s):** CG-095

**Key Milestone / Deliverable Schedule:**

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Date</th>
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<tbody>
<tr>
<td>Project Start</td>
<td>2 May 11</td>
</tr>
<tr>
<td>Selection of Port Scenarios Interim Report</td>
<td>25 Nov 11</td>
</tr>
<tr>
<td>Existing ATON Performance Interim Report</td>
<td>3 Feb 12</td>
</tr>
<tr>
<td>Modeling/Risk Interim Report</td>
<td>8 Jun 12</td>
</tr>
<tr>
<td><strong>Final Report of Comparative Risk Model to Support Changes to Design Standards of USATONS</strong></td>
<td>12 Nov 12</td>
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<tr>
<td>Project End</td>
<td>15 Apr 13</td>
</tr>
</tbody>
</table>

**Expected Benefit:**
Improve operational performance/efficiency/mission execution/resiliency

**Notes:**

**Indicates RDC product.**

UNCLAS/USCG Research & Development Center

7/11/2013 32
Ballast Water Treatment (BWT)

Mission Need: Verify that ballast water treatment systems meet discharge standards.

**Project Objectives:**
- Develop a test protocol for shore-based tests of BWT systems.
- Conduct inter-comparison of shore-based test facilities.
- Develop automated methods to standardize analysis of samples with very low concentrations of organisms.

**Sponsor:** CG-OES-3
**Stakeholder(s):** GLRI, DOT (VOLPE)

<table>
<thead>
<tr>
<th>Key Milestone / Deliverable Schedule:</th>
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<tbody>
<tr>
<td><strong>Project Start</strong>..........................</td>
<td>30 May 08 ✓</td>
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<tr>
<td><strong>Begin Test Facility Equipment Testing</strong></td>
<td>10 Jan 11 ✓</td>
</tr>
<tr>
<td><strong>Conclude Test Facility Equipment Testing</strong></td>
<td>8 Aug 11 ✓</td>
</tr>
<tr>
<td><strong>Revised Protocol for Zooplankton Automated Analysis</strong></td>
<td>14 Nov 11 ✓</td>
</tr>
<tr>
<td><strong>Protocol for Automated Protist Analysis</strong></td>
<td>8 Dec 11 ✓</td>
</tr>
<tr>
<td><strong>Automated Protist Analysis of Complex Samples:</strong> Recent Investigations Using Motion and Thresholding</td>
<td>13 Jan 12 ✓</td>
</tr>
<tr>
<td><strong>Intercomparison of U.S. Ballast Water Test Facilities - Final Report</strong></td>
<td>29 Nov 12 ✓</td>
</tr>
<tr>
<td><strong>Indep. Assess. of MERC BW Test Facility</strong></td>
<td>6 Dec 12 ✓</td>
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<tr>
<td><strong>Project End</strong></td>
<td>Aug 13</td>
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</table>

**Expected Benefit:**
Influence international standards

**Notes:**

**Version date:** 7/11/2013

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![Ballast Water Treatment Test Facility at NRL Key West](attachment:Ballast_Water_Treatment_Test_Facility.png)

**Project #:** 4101  
**Tier:** 2  
**RDC POC:** Ms. Gail Roderick  
860-271-2658  
**CG-926 Domain Lead:** Mr. Jaurin Joseph  
202-475-3493

*Indicates RDC product.*
Recovery of Heavy Oil

Mission Need: Capability to detect and recover heavy oils, which do not remain on surface of water.

**Project Objectives:**

- Document the present status of capabilities and techniques for the detection and recovery of heavy oils.
- Develop and evaluate the most promising capabilities and techniques for detecting heavy oil on the bottom.
- Develop and evaluate the most promising capabilities and techniques for recovering heavy oil on the bottom.
- Field demonstrations of two prototypes.

**Sponsor:** CG-5RI  
**Stakeholder(s):** BSEE, ICCOPR

**Key Milestone / Deliverable Schedule:**

<table>
<thead>
<tr>
<th>Phase</th>
<th>Milestone Description</th>
<th>Start Date</th>
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<tbody>
<tr>
<td>Phase 1: Detection</td>
<td>Heavy Oil Detection Proofs of Concept Briefing</td>
<td>22 May 08</td>
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<tr>
<td></td>
<td>Heavy Oil Detection Prototypes Final Report..</td>
<td>11 Jun 09</td>
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<tr>
<td>Phase 2: Recovery</td>
<td>Heavy Oil Recovery Design Briefing</td>
<td>11 Jan 11</td>
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<tr>
<td></td>
<td>Recovery Prototype Tests</td>
<td>15 Nov 11</td>
</tr>
<tr>
<td></td>
<td>Heavy Oil Recovery Ohmsett Test Report</td>
<td>8 Jun 12</td>
</tr>
<tr>
<td></td>
<td>Prototype Field Demonstration</td>
<td>24 Oct 12</td>
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<tr>
<td></td>
<td>Development of Bottom Oil Recovery Systems – Final Project Report</td>
<td>Jul 13</td>
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<tr>
<td>Project End</td>
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<td>Aug 13</td>
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</table>

**Project #:** 4153  
**Tier:** 2  
**RDC POC:** Mr. Kurt Hansen  
860-271-2865  
**CG-926 Domain Lead:**  
Mr. Shannon Jenkins  
202-475-3490

**Expected Benefit:**

Improve operational performance/efficiency/mission execution/resiliency

**Notes:**

Includes funding from FY11 Oil Spill Research Earmark. Partnered with Great Lakes Restoration Initiative in Phase 2.
Detection and Collection of Oil within the Water Column

Mission Need: Accurately detecting and mitigating subsurface oil within the water column up to 10,000 feet.

**Project Objectives:**
- To develop new spill response technologies that detect and mitigate oil within the water column down to 10,000 ft.
  - Operate in all environmental conditions.
  - Locate and mark subsurface oil for possible removal.
  - High resolution for detecting small droplets of oil.
- Technology to be capable of operating off vessels of opportunity.
- Addresses near shore and rivers.

**Sponsor:** CG-5RI
**Stakeholder(s):** BSEE, ICCOPR

**Key Milestone / Deliverable Schedule:**

<table>
<thead>
<tr>
<th>Project Start</th>
<th>4 Aug 11 ✓</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Design Phase</td>
<td>2 Apr 12 ✓</td>
</tr>
</tbody>
</table>

**Detection of Oil in Water Column: Sensor Design**
- 5 Mar 13 ✓

**Detection of Oil in Water Column, Final Report: Detection Prototype Tests**
- Apr 14

**Detection of Oil in Water Column, Presentation: Mitigation Design**
- Oct 15

**Detection of Oil in Water Column, Final Report: Prototype Mitigation Tests**
- Nov 16

**Project End**
- Jan 17

**Expected Benefit:**
Improve operational performance/efficiency/mission execution/resiliency

**Notes:**
Includes funding from FY11 Oil Spill Research Earmark.
Project includes use of a BAA.
# Environmental & Waterways Branch Support

**Mission Need:** Maintain RDC Branch competency and knowledge; provide rapid response; and provide external liaison.

## Project Objectives:
- Maintain RDC competency/technical knowledge in understanding present and future CG Mission Performance Gaps that are within the Branch’s purview.
- Maintain RDC competency in technologies that currently or potentially could be used to eliminate or reduce CG Mission Performance Gaps within the Branch’s purview.
- Maintain RDC competency/technical knowledge necessary to maintain leadership within the appropriate SME community.

### Sponsor:
CG-926

### Stakeholder(s):

<table>
<thead>
<tr>
<th>Key Milestone / Deliverable Schedule:</th>
<th>Project #</th>
<th>Tier</th>
<th>RDC POC:</th>
<th>CG-926 Domain Lead:</th>
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<td>Project Start ................................</td>
<td>9993</td>
<td>3</td>
<td>Mr. James Fletcher</td>
<td>Mr. Shannon Jenkins</td>
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<td>Sponsor Performance Gap Meetings………..</td>
<td>As Required</td>
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<td>860-271-2659</td>
<td>202-475-3490</td>
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<td>Potential Project Field Visits…………..</td>
<td>As Required</td>
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<tr>
<td>Ideation Research/Reviews………………….</td>
<td>As Required</td>
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<tr>
<td>New Project Execution Plans (PEPs)……….</td>
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<tr>
<td>New Project Proposals………………….….</td>
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<tr>
<td>Conduct Market Research…………………..</td>
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<td></td>
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<tr>
<td>Technology Conferences…………………..</td>
<td>As Required</td>
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<tr>
<td>Project End…………………………………</td>
<td>TBD</td>
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</table>

### Expected Benefit:
Add to general R&D knowledge base

### Notes:

*Indicates RDC product.*
Panga Search Planning Tools/POS Calculation Analysis

Mission Need: Improve LE search planning tools for finding Pangas or other vessels of interest that are trying to avoid detection.

Project Objectives:

- Characterize “Panga” maritime threats.
- Use Operations Research Modeling and Simulation (ORMS) to conceive a law enforcement search planning tool.
- Create initial conceptualization for system development.
- Seek program & stakeholder approval to enter Systems Development Life Cycle (SDLC) - Conceptual Planning Phase for formal Business Case Analysis (BCA).

Sponsor: CG-MLE-3
Stakeholder(s): PAC-7, Sector San Diego, C3CEN

Key Milestone / Deliverable Schedule:

<table>
<thead>
<tr>
<th>Project Start</th>
<th>Preliminary LE Search Planning System Requirements</th>
<th>Conceptual LE Search Planning System</th>
<th>Present Concept to Programs &amp; Stakeholders</th>
<th>Seek Program Memo for System Justification</th>
<th>Project End</th>
<th>FY15 SDLC Conceptual Planning Project Start</th>
</tr>
</thead>
</table>

Project #: 1025  Tier: 3  RDC POC: Mr. Warren Heerlein 860-271-2625  CG-926 Domain Lead: Mr. Shannon Jenkins 202-475-3490

Expected Benefit:
Inform follow-on acquisition/enterprise deployment

Notes:
Optimizing RADAR & Electro-Optical Sensors

Mission Need: Provide sensor performance decision support to the operational and acquisition communities from Sensor Performance Modeling.

**Project Objectives:**

- Assess the design and capabilities of current USCG sensor performance applications and prediction tools in order to enhance existing or develop new digital sensor, target, and environment models.
- Identify a scalable and maintainable path forward that allows for cost effective improvements for future growth.

**Sponsor:** CG-926  
**Stakeholder(s):** CG-SAR

**Key Milestone / Deliverable Schedule:**

- **Project Start:** 10 Mar 09 ✓
- **Summary Report: Sensor M&S - Phase I** .... 11 May 10 ✓
- **Briefing – Validation of RADAR/EO/IR testing:** 23 Mar 12 ✓
- **NATO Partnered Validation Test:** 14 Jun 12 ✓
- **Sensor Model Accreditation Summary Report:** Dec 14
- **Project End:** Jan 14

**Expected Benefit:**

Improved Doctrine/CONOPs/TTPs

**Notes:**

UNCLAS/USCG Research & Development Center

7/11/2013
Version date 38
Support Development of Coastal Operations Analytical Suite of Tools (COAST)

Mission Need: Accredited M&S tools that support operational and programmatic decision making within the Coastal Zone, Great Lakes or Inland Waters.

Project Objectives:

- Complete Search and Rescue Visualization Analytics (SARVA) and Boat Allocation Model (BAM) Verification, Validation, and Accreditation (VV&A).
- Support development and complete VV&A of Aviation Capability and Capacity Assignment Module (ACCAM).
- Support development/VV&A of subsequent modules.

Sponsor: CG-771
Stakeholder(s): DHS S&T (OUP), M&S Council, CG-7

Key Milestone / Deliverable Schedule:

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Date</th>
<th>Status</th>
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<tbody>
<tr>
<td>Project Start</td>
<td>1 Oct 12</td>
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<tr>
<td>SARVA Verification and Validation Report</td>
<td>31 Jan 13</td>
<td>✔</td>
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<tr>
<td>ACCAM Modeling Capability Develop Plan</td>
<td>22 Mar 13</td>
<td>✔</td>
</tr>
<tr>
<td>ACCAM Phase 1 V&amp;V Report</td>
<td>Oct 13</td>
<td></td>
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<tr>
<td>BAM Verification and Validation Report</td>
<td>Dec 13</td>
<td></td>
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<tr>
<td>ACCAM Final V&amp;V Report</td>
<td>Jan 14</td>
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<tr>
<td>Project End</td>
<td>May 15</td>
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</tr>
</tbody>
</table>

Project #: 7520 | Tier: 2 | RDC POC: Mr. Mike Lehocky 860-271-2698 | CG-926 Domain Lead: LT Derek Storolis 202-475-3492

Expected Benefit:
Improved Doctrine/CONOPs/TTPs

Notes:
Systems Analysis and Optimization of CGMOES

Mission Need: A modern, stable campaign analysis tool under government control for routine decision support.

Project Objectives:
• The Coast Guard needs to improve its existing campaign modeling capabilities by modernizing its hardware and software suite, obtaining greater government control/oversight, and providing CG decision makers a stable platform for future (routine) decision analysis support.

Sponsor: CG-771
Stakeholder(s): CG-926, M&S Council

Key Milestone / Deliverable Schedule:
Project Start ......................................................... 23 Jul 12 ✓
Complete Phase I ................................................. 15 Aug 12 ✓
KDP to Convert Database from Access to SQL… 19 Jun 13 ✓
Project End .......................................................... Jul 13

Expected Benefit:
Influence Mission Support efficiencies

Notes:
It has been decided to cancel this project and startup the Next Generation CGMOES project.
CGMOES Next Generation
Mission Need: An easy-to-use, streamlined capability for routine Coast Guard-wide asset allocation and force structure decision support.

**Project Objectives:**
- Develop an organic capability to support quick turnaround answers to senior leadership force structure questions driven by Congress regarding: eliminations of asset classes, changes in mission priorities, etc.
- Reduce the time and costs involved with current modeling approaches.
- Improve the defensibility of model-based decision support system (DSS).

**Sponsor:** CG-771
**Stakeholder(s):** LANTAREA, CG-926, M&S Council

**Key Milestone / Deliverable Schedule:**

<table>
<thead>
<tr>
<th>Project Start</th>
<th>Tier</th>
<th>RDC POC</th>
<th>CG-926 Domain Lead</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 May 13</td>
<td>2</td>
<td>Ms. Kathleen Shea Kettle 860-271-2770</td>
<td>LT Derek Storolis 202-475-3492</td>
</tr>
<tr>
<td>Phase I Demo as a Result of Market Research</td>
<td></td>
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<tr>
<td>Mar 14</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Results from Demo of CGMOES Alternative</td>
<td></td>
<td></td>
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<tr>
<td>Mar 14</td>
<td></td>
<td></td>
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<tr>
<td>Phase II KDP Upgrade CGMOES or Acquire New System</td>
<td></td>
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<tr>
<td>Mar 14</td>
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<tr>
<td>Phase III Develop Requirements</td>
<td></td>
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<tr>
<td>Apr 14</td>
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<td></td>
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<tr>
<td>Business Case for Next Generation CGMOES</td>
<td></td>
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<tr>
<td>Apr 14</td>
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<tr>
<td>Phase IV Solicit for New CG Operational Effectiveness Model</td>
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<tr>
<td>Nov 14</td>
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<tr>
<td>Phase V Create Production Level Environment</td>
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<td>Jun 15</td>
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<td>Jul 15</td>
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</tbody>
</table>

**Expected Benefit:**
Influence Mission Support efficiencies

**Notes:**

Indicates RDC product.
Modeling & Simulation Center of Expertise (COE) Branch

Mission Need: Maintain RDC Branch competency and knowledge; provide rapid response; and provide external liaison.

Project Objectives:
- Maintain and enhance Branch competencies (Fleet Mix Strategic Analysis, Tactical Force Package Analysis, Sensor Performance Analysis, Data Repository, Analysis, and Visualization).
- Provide CG-9 a core competency for analysis, modeling and simulation by investigating/developing modeling approaches that provide more efficacy and efficiency for acquisition decision-making.

Sponsor: CG-926
Stakeholder(s): M&S Council

Key Milestone / Deliverable Schedule:
Project Start: 29 Nov 11

- Sponsor Performance Gap Meetings: As Required
- Stand-up New M&S COE Space at RDC: Dec 13
- New Project PEPs/Proposals/Tasks: As Required
- Accreditation Management: As Required
- Technology Conferences: As Required
- Project End: TBD

Expected Benefit:
Add to general R&D knowledge base

Notes:

Project #: 9997
Tier: 3
RDC POC: CDR Sean Lester 860-271-2880
CG-926 Domain Lead: LT Derek Storolis 202-475-3492

* Indicates RDC product.
Short Term Modeling & Simulation Support Efforts (M&S COE Tasks)

Purpose:

Provide Modeling, Simulation or Analysis to focused operational or business questions. Short term efforts are characterized by limited complexity with the need for standard technical and contracting approaches.

FY13 Efforts:

<table>
<thead>
<tr>
<th>Submission Date</th>
<th>Task</th>
<th>Title</th>
<th>Office Supported</th>
<th>Funding Type</th>
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<td>7400008</td>
<td>CGMOES Excursions for NSC 6,7,8 and 210 DAFHP</td>
<td>CG-771</td>
<td>OE</td>
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<td>Ongoing</td>
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<td>DHS S&amp;T</td>
<td>S&amp;T</td>
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<td>7400010</td>
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<td>RDC</td>
<td>RDT&amp;E</td>
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<tr>
<td>NEW</td>
<td>7400011</td>
<td>PROTECT Rollout - Western Rivers</td>
<td>LANT-7</td>
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<td>Accreditation Plan for the Port Resiliency for Operational &amp; Tactical</td>
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<td>RDT&amp;E</td>
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<td>15 Feb 2013</td>
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<td>Verification of FY12 MISLE Response Case Data For the Coast cgSARVA</td>
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<td>Module</td>
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## Short Term Modeling & Simulation Support Efforts (M&S COE Tasks) (Continued)

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<td>NEW</td>
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<td>Plum Island PROTECT</td>
<td>PIADCNY</td>
<td>RDT&amp;E</td>
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</table>
Operational Testing of Alternative Fuels

Mission Need: The means to meet mandated future greenhouse gas emissions and energy reduction targets.

**Project Objectives:**
- Identify benefits from CG use of alternative, lower carbon footprint diesel and gasoline replacement fuels in its boats/cutters based on materials, bench and operational tests.
- Cooperative Research and Development Agreements (CRADA) with engine manufacturers Honda, Mercury and Cummins and a MIPR with Oak Ridge National Laboratory will be leveraged to provide technical expertise on alternative fuels.

**Sponsor:** CG-731  
**Stakeholder(s):** CG-453, SFLC

**Key Milestone / Deliverable Schedule:**

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
<th>Status</th>
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<td>Project Start</td>
<td>16 Feb 11</td>
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<tr>
<td>CRADA with Honda</td>
<td>9 Jun 11</td>
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<tr>
<td>CRADA with Mercury Marine</td>
<td>12 Jan 12</td>
<td>✔</td>
</tr>
<tr>
<td>CRADA with Cummins</td>
<td>2 Feb 12</td>
<td>✔</td>
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<tr>
<td>Conduct Diesel Testing</td>
<td>Mar 14</td>
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<tr>
<td><strong>Evaluation of a Diesel Fuel Alternative for Coast Guard Boats</strong></td>
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<tr>
<td>Conduct Gasoline Testing</td>
<td>Jul 14</td>
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<tr>
<td><strong>Evaluation of a Gasoline Fuel Alternative for Coast Guard Boats</strong></td>
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<td>Project End</td>
<td>Dec 14</td>
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</table>

**Expected Benefit:**
Direct Product Line/Core Technology Support (Tech refresh, DMS, etc)

**Notes:**
Project includes use of CRADAs.
Cost Benefit Analysis of CG Using Boat Lifts

Mission Need: Reduce maintenance costs associated with in water storage of Coast Guard Boats.

**Project Objectives:**
- Determine if boat maintenance and repair costs are reduced sufficiently by storing Coast Guard boats out of the water on a boat lift or similar system to offset the costs of installation, maintenance, operation and training of the storage system.
- Recommend whether the CG should pursue future utilization of this solution including salient characteristics of the recommended style of lift.

**Sponsor:** CG-926  
**Stakeholder(s):** SFLC

**Key Milestone / Deliverable Schedule:**

<table>
<thead>
<tr>
<th>Project Objective</th>
<th>Due Date</th>
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</thead>
<tbody>
<tr>
<td>Investigate Boat Lifts and Costs</td>
<td>1 Mar 12</td>
</tr>
<tr>
<td>Install Boat Lifts for Evaluation Period</td>
<td>5 Sep 12</td>
</tr>
<tr>
<td>1149 Boat Lifts to Station / ANT</td>
<td>Jun 14</td>
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<tr>
<td><strong>Boat Lift Evaluation Report</strong></td>
<td>Aug 14</td>
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<tr>
<td>Project End</td>
<td>Apr 14</td>
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**Expected Benefit:**
Direct Product Line/Core Technology Support (Tech refresh, DMS, etc)

**Notes:**

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\* Indicates RDC product.

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**Project #:** 5103  
**Tier:** 3  
**RDC POC:** LT Brent Fike 860-271-2891  
**CG-926 Domain Lead:** LCDR Anthony Erickson 202-475-3748
Joint Non-Lethal Weapons Directorate Small Vessel Entanglement

Mission Need: A capability to non-lethally stop a non-compliant vessel.

Project Objectives:
Team with NSWC Dahlgren and Carderock to:
- Continue to conduct tests on outboard and inboard vessels,
- Continue to optimize full-scale net design, and
- Develop and demonstrate launcher capabilities.

| Sponsor: | CG-721 |
| Stakeholder(s): | JNLWD, RNWC |

Key Milestone / Deliverable Schedule:

| Project Start | 12 Dec 07 ✓ |
| Net Optimization Tests vs. Inboard Vessels | 21 Jan 11 ✓ |
| Net Optimization Tests vs. Outboard Vessels | 2 Aug 11 ✓ |
| Launcher Modification | 2 Oct 11 ✓ |
| Small Vessel Surface Entanglement Prototype System Delivered/DT&E | 26 Mar 12 ✓ |
| Small Vessel Surface Entanglement TTA Signed | Mar 14 |
| Small Vessel Surface Entanglement SNARE Operational Suitability Assessment | Apr 14 |
| Project End | May 14 |

Expected Benefit:
Inform follow-on acquisition/enterprise deployment

Notes:
Arctic Craft Investigation

Mission Need: Boat capability to support mission operations in the Arctic.

**Project Objectives:**
- Conduct technical and market research on craft that could provide the CG with Arctic capability.
- Conduct a demonstration of Arctic craft to evaluate their effectiveness to execute CG missions on the North Slope of Alaska.
- Identify and test technologies that could be implemented to improve a craft’s Arctic capabilities.

**Sponsor:** CG-731  
**Stakeholder(s):** D17, SFLC

**Key Milestone / Deliverable Schedule:**
- Project Start: 1 Oct 10
- **Arctic Craft Investigation Report**: 20 Aug 11
- **Demonstration in Arctic**: 8 Nov 12
- **Improving Craft Capabilities for Arctic Operations**: Sep 13
- Project End: Sep 13

**Project #:** 6204  
**Tier:** 3  
**RDC POC:** Mr. Jason Story 860-271-2833  
**CG-926 Domain Lead:** LCDR Anthony Erickson 202-475-3748

**Expected Benefit:**
Inform follow-on acquisition/enterprise deployment

**Notes:**
Project includes use of a BAA.
**Arctic Shield 2012 Capabilities Documentation**

**Mission Need:** A scientific analysis (R&D) on the affects of the Arctic environment on the performance of CG Programs of Record capabilities.

---

**Project Objectives:**

- Establish RDC as the CG go to organization for R&D efforts in the Arctic.
- Document and analyze the SORS deployment under Arctic Shield 2012 and make recommendations for planning necessary R&D to support Arctic oil spill capability.
- Obtain information on authorized communications demonstration activities to support planning future R&D efforts.

**Sponsor:** CG-5RI  
**Stakeholder(s):** CG-761, CG-926, D17

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**Key Milestone / Deliverable Schedule:**

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
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<td>Project Start</td>
<td>4 Apr 12</td>
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<tr>
<td>SORS Deployment Exercise</td>
<td>3 Aug 12</td>
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<tr>
<td>Arctic Shield Deployment ends</td>
<td>31 Oct 12</td>
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<tr>
<td><strong>SORS Deployment Report</strong></td>
<td>26 Dec 12</td>
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<tr>
<td><strong>Comms Report Delivered</strong></td>
<td>26 Mar 13</td>
</tr>
<tr>
<td>Project End</td>
<td>Aug 13</td>
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**Notes:**

- Indicates RDC product.

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**Project #:** 6207  
**Tier:** 2  
**RDC POC:** Mr. Scot Tripp  
860-271-2680  
**CG-926 Domain Lead:** Mr. Shannon Jenkins  
202-475-3490

**Expected Benefit:**

Add to general R&D knowledge base
Arctic Operations Support 2013

Mission Need: A scientific analysis (R&D) on the effects of the Arctic environment on CG mission execution.

**Project Objectives:**

- Establish clear RDT&E objectives for supporting CG missions in the Arctic.
- Document and analyze Oil in Ice Search, Detect and Recover exercise conducted during Arctic Shield 2013 and make recommendations for improving CG capabilities and Mission effectiveness.
- Demonstrate with COTS and GOTS technologies the ability to recover spilled oil in Arctic ice

**Sponsor:** CG-926

**Stakeholder(s):** CG-711, CG-MER and D-17

**Key Milestone / Deliverable Schedule:**

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<thead>
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<th>Milestone</th>
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<tr>
<td>Determine Nature of Support</td>
<td>15 Jan 12</td>
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<tr>
<td>Approved Plan</td>
<td>15 Feb 13</td>
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<tr>
<td>Coordinate Exercise</td>
<td>Aug 13</td>
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<tr>
<td>Conduct exercise</td>
<td>Sep 13</td>
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<tr>
<td>Documentation of 2013 Arctic R&amp;D Support</td>
<td>Feb 14</td>
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<tr>
<td>Project End</td>
<td>Mar 14</td>
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**RDC POC:**

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<tr>
<td>Mr. Scot Tripp</td>
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**CG-926 Domain Lead:**

<table>
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<tr>
<th>Domain Lead</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Ms. Mary Kate Watts</td>
<td>202-475-3724</td>
</tr>
</tbody>
</table>

**Expected Benefit:**

Improve operational performance/efficiency/mission execution/resiliency

**Notes:**

The project will be accomplished through partnerships with DHS S&T University Center of Excellence Program, NOAA, and the Department of Interior Bureau of Safety and Environmental Enforcement.

* Indicates RDC product.
Anti-Icing Technologies Investigation

Mission Need: Reduce ice accumulation impact on Coast Guard vessel missions and shore communication effectiveness in cold weather and Arctic operations.

**Project Objectives:**
- Establish current Coast Guard anti-icing capabilities.
- Review requirements for anti-icing.
- Anti-icing capabilities market research.
- Develop roadmap for testing and evaluation of promising anti-icing coatings.

**Sponsor:** CG-751
**Stakeholder(s):** CG-731, CG-WWM, CG-6

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<td>Market Research Complete ..............</td>
<td>14 Mar 13 ✓</td>
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<td>Vessel Anti-icing Roadmap.............</td>
<td>31 May 13 ✓</td>
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<td>Project End ............................</td>
<td>Aug 13</td>
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</table>

**Expected Benefit:**
Add to general R&D knowledge base

**Notes:**

**Version date** 7/11/2013

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Indicates RDC product.
Laser Deposited Nonskid (LDN) Analysis

Mission Need: A more cost effective and reliable non-skid technology.

**Project Objectives:**
- Research characteristics of LDN plate (aluminum & steel) with OGA (e.g., Navy) and academia, with regard to:
  - Weld quality after LDN application;
  - Effects of Corrosion to LDN, as evident in a marine environment; and
  - Determine if this emerging technology offers a significant Life-Cycle Cost (LCC) savings.

**Sponsor:** CG-45  
**Stakeholder(s):** SFLC

**Key Milestone / Deliverable Schedule:**

<table>
<thead>
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<th>Event</th>
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<td>18 Nov 11</td>
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<td>Laser Deposited Nonskid (LDN) Analysis Report</td>
<td>Jul 13</td>
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<td>Project End</td>
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**Expected Benefit:**
Direct Product Line/Core Technology Support (Tech refresh, DMS, etc)

**Notes:**

**Project #:** 7747  
**Tier:** 3  
**RDC POC:** Ms. D.J. Hastings  
860-271-2798  
**CG-926 Domain Lead:** LCDR Anthony Erickson  
202-475-3748
CG JMTD In-Situ Burn Capabilities
Mission Need: Marine in-situ burn testing capability.

**Project Objectives:**
- Conduct analysis of ISB capabilities to support RDT&E.
- Identify programs and stakeholders.
- Conduct assessment for material condition of the ISB tank.
- Commercial upgrades at designate site.
- Improve wave generator IAW ASTM approved standards for fire retardant boom testing.

**Sponsor:** CG-926

**Stakeholder(s):**

**Key Milestone / Deliverable Schedule:**

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<tbody>
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<td>Project Start</td>
<td>26 Jun 13</td>
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<tr>
<td>Initial Operational Capability</td>
<td>Sep 13</td>
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<td>Full Operational Capability</td>
<td>Sep 14</td>
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<tr>
<td>Project End</td>
<td>Sep 14</td>
</tr>
</tbody>
</table>

**Expected Benefit:**
- Improve operational performance execution

**Notes:**

- Indicators RDC product.
Evaluation of 270’ WMEC Pitch/RPM Schedules

Mission Need: Improved energy efficiency in the operation of cutters to help meet energy conservation goals and greenhouse gas (GHG) reduction goals.

Project Objectives:

- Assess pre-determined pitch/RPM combinations through comprehensive underway data collection with an operational cutter.
- Analyze results and compare with prior (1998) fuel savings projections.
- Deliver recommendations for implementation.

Sponsor: CG-46
Stakeholder(s): SFLC

Key Milestone / Deliverable Schedule:

- Project Start ............................................. 15 Nov 12 ✓
  - Complete Data Collection ............................. Mar 14
  - Complete Data Analysis ............................. Jun 14
  - Evaluation of 270’WMEC Pitch/RPM Schedule Changes ......................... Aug 14
- Project End ............................................. Sep 14

Expected Benefit:

Direct Product Line/Core Technology Support (Tech refresh, DMS, etc)

Notes:

- Indicates RDC product.
Tactical Flotation & Buoyancy

Mission Need: A heads-up flotation system and equipment kits to support unconscious (or incapacitated) tactical operators.

**Project Objectives:**

- Develop a heads-up flotation solution for the unconscious or incapacitated member.
- Identify lighter, more streamlined and cost effective DSF Tactical Operator equipment.

**Sponsor:** CG-731  
**Stakeholder(s):** DG-4

**Key Milestone / Deliverable Schedule:**

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<td>Project Start</td>
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<tr>
<td>Key Decision Point (Flotation System)</td>
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<td>Canceled Reduced Gear Weight Testing</td>
<td>1 Nov 12</td>
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<tr>
<td>Complete Flotation System Testing</td>
<td>11 Nov 12</td>
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<tr>
<td>Heads-Up Flotation System Report</td>
<td>18 Jan 13</td>
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<tr>
<td>50 lbs Gear Weight Kit Report</td>
<td>14 Feb 13</td>
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<td>Project End</td>
<td>26 Mar 13</td>
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**Expected Benefit:**

Direct Product Line/Core Technology Support (Tech refresh, DMS, etc)

**Notes:**

**Indicates RDC product.**
Surface Branch Support

Mission Need: Maintenance of RDC Branch competencies and knowledge; provide rapid response; and provide external liaison.

Project Objectives:
- Support CG Weapons Of Mass Destruction (WMD) program by providing subject matter expertise and OGA leveraging.
- Coordinate Arctic projects.

Sponsor: CG-926
Stakeholder(s):

Key Milestone / Deliverable Schedule:

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<tr>
<td>Sponsor Performance Gap Meetings</td>
<td>As Required</td>
<td>3</td>
<td>Mr. Rich Hansen 860-271-2866</td>
<td>LCDR Anthony Erickson 202-475-3748</td>
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<tr>
<td>Potential Project Field Visits</td>
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Expected Benefit:
Add to general R&D knowledge base

Notes:
## Composite Strategic Investment Teams

**Mission Need:** A shared vision for mitigating critical Evergreen III “Strategic Needs” between CG RDT&E Program and CG Program Managers contending with changing mission demands.

### Project Objectives:
- Develop a shared vision of future CG operational capabilities in selected CG mission areas with key Program Managers.
- Create, with solid CG Program Manager support, FY15 and beyond annual CG RDT&E and CG Program appropriation budget space for mitigating critical capability gaps.
- Provide validated CG operational capability gaps into the RDC annual portfolio development process.

### Sponsor:
- CG-095  
**Stakeholder(s):** CG-926

### Key Deliverable Schedule:

<table>
<thead>
<tr>
<th>Project Start</th>
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<tbody>
<tr>
<td>Project Start</td>
<td>7 Apr 09</td>
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| Draft POAMs for Arctic & Intel | 31 Jul 09 |
| Draft POAMs for Arctic, C2, ISR, Aviation, M&S, Alternative Energy, & Surface Asset Technology | 22 Sep 10 |
| Draft POAMs for Arctic, C2, ISR, Aviation, M&S, Alt Energy, & Surface Asset Technology | 9 Aug 11 |
| CG Aids to Navigation (AtoN) Capability Gaps for FY12 | 5 Sep 12 |
| CG Underwater Asset Capability Gaps for FY12 | 12 Oct |
| CG C4ISR / Intel Capability Gaps for FY12 | 12 Oct |
| Draft POAMs for Evergreen III Aviation & Arctic Sep 13 | 13 Sep |
| Prioritized Gaps for Evergreen III Cyber “Need” | Sep 13 |

### Notes:
- Add to general R&D knowledge base

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**Indicates RDC product.**

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**UNCLAS/USCG Research & Development Center**  
7/11/2013  
Version date 57
Short Term Analytical Support Efforts (REACT Reports)

Purpose:

Provide short term analytical to support CG decision makers with a means to access quick, inexpensive analyses to investigate a wide range of technology issues relating to current or planned CG operations or procurements. Larger analytical support projects will typically require funding to cover the cost of R&D Center labor & overhead and other direct costs.

FY13 Efforts:

<table>
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<tr>
<th>Submission Date</th>
<th>Title</th>
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<tr>
<td>Completed</td>
<td>Inland Construction Tender Fleet Mix</td>
<td>CG-932</td>
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<tr>
<td>Completed</td>
<td>OPC Homeport Analysis</td>
<td>CG-932</td>
</tr>
<tr>
<td>18 Jun 2013</td>
<td>Traction Kites</td>
<td>PAC-3</td>
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</table>
C-144 Video and Mission Processor (VAMP)
Mission Need: Process, exploit, and disseminate (PED) signals of interest as part of airborne, forward collections platforms to support advanced surveillance, identification, classification, and interception.

Project Objectives:
• Assess deficiencies in the Video & Mission Processor (VAMP); provide recommendations on a State-Of-The-Market (SOTM) VAMP-”like” device to replace existing device.

Sponsor: CG-933
Stakeholder(s): CG-761, CGCG, CG-251

Key Milestone / Deliverable Schedule:

<table>
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<tr>
<th>Event</th>
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<th>RDC POC</th>
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</thead>
<tbody>
<tr>
<td>Project Start</td>
<td></td>
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<tr>
<td>Stakeholder workshop</td>
<td></td>
<td>1</td>
<td>Ms. Val Arris</td>
</tr>
<tr>
<td>Review (VAMP) BAA results</td>
<td></td>
<td></td>
<td>860-271-2849</td>
</tr>
<tr>
<td>Conduct Flight Tests of upgraded VAMP</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Report on VAMP upgrade</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Project End</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Expected Benefit:
Direct Acquisition Support (MAR, MNS, CONOPS, ORD, AA, LCCE, T&E, etc)

Notes:
**NSC Side Davit Launch and Recovery Simulation**

Mission Need: Improvement in NSC launch and recovery operations.

**Project Objectives:**
- Develop, integrate and analyze motion control strategies.
- Provide human-in-the-loop simulation of launch and recovery based on existing davit technology.
- Produce a report to support IOT&E.

**Sponsor:** CG-9321  
**Stakeholder(s):**

<table>
<thead>
<tr>
<th>Key Milestone / Deliverable Schedule</th>
<th>Project Start</th>
<th>RDC Product (Report)</th>
<th>Project End</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>TBD+9 Mos.</td>
<td>TBD+10 Mos.</td>
</tr>
</tbody>
</table>

**Notes:**

**Expected Benefit:**
- Direct Acquisition Support (MAR, MNS, CONOPS, ORD, AA, LCCE, T&E, etc)

**Indicates RDC product.**
Nationwide Automatic Identification System (AIS) Acquisition
Mission Need: Analyses and tool development to support acquisition of the NAIS Permanent Transceive (PT) System.

**Project Objectives:**
- Develop software and methods needed to support transition to NAIS PT Initial Operation Capable (IOC) System from NAIS Interim System.
- Develop tools and methods to monitor and evaluate operation of the NAIS PT IOC System performance and transmit capability for compliance with national and international VDL usage guidelines.

**Sponsor:** CG-9332  
**Stakeholder(s):** CG-761, CG-652, C3CEN, OSC, NAVCEN

<table>
<thead>
<tr>
<th>Key Milestone / Deliverable Schedule:</th>
<th>Project #:</th>
<th>Tier:</th>
<th>RDC POC:</th>
<th>CG-926 Domain Lead:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Start………………………………………. Jun 05 ✓</td>
<td>2411</td>
<td>2</td>
<td>Mr. Lee Luft 860-271-2685</td>
<td>CDR Tung Ly 202-475-3011</td>
</tr>
<tr>
<td>Implement Temporary System Operation Center……Oct 06 ✓</td>
<td></td>
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</tr>
<tr>
<td>Deploy NAIS Interim System Network………………..24 Mar 08 ✓</td>
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<tr>
<td>Delivered 3 Prior Year Products</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increment-1 Interface Control Document…….. 27 May 09 ✓</td>
<td></td>
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<tr>
<td>Technical Assessment of AIS Reception from Orbcomm Satellites………………………………1 Jul 09 ✓</td>
<td></td>
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<tr>
<td>Modifications to I-1 Software suitable for use with the I-2 NAIS Network…………………. 19 Sep 12 ✓</td>
<td></td>
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<tr>
<td>Establish Capability to Monitor and Evaluate Operation of the NAIS PT IOC System Transmit……… Aug 13</td>
<td></td>
<td></td>
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<tr>
<td>Perform Daily NAIS PT IOC System Reception Performance Analysis…………………………… Sep 13</td>
<td></td>
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<tr>
<td>Project End……………………………………….. Dec 13</td>
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</tbody>
</table>

**Expected Benefit:**
Direct Acquisition Support (MAR, MNS, CONOPS, ORD, AA, LCCE, T&E, etc)

**Notes:**
- Indicates RDC product.
Operational Testing of ESS


Project Objectives:
- Validate effectiveness and provide recommendations to improve current ESS settings, configurations and employment techniques on the MH-60T and MH-65C/D helicopters.
- Develop lateral range curves and sweep widths for the ESS Thermal Imager against typical SAR targets.
- Characterize operational performance and provide TTP input for all ESS components.

Sponsor: CG-931
Stakeholder(s): LCDR Bacher, LCDR Torgersen

Key Milestone / Deliverable Schedule:

- Project Start ……………………………………………... 9 Dec10 ✓
- Post-test Briefing on ESS Validation Test………28 Jun 11 ✓
- Phase 3 At-sea Operational Performance Testing… 14 Oct 11 ✓
- Interim Report & Brief on FY11 ESS Operational Performance Testing………………………………….28 Mar 12 ✓
- Phase 4 At-sea Operational Test Event 1………………9 May 13 ✓
- Phase 4 At-sea Operational Test Event 2……………… Nov 13
- Post-test Briefing on ESS Phase IV Test…………….. Jan 14
- Final Report & Brief on FY11 ESS Operational Performance Testing………………………………… Apr 14
- Project End …………………………………………….. May 14

Expected Benefit:
Improved Doctrine/CONOPs/TTPs

Notes:

Indicates RDC product.
Support for H65 RADAR Replacement

Mission Need: Support the H65 RDR 1300(C) Bendix/King RADAR replacement.

Project Objectives:
- Review and provide technical feedback on the RFI responses.
- Provide technical support to assist with preliminary specification (P-Spec) document and drafting RFP.
- Review and provide technical feedback on the RFP responses.
- Provide support to model RADAR performance capabilities from vendor data in order to effectively compare candidate products and assist in source selection.

Sponsor: CG-9315
Stakeholder(s):

Key Milestone / Deliverable Schedule:

<table>
<thead>
<tr>
<th>Task</th>
<th>Date</th>
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<tbody>
<tr>
<td>Project Start</td>
<td>3 Mar 11</td>
</tr>
<tr>
<td>RFI Technical Support</td>
<td>30 Jun 11</td>
</tr>
<tr>
<td>P-Spec Technical Support</td>
<td>1 Sep 12</td>
</tr>
<tr>
<td>RFP Technical Support</td>
<td>Jul 13</td>
</tr>
<tr>
<td>Technical Support for H-65 Radar Replacement</td>
<td>Sep 13</td>
</tr>
<tr>
<td>Source Selection Committee Technical Support</td>
<td>Aug 13</td>
</tr>
<tr>
<td>Project End</td>
<td>Sep 13</td>
</tr>
</tbody>
</table>

Expected Benefit:
Direct Acquisition Support (MAR, MNS, CONOPS, ORD, AA, LCCE, T&E, etc)

Notes:

Version date 7/11/2013
ESS Geo-positioning Accuracy Assessment

Mission Need: USCG rotary wing (RW) fleet seeks to validate ESS geo-positioning accuracy and reduce resource burden imposed by current calibration requirements.

Project Objectives:

- Conduct airborne ESS geo-positioning accuracy tests to evaluate target positioning errors (1) after conducting a standard calibration and (2) without calibration following various maintenance actions that involve removal and replacement of key ESS components.
- Document geo-positioning errors for each test scenario.
- Provide recommendations concerning circumstances under which re-calibration should be performed.

Sponsor: ALC-ESD
Stakeholder(s): CG-931, CG-711, CG-41, CG RW Air Stations

Key Milestone / Deliverable Schedule:

- Project Start............................................. 24 Jan 13 ✓
  Conduct GEOPOINT Accuracy Testing............ 21 Mar 13 ✓
  Analysis of ESS Geo-positioning Accuracy and Calibration Requirements....................... Aug 13
- Project End............................................. Sep 13

Project #: 7750  Tier: 3  RDC POC: Mr. Gary Hover (860) 271-2818  CG-926 Domain Lead: CDR Al Antaran (202) 475-3049

Expected Benefit:

Direct Product Line/Core Technology Support (Tech refresh, DMS, etc)

Notes:
MH-65 AFCS System Support Study

Mission Need: The CG requires an updated System Support Study for the MH-65 AFCS.

Project Objectives:

- Develop an independent H-65 AFCS System Support Study and compare to the USCG study conducted in 2011.
- Research Solutions for obsolescence issues. Potential solutions will include purchasing last time buys of repair parts, initiating manufacturing and re-engineering existing components.

Sponsor: CG-9315
Stakeholder(s): CG-926

Key Milestone / Deliverable Schedule:

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Due Date</th>
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<tbody>
<tr>
<td>Project Start</td>
<td>6 Dec 12</td>
</tr>
<tr>
<td>ALMIS Data Collection</td>
<td>10 Jan 13</td>
</tr>
<tr>
<td>KDP</td>
<td>12 Jan 13</td>
</tr>
<tr>
<td>Vendor Site Visits</td>
<td>15 Feb 13</td>
</tr>
<tr>
<td>Update Systems Support Study – Draft</td>
<td>14 Mar 13</td>
</tr>
<tr>
<td><strong>Update Systems Support Study - Final</strong></td>
<td><strong>9 Apr 13</strong></td>
</tr>
<tr>
<td>Project End</td>
<td>21 May 13</td>
</tr>
</tbody>
</table>

Expected Benefit:
Inform follow-on acquisition

Notes:
Using CORE AC&I for labor

---

Indicates RDC product.
Polar Icebreaker Acquisition Support

Mission Need: New polar icebreaking capability acquisition.

Project Objectives:
- Prepare acquisition support documents including:
  - Preliminary Operational Requirements Document (PORD)
  - Operational Requirements Document (ORD)
  - Alternatives Assessment (AA)

Sponsor: CG-751 (PORD/ORD), CG-9323 (AA)
Stakeholder(s): CG-7, 9, 6, SFLC

Key Milestone / Deliverable Schedule:

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Due Date</th>
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<tbody>
<tr>
<td>Project Start</td>
<td>13 May 13</td>
</tr>
<tr>
<td>PORD</td>
<td>Sep 14</td>
</tr>
<tr>
<td>AA Study Plan</td>
<td>Sep 14</td>
</tr>
<tr>
<td>ORD</td>
<td>Mar 15</td>
</tr>
<tr>
<td>AA</td>
<td>Mar 15</td>
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<tr>
<td>Project End</td>
<td>Jun 15</td>
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</table>

Project #: 7930
Tier: 1
RDC POC: Mr. Mark VanHaverbeke (860) 271-2754
CG-926 Domain Lead: LCDR Anthony Erickson (202) 475-3748

Expected Benefit:
Direct Acquisition Support (MAR, MNS, CONOPS, ORD, AA, LCCE, T&E, etc)

Notes:
Seakeeping vs Ice Breaking Capability

Mission Need: Icebreaker hulls optimized for both seakeeping and icebreaking.

**Project Objectives:**
- Identify hull design characteristics that will provide optimal seakeeping and icebreaking.
- Develop a report for on icebreaker hull optimization that makes recommendations on a path forward for future acquisitions.

**Sponsor:** CG - 9323
**Stakeholder(s):** CG - 751

**Key Milestone / Deliverable Schedule:**

<table>
<thead>
<tr>
<th>Event</th>
<th>Schedule</th>
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<tbody>
<tr>
<td>Project Start</td>
<td>Aug 13</td>
</tr>
<tr>
<td>Perform Icebreaker Hull Research</td>
<td>Nov 13</td>
</tr>
<tr>
<td>Icebreaker Hull Optimization Study</td>
<td>Jul 14</td>
</tr>
<tr>
<td>Project End</td>
<td>Aug 14</td>
</tr>
</tbody>
</table>

**Expected Benefit:**
Inform follow-on acquisition/enterprise deployment

**Notes:**

**Project #:** 9504  
**Tier:** 3  
**RDC POC:** Mr. Jason Story  
(860) 271-2833

**CG-926 Domain Lead:** LCDR Anthony Erickson  
(202) 475-3748

Indicates RDC product.
# Development of a Modernized IMO GMDSS

**Mission Need:** Participation in Standards Development to support Modernization of the Global Maritime Distress Signal System (GMDSS) by the IMO.

<table>
<thead>
<tr>
<th>Project Objectives:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Participate in the IMO’s Report Drafting Group which will author a modernized GMDSS for the SOLAS convention.</td>
</tr>
<tr>
<td>• Avoid telecommunications regulators imposing high-cost and unsustainable solutions upon the CG. Incorporate new technologies such as AIS, networks, &amp; modern navigation systems.</td>
</tr>
<tr>
<td>• Developing a sustainable and economic GMDSS solution which improves maritime safety and lessens the burden of CG SAR operators &amp; watchstanders.</td>
</tr>
</tbody>
</table>

**Sponsor:** CG-652  
**Stakeholder(s):**

<table>
<thead>
<tr>
<th>Key Milestone / Deliverable Schedule:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Start .................................................. TBD</td>
</tr>
<tr>
<td>Draft High Level Review of Modernized GMDSS............................ TBD+11 Mos.</td>
</tr>
<tr>
<td>Draft Detailed Review of Modernized GMDSS............................... TBD+23 Mos.</td>
</tr>
<tr>
<td>Outline of Modernization Plan............. TBD+35 Mos.</td>
</tr>
<tr>
<td>Completed Modernization Plan.............. TBD+47 Mos.</td>
</tr>
<tr>
<td>Endorsed Modernization Plan............... TBD+59 Mos.</td>
</tr>
<tr>
<td>Project End ................................................... TBD+59 Mos.</td>
</tr>
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</table>

**Expected Benefit:**  
Influence international standards

**Notes:**

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![RDC POC: Mr. Jon Turban, P.E.](image)

**Project #:** 2013.018  
**Tier:** 3  
**RDC POC:** Mr. Jon Turban, P.E.  
860-271-2824  

**CG-926 Domain Lead:**  
CDR Tung Ly  
202-475-3011
IP Based Communications Interface Systems Assessment

Mission Need: Monitor effective communications across divergent locations during abnormal operating conditions.

Project Objectives:
- Provide the CG C3CEN with quantitative data on IP based communications interface systems capabilities to support acquisition decisions relating to facilitating the ability for one CAMS to control all COMSTAs and the other CAMS.

Sponsor: CG-761
Stakeholder(s): C3CEN, CAMS-OCE

Key Milestone / Deliverable Schedule:

<table>
<thead>
<tr>
<th>Project Start</th>
<th>Identify IP Interface Capabilities for Testing</th>
<th>Develop Test Plan for Interface Validation</th>
<th>Identify an IP based System for Testing</th>
<th>Test System and Analyze Results</th>
<th>Perform Cost Benefit Analysis on IP Based Communications Equipment</th>
<th>IP Based Comms Interface System Assessment Report</th>
<th>Project End</th>
</tr>
</thead>
<tbody>
<tr>
<td>TBD</td>
<td>TBD+4 Mos.</td>
<td>TBD+6 Mos.</td>
<td>TBD+11 Mos.</td>
<td>TBD+16 Mos.</td>
<td>TBD+17 Mos.</td>
<td>TBD+20 Mos.</td>
<td>TBD+22 Mos.</td>
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</tbody>
</table>

Expected Benefit:
Improve operational performance/efficiency/mission execution/resiliency

Notes:

Project #: 2013.031
Tier: 3
RDC POC: Ms. Judith Connelly 860-271-2643
CG-926 Domain Lead: CDR Tung Ly 202-475-3011
Navigation 2025 Prototype Implementation

Mission Need: A design, implementation, and analysis of a new 21st Century Aids to Navigation System (one that is heavily based on electronic navigation capabilities and less on physical aids) within two US ports / waterways.

Project Objectives:
- Conduct initial business case for a spatial waterways design capability per System Development Life Cycle (SDLC) process.
- Analyze alternatives for modernized Western Rivers waterway designs.
- Prepare for Design Phase of Navigation 2025 – Prototype Implementation project.

Sponsor: CG-NAV-1
Stakeholder(s): DOT (VOLPE), USACE

Key Milestone / Deliverable Schedule:

<table>
<thead>
<tr>
<th>Project Start</th>
<th>Conduct Initial Business Case</th>
<th>31 May 13</th>
<th>26 Jul 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nav 2025 - Initial Business Case for a Waterways Design and Spatial Analysis Capability</td>
<td>28 Jun 13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analyze Alternatives for Western Rivers</td>
<td>Jul 13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nav 2025 – Analysis of Alternatives for Waterway Designs on the Western Rivers</td>
<td>Aug 13</td>
<td></td>
<td></td>
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<tr>
<td>Project End</td>
<td>Sep 13</td>
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</tbody>
</table>

Expected Benefit:
Improve operational performance/efficiency/mission execution/resiliency

Notes:
Support of Nav 2025 is anticipated to last 5 or more years.
Projects will be executed as a joint collaboration with USACE.
### AIS Transmit Capability

**Mission Need:** Investigation and evaluation of the AIS transmit capability.

#### Project Objectives:
- Investigate requirements of users (government and commercial) for AIS binary message transmit.
- Evaluate the effectiveness of information disseminated from USCG Vessel Traffic Services (VTS) and other providers.
- Demonstrate and develop AIS binary message transmit capability.

#### Sponsor:
CG-7413, CG-7611  
**Stakeholder(s):** CG-741, CG-761, USACE

#### Key Milestone / Deliverable Schedule:

<table>
<thead>
<tr>
<th>Milestone</th>
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<th>Status</th>
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<tr>
<td>Project Start</td>
<td>2 May 07</td>
<td>✔️</td>
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<tr>
<td>Input Paper to IALA eNav9 on AIS ASM’s</td>
<td>17 Mar 11</td>
<td>✔️</td>
</tr>
<tr>
<td>Input Paper on AIS ASMs to IMO Nav57</td>
<td>11 Apr 11</td>
<td>✔️</td>
</tr>
<tr>
<td>Transition Plan for Tampa</td>
<td>8 Sep 11</td>
<td>✔️</td>
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<tr>
<td>Operational Framework for AIS Transmit</td>
<td>10 Sep 12</td>
<td>✔️</td>
</tr>
<tr>
<td>Operational Implementation Plan for AIS Transmit</td>
<td>Aug 13</td>
<td></td>
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<tr>
<td>USACE AIS ASM Test Bed Delivery</td>
<td>May 14</td>
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<tr>
<td>Project End</td>
<td>Dec 14</td>
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#### Project #:
2413  
**Tier:** 3  
**RDC POC:** Ms. Irene Gonin  
860-271-2694  
**CG-926 Domain Lead:** CDR Tung Ly  
202-475-3011

#### Expected Benefit:
Improve operational performance/efficiency/mission execution/resiliency

#### Notes:

★ Indicates RDC product.
NAIS Technical Forum and Performance Analysis Support

Mission Need: A review of and modification to international standards, assistance conducting VDL integrity monitoring and analysis, and support for sustainment of the NAIS Network.

**Project Objectives:**
- Participate in standards development.
- Provide project sponsor with VHF Data Link (VDL) integrity monitoring and analysis critical to maintaining the integrity of the NAIS.
- Provide the expertise and capabilities needed to support and sustain the NAIS network, and support transition to the NAIS Permanent Transceive (PT) System.

**Sponsor:** CG-761
**Stakeholder(s):** CG-9332, CG-652, OSC, NAVCEN, C3CEN

**Key Milestone / Deliverable Schedule:**

<table>
<thead>
<tr>
<th>Project Start</th>
<th>5 Dec 08 ✓</th>
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</thead>
<tbody>
<tr>
<td>Attend AIS Standard Committee Meetings</td>
<td>Oct 08–Sep 13</td>
</tr>
</tbody>
</table>

 ✓ Delivered 21 Prior Year Products
- Technical Inputs to NMEA 2000 v2.0 .............. 19 Sep 12 ✓
- Rhode Island Sound Traffic Study ............... 31 Oct 12 ✓
- VDL Analysis Work Completed Since Last RDC
  - VDL Analysis Loading Report .................. 8 Nov 12 ✓
- Port Ambrose Traffic Study ...................... Jul 13
- Class B AIS Detection Study ..................... Aug 13
- Technical Inputs to NMEA 2000 v2.0 Standard ...... Sep 13
- Technical Inputs to IEC 61162-1 Interface Std .... Sep 13
- Interim Report: VDL Analysis using New Long Range AIS Instrumentation ................ Sep 13
- Project End ...................................... Dec 13

**Expected Benefit:**
Influence international standards

**Notes:**

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Project #: 2419  
Tier: 3  
RDC POC: Mr. Lee Luft  
860-271-2685  
CG-926 Domain Lead:  
CDR Tung Ly  
202-475-3011  

Indicates RDC product.
General Engineering Laboratory Support

Mission Need: Test and Evaluation of Aids to Navigation to improve performance, lower costs and extend maintenance intervals.

**Project Objectives:**
- Provide a laboratory and test and evaluation services in support of the CG Aids to Navigation (AtoN) program.
- Conduct test and evaluation of AtoN to ascertain conformance with established regulatory and certification criteria.
- Evaluate the viability of emerging technologies to reduce CG operating/maintenance costs or alleviate (AtoN signal) problem areas.

**Key Milestone / Deliverable Schedule:**

| Project Start…………………………………………circ 72 ✓ | Project #: 2784 |
| GELS FY12 Activity Summary 1st and 2nd Qt . 09 Apr 12 ✓ | Tier: 3 |
| GELS FY12 Activity Summary 3rd and 4th Qtr 27 Sep 12 ✓ | RDC POC: Mr. Vincent Reubelt 860-271-2661 |
| GELS FY13 Activity Summary 1st and 2nd Qtr .08Apr 13 ✓ | CG-926 Domain Lead: LCDR Anthony Erickson 202-475-3748 |
| GELS FY13 Activity Summary 3rd and 4th Qtr …. Sep 13 | Expected Benefit: |
| Project End ....................................................... TBD | Direct Product Line/Core Technology Support (Tech refresh, DMS, etc)

**Notes:**
Command Center Capability Analysis Support

Mission Need: A comprehensive understanding of the essential/core set of Command Center capabilities.

Project Objectives:
- Establish a set of “baseline” (core) Command Center (CC) capability requirements (Phase 1).
- Use capability requirements to perform “current state” assessment for two Command Center missions (Phase 2).

Sponsor: CG-7412
Stakeholder(s):

Key Milestone / Deliverable Schedule:

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<tbody>
<tr>
<td>Project #:</td>
<td>3 Apr 12</td>
<td>28 Jun 12</td>
<td>3 Oct 12</td>
<td>6 Feb 13</td>
<td>Jun 13</td>
<td>Jul 13</td>
<td>Aug 13</td>
<td>TBD</td>
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</table>

● Indicates RDC product.

Project #: 3402  Tier: 3  RDC POC: Dr. Anita Rothblum 860-271-2847  CG-926 Domain Lead: Mr. Jaurin Joseph 202-475-3493

Expected Benefit:
Improved Doctrine/CONOPs/TTPs

Notes:
Reduced WMEC 270 Propulsion Fuel Consumption

Mission Need: The means to improve energy efficient operation of cutters to meet greenhouse gas (GHG) emission reduction goals.

Project Objectives:
• Exploit digital data capabilities of post-MEP 270’ WMEC main propulsion control & monitoring system (MPCMS) by incorporating enhanced data logging and fuel oil metering into available data stream for future analysis.

Sponsor: CG-46
Stakeholder(s): SFLC

Key Milestone / Deliverable Schedule:

<table>
<thead>
<tr>
<th>Project Start</th>
<th>6 Jun 11 ✓</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPCMS Software Interface Developed</td>
<td>30 Sep 12 ✓</td>
</tr>
<tr>
<td>Fuel Oil Meter (FOM) Installation and Testing</td>
<td>Aug 13</td>
</tr>
<tr>
<td>Vessel Energy Efficiency Baselining Tool / Final Letter Report</td>
<td>Sep 13</td>
</tr>
<tr>
<td>Project End</td>
<td>Sep 13</td>
</tr>
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Project #: 4109
Tier: 3
RDC POC: Mr. Jay Carey
860-271-2702
CG-926 Domain Lead: LCDR Anthony Erickson
202-475-3748

Expected Benefit:
Direct Product Line/Core Technology Support (Tech refresh, DMS, etc)

Notes:
CG HAZMAT Spill Response Equipment Assessment

Mission Need: The CG vessel community does not know what is the best shipboard sorbent.

Project Objectives:
• Evaluate sorbents for carriage and use aboard CG vessels to determine “best” type in terms of initial cost, storage requirements, shelf life, effectiveness for on-board spill response, and disposal.

Sponsor: Surface Forces Logistics Center
Stakeholder(s):

Key Milestone / Deliverable Schedule:
Project Start……………………………………… TBD
Shipboard Sorbent Evaluation………………… TBD+10 Mos.
Project End……………………………………… TBD+11 Mos.

Project #: 4201  Tier: 3  RDC POC: Mr. Marion Lewandowski (860) 271-2692  CG-926 Domain Lead: LCDR Erickson (202) 475-3748

Expected Benefit:
Direct Product Line/Core Technology Support

Notes:

Indicates RDC product.
Preliminary Business Case Analysis – Boat Stations

Mission Need: A preliminary Business Case Analysis to identify possible alternatives to the traditional brick and mortar boat station buildings and facilities.

Project Objectives:
- Create study plan.
- Conduct a high level requirements gap analysis.
- Conduct a preliminary Business Case Analysis (evaluate alternatives for CG Boat Stations in terms of risk, ROM life cycle costs, supportability and cost-benefit).

Sponsor: CG-731
Stakeholder(s): CG-D5

Key Milestone / Deliverable Schedule:

<table>
<thead>
<tr>
<th>Project Start</th>
<th>Create a Study Plan</th>
<th>Site Visits (Other Federal Agencies, CG Small Boat Stations)</th>
<th>Conduct High Level Requirements Analysis</th>
<th>Preliminary Business Case Analysis – Small Boat Station Facilities</th>
<th>Project End</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TBD</td>
<td>TBD+6 Mos.</td>
<td>TBD+8 Mos.</td>
<td>TBD+13 Mos.</td>
<td>TBD+14 Mos.</td>
</tr>
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</table>

Expected Benefit:
Direct Acquisition Support (MAR, MNS, CONOPS, ORD, AA, LCCE, T&E, etc)

Notes:

Indicates RDC product.
ORAM DOMICE Model Improvement

Mission Need: Correct inaccuracies in the prototype DOMICE risk model.

### Project Objectives:
- Modify the prototype DOMICE risk model to improve accuracy and fidelity for the time step.

### Sponsor:
CG-5PW

### Stakeholder(s):
LANT-7, CG-751

### Key Milestone / Deliverable Schedule:

<table>
<thead>
<tr>
<th>Milestone / Deliverable</th>
<th>Project Start</th>
<th>Status</th>
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<tr>
<td>Domestic Icebreaking Simulation Model</td>
<td>11 Sep 12</td>
<td>✓</td>
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<tr>
<td>Domestic Icebreaking Simulation Model User Guide</td>
<td>6 Feb 13</td>
<td>✓</td>
</tr>
<tr>
<td>Project End</td>
<td>22 Apr 13</td>
<td>✓</td>
</tr>
</tbody>
</table>

### Expected Benefit:
Improve operational performance/efficiency/mission execution/resiliency

### Notes:

- Indicates RDC product.
ECAT Modeling to Evaluate CG Display Design

Mission Need: A cost-effective means to evaluate the design of operator displays.

**Project Objectives:**
- Demonstrate the value of the ECAT model to evaluate and improve the design of CG displays.

**Sponsor:** CG-1B3
**Stakeholder(s):**

**Key Milestone / Deliverable Schedule:**

- **Project Start** .................................................. TBD
- **Select Scenarios/Tasks for Display Design** ...... TBD+4 Mos.
- **Design and Test Alternative Displays** ............ TBD+7 Mos.
- **Present Briefing to Sponsor** ......................... TBD+9 Mos.
- **Use of ECAT to Evaluate CG Displays** ...... TBD+10 Mos.
- **Project End** .................................................. TBD+12 Mos.

**Expected Benefit:**
Improve operational performance/efficiency/mission execution/resiliency

**Notes:**

- Indicates RDC product.

**Project #:** 7521  **Tier:** 3  **RDC POC:** Dr. Anita Rothblum 860-271-2847  **CG-926 Domain Lead:** Mr. Jaurin Joseph 202-475-3493
USCG Airborne Radar Lateral Range Curves for SAROPS

Mission Need: SAROPS requires search performance data for the full range of radar settings and altitudes reflected in current small target search guidance to CG airborne radar operators.

Project Objectives:
- Apply physics-based radar modeling and previously-documented heuristic methods to expand the airborne radar lateral range curve (LRC) data set available to SAROPS programmers.
- Document results in a format that can be used to update the SAROPS search planning software tool.

Sponsor: CG-5RI
Stakeholder(s): CG-711, CG SAR Mission Planners

Key Milestone / Deliverable Schedule:

Project Start........................................16 Jan 13 ✓
Conduct radar LRC analysis & modeling........27 Feb 13 ✓
Expanded CG Airborne Radar LRC Estimates for Small Search Objects...............24 May 13 ✓
Project End........................................30 May 13 ✓

Expected Benefit:
Improve operational performance/efficiency/mission execution/resiliency

Notes:

* Indicates RDC product.
Underwater Imaging System Transition Evaluation
Mission Need: An integrated CG underwater detection and imaging organic CG capability.

Project Objectives:
• Identify where the UIS could add value/improve the operational efficacy of CG Missions relating to underwater operations.

Sponsor: CG-5RE
Stakeholder(s):

Key Milestone / Deliverable Schedule:
Project Start .......................................................... 29 Feb 12 ✓
Mission Applicability Matrix.............................. 24 Oct 12 ✓
Technology Transition Agreement Signed............. Nov 12 *
Project End .......................................................... 20 Dec 12 ✓

Expected Benefit:
Improve operational performance/efficiency/mission execution/resiliency

Notes:
*Pending Headquarters realignment.

Project #: 7748
Tier: 3
RDC POC: Mr. Scot Tripp
860-271-2680

CG-926 Domain Lead:
CDR Tung Ly
202-475-3011
Analysis Support for CG Airborne Use of Force (AUF) Weapons Testing

Mission Need: Objective information for Coast Guard policymakers concerning shrapnel/ricochet danger zones resulting from employment of AUF weapons and tactics.

Project Objectives:
- Conduct live-fire testing to characterize likely shrapnel/ricochet danger zones around typical threat vessel outboard motors using current USCG AUF ordnance, ammunition, and TTPs.

Sponsor: CG-7112  
Stakeholder(s): CG-721, ATC Mobile, CG AUF Units

Key Milestone / Deliverable Schedule:
- Project Start: 16 Jan 13  
- Conduct Live Fire Testing: Sep 13  
- Analysis of Likely Shrapnel/Ricochet Dangers from USCG Airborne Use of Force Engagements Briefing: Feb 14  
- Project End: Mar 14

Project #: 7749  
Tier: 3  
RDC POC: LCDR Tom Hickey (860) 271-2897  
CG-926 Domain Lead: CDR Al Antaran (202) 475-3049

Expected Benefit:
- Improved Doctrine/CONOPs/TTPs

Notes:

UNCLAS/USCG Research & Development Center  
7/11/2013

Mission Need: A mission analysis for the MSO Program.

**Project Objectives:**
- Prepare a MSO Program MAR.
- Deliver a briefing.
- Deliver a final report.

**Sponsor:** DCO-81
**Stakeholder(s):** CG-MSR

**Key Milestone / Deliverable Schedule:**

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>16 May 12</td>
<td>12 Dec 12</td>
<td>20 Jun 13</td>
</tr>
</tbody>
</table>

**Project #:** 7926  
**Tier:** 2

**RDC POC:**  
Mr. Mark VanHaverbeke  
860-271-2754

**CG-926 Domain Lead:**  
LT Derek Storolis  
202-475-3492

**Expected Benefit:**
Direct Acquisition Support (MAR, MNS, CONOPS, ORD, AA, LCCE, T&E, etc)

**Notes:**

★ Indicates RDC product.
Chicago Sanitary Ship Canal (CSSC) Marine Safety Risk Analysis

Mission Need: A review of marine safety risks associated with the fish barrier to determine adequacy of present risk mitigation strategies and make recommendations for alternatives.

**Project Objectives:**
- Conduct an analysis of risks to marine safety for commercial and recreational mariners that transit the Chicago Sanitary and Ship Canal (CSSC) in the vicinity of the fish barrier.
- Determine adequacy of present risk mitigation strategies.
- If necessary, recommend alternatives to the present strategies.

**Sponsor:** CGD9 (dpi)
**Stakeholder(s):** USEPA-GLNPO

**Key Milestone / Deliverable Schedule:**
- **Project Start:** 8 Nov 11 ✓
- **Data Collection and Analysis:** 25 Aug 12 ✓
- **Preliminary Risk Assessment:** 21 Dec 12 ✓
- **Risk Analysis, Interim Summary:** 26 Feb 13 ✓
- **CSSC Risk Validation Session:** 19 Jun 13 ✓
- **CSSC Marine Safety Risk Analysis Report:** Sep 13
- **Project End:** Oct 13

**Expected Benefit:**
Improve operational performance/efficiency/mission execution/resiliency

**Notes:**
COMMSTA Maintenance Cost Estimate

Mission Need: Accurate maintenance cost estimate to support remotely operated communication stations.

**Project Objectives:**
- Develop a cost estimate for personnel and maintenance costs for the remotely operated COMMSTAs
- Conduct a cost comparison to determine cost savings associated with utilizing government and/or contractor personnel for maintenance

**Sponsor:** C3CEN
**Stakeholder(s):** CG-65

**Key Milestone / Deliverable Schedule:**

<table>
<thead>
<tr>
<th>Project Milestone</th>
<th>Start Date</th>
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</thead>
<tbody>
<tr>
<td>Project Start</td>
<td>25 Apr 13</td>
</tr>
<tr>
<td>Site Visit COMMSTA</td>
<td>Sep 13</td>
</tr>
<tr>
<td>Cost Data Collection</td>
<td>Oct 13</td>
</tr>
<tr>
<td>Interim Draft Report</td>
<td>Dec 13</td>
</tr>
<tr>
<td><strong>RDC Product “Communication Station (COMMSTA) Maintenance Cost Estimate”</strong></td>
<td><strong>Feb 14</strong></td>
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<tr>
<td>Project End</td>
<td>Feb 14</td>
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</table>

**Project #:** 3404  
**Tier:** 3
**RDC POC:** Ms. Monica Cisternelli  
(860) 271-2741

**CG-926 Domain Lead:**  
LT Derek Storolis  
(202) 475-3492

**Expected Benefit:**
Direct Acquisition Support (MAR, MNS, CONOPS, ORD, AA, LCCE, T&E, etc)

**Notes:**

Indicates RDC product.
GLRI BWT Shipboard Approval Tests
Mission Need: Capability to verify that ballast water treatment systems installed aboard ships meet discharge standards.

**Project Objectives:**
- Develop methodology and test protocols for approval/certification testing of BWT systems aboard ships.
- Coordinate with CG-5224 and MARAD to test BWT system aboard Laker.
- Evaluate BWT system in fresh water.

**Sponsor:** CG-5PS
**Stakeholder(s):** USEPA-GLNPO

**Key Milestone / Deliverable Schedule:**

<table>
<thead>
<tr>
<th>Project Start</th>
<th>Generic Protocol for Filtration Skid</th>
<th>Begin Shipboard Tests</th>
<th>Validation of Filtration Skid During Land-Based &amp; Shipboard Tests</th>
<th>Key Decision Point to Pursue Fourth Test</th>
<th>Validation of Shipboard Testing Protocol</th>
<th>Project End</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 Jan 11 ✓</td>
<td>8 Jun 12 ✓</td>
<td>26 Jul 12 ✓</td>
<td>12 Oct 12 ✓</td>
<td>Sep 13</td>
<td>Jun 14</td>
<td>30 Jul 14</td>
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</table>

**Expected Benefit:**
Improved Doctrine/CONOPs/TTPs

**Notes:**

**Project #:** 41012  **Tier:** 2  **RDC POC:** Mr. Chris Turner 860-271-2623  **CG-926 Domain Lead:** Mr. Jaurin Joseph 202-475-3493

- Indicates RDC product.
Shipboard Compliance of Ballast Water Discharge Standards (BWDS)

Mission Need: The tools to quickly and reliably determine vessel compliance with the Phase One and the proposed Phase Two ballast water discharge standards.

**Project Objectives:**
- Determine the availability and capabilities of existing technologies that could be utilized for compliance verification of Phase One and the proposed Phase Two ballast water discharge standards.

**Sponsor:** CG-OES3  
**Stakeholder(s):** USEPA-GLNPO, CG-CVC2

**Key Milestone / Deliverable Schedule:**

**Compliance Verification Technology Workshop…. 28 Jun 11 ✓**

**Procedures of Ballast Water Discharge Standards Compliance Subject Matter Expert Workshop................................. 7 Sep 11 ✓**

**Market Research Assessment: Verification Technologies for BWDS Compliance.......... 17 Oct 12 ✓**

**Prototype Development of Compliance Tools………Nov 14**

**Independent Field Testing of Prototype Compliance Verification Tools........................ Aug 15**

**Compliance Tool Transition Plan.........................May 16**

**Project End......................................................... Jun 16**

**Expected Benefit:**
Direct Product Line/Core Technology Support (Tech refresh, DMS, etc)

**Notes:**

**Project #: 410131**

**Tier:** 2

**RDC POC:** Ms. Gail Roderick  
860-271-2658

**CG-926 Domain Lead:** Mr. Jaurin Joseph  
202-475-3493

**Version date:** 7/11/2013
Develop CG Guidance to Verify Ballast Water Discharge Standards Compliance
Mission Need: Procedures to verify federal ballast water discharge standards.

Project Objectives:
- Describe CG requirements and future capabilities gaps.
- Companion project provides suitable potential technology solutions and tiered approach to numerical BDWS enforcement.
- Identify policy and non-material solutions that meet requirements.
- Develop guidance for CG enforcement of the new BWDS.

Sponsor: CG-CVC
Stakeholder(s): USEPA-GLNPO, CG-CVC, CG-OES

Key Milestone / Deliverable Schedule:
Project Start .............................................. 15 Dec 11 ✓
Guidance to Verify Ballast Water Discharge Standards Compliance ......................... Oct 13
Project End .............................................. Dec 13

Expected Benefit:
Improved Doctrine/CONOPs/TTPs

Notes:
Analysis Support for the Mandated Periodic & Practicability Reviews of Ballast Water Standards

Mission Need: To determine the practicability of implementing ballast water discharge standards more stringent than the current standards.

**Project Objectives:**

- Develop a plan for determining the practicability of implementing more stringent ballast water discharge standards.
- Conduct a practicability review that examines all aspects of the prevailing ballast water management program requirements, standards, and regulations and assesses the program’s effectiveness in preventing invasions.

**Sponsor:** CG-OES

**Stakeholder(s):** USEPA-GLNPO

**Key Milestone / Deliverable Schedule:**

<table>
<thead>
<tr>
<th>Project Start</th>
<th>Tier</th>
<th>RDC POC</th>
<th>CG-926 Domain Lead</th>
</tr>
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<tbody>
<tr>
<td>28 Jan 13</td>
<td>3</td>
<td>Ms. Gail Roderick 860-271-2658</td>
<td>Mr. Jaurin Joseph 202-475-3493</td>
</tr>
</tbody>
</table>

- **Phase I: BWDS Practicability Planning Meeting**… Mar 14
- **BWDS Practicability Review Plan**……… Aug 14
- **KDP: Conduct BWDS Practicability Review**… Apr 15
- **Phase II: A: Determine detection limits of testing protocols**… Sep 15
- **Phase II: B: Determine thresholds of treatment technologies**… May 15
- **Phase II: C: Determine integration into ships’ ops regime**… Mar 16
- **BWDS Practicability Review**… Sep 16
- **Project End**… Nov 16

**Expected Benefit:**
Add to general R&D knowledge base

**Notes:**
Investigation of Ballast Water Treatment’s Effect on Corrosion

Mission Need: Understanding of how ballast water treatment affects ballast tank corrosion in order to assess corrosion acceptability as part of type approval.

**Project Objectives:**

- Determine potential for accelerated ballast water tank corrosion from various ballast water treatments.
- Determine how CG can assess corrosion acceptability as part of type approval.

**Sponsor:** CG-5PS

**Stakeholder(s):** USEPA-GLNPO

**Key Milestone / Deliverable Schedule:**

| Project Start | 3 Nov 10 ✓ |
| Phase 1 – Corrosion Scoping Study | 6 May 11 ✓ |
| Desktop Literature Review | |
| Shipboard Surveys (Lakers/Salties) | |
| KDP for Phase 2 | 1 Sep 11 ✓ |
| **Interim Report: Corrosion Scoping Study** | 19 Oct 11 ✓ |
| Phase 2 – Corrosion Rate Assessment Controlled | |
| Laboratory Tests | 19 Oct 12 ✓ |
| **Final Report: Corrosion Rate Assessment** | 28 Mar 13 ✓ |
| Project End | Aug 13 |

**Expected Benefit:**

Add to general R&D knowledge base

**Notes:**

* Indicates RDC product.
Asian Carp Towboat/Barge Sampling Study

Mission Need: Understanding whether barge and vessel operations create a dispersal barrier bypass for Asian carp into the Great Lakes.

**Project Objectives:**
- Support the Barge/Towboat Work Group research.
- Evaluate towboat/barge potential for transporting Asian carp across the dispersal barrier.
- Evaluate carp survival in ballast tanks.
- Estimate impact of vessel operations on Asian carp movement.

**Sponsor:** USEPA-GLNPO  
**Stakeholder(s):** CG-OES-3

**Key Milestone / Deliverable Schedule:**

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<tbody>
<tr>
<td></td>
<td>8 Apr 10 ✓</td>
<td>15 Apr 10 ✓</td>
<td>4 Jan 11 ✓</td>
<td>23 Mar 12 ✓</td>
<td>29 Aug 12 ✓</td>
<td>15 Oct 12 ✓</td>
<td>7 Mar 13 ✓</td>
</tr>
</tbody>
</table>

**Expected Benefit:**
Add to general R&D knowledge base

**Notes:**
Replaced Update “Survivability of Asian Carp in Barge Tanks in the Illinois River” with report combining survivability report with water transport report.
Response to Oil In Ice

Mission Need: A group of methodologies to minimize the damage to the environment caused by spilled oil in extreme cold in the Arctic Region nor the Northern U.S.

Project Objectives:
• To develop equipment and techniques that can be used successfully to detect, track and recover oil in ice filled waters in all conditions.
• Conduct a series of demonstrations in the Great Lakes and the Arctic of increasing complexity to test operational deployments of equipment.
• Support National Academy of Science (NAS) Arctic Response Assessment.

Sponsor: CG-MER
Stakeholder(s): D9, D17, EPA, BSEE

Key Milestone / Deliverable Schedule:

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<td>2 Nov 09</td>
<td>22 Apr 11</td>
<td>27 Jan 12</td>
<td>15 Jul 11</td>
<td>11 May 12</td>
<td>22 Feb 13</td>
<td>Sep 13</td>
<td>Dec 13</td>
<td>Oct 14</td>
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</table>

Project #: 4701
Tier: 2
RDC POC: Mr. Kurt Hansen 860-271-2865
CG-926 Domain Lead: Mr. Shannon Jenkins 202-475-3490

Expected Benefit:
Improve operational performance/efficiency/mission execution/resiliency

Notes:
Includes funding from FY11 Oil Spill Research Earmark.
Partnered with Great Lakes Restoration Initiative.
Improve SMART Protocol Effectiveness

Mission Need: Enhanced SMART Program policies and tools to support Coast Guard evolving spill response needs.

Project Objectives:
• Resolve requirements needed to fulfill the program’s current mission.
• Identify short and long term technology improvements needed to meet the Program’s mission requirements.

Sponsor: CG-MER-3
Stakeholder(s): NSFCC, Elizabeth City

Key Milestone / Deliverable Schedule:

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<td>TBD+7 Mos.</td>
<td>TBD+10 Mos.</td>
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</tbody>
</table>

Project #: 4703
Tier: 3
RDC POC: Mr. Chris Turner (860) 271-2623
CG-926 Domain Lead: Mr. Shannon Jenkins (202) 475-3490

Expected Benefit:
Improved Doctrine/CONOPs/TTPs

Notes:
**Maritime Trace Narcotic Identification/Verification**

**Mission Need:** Narcotic ID/verification capabilities to meet NDCS performance goals.

**Project Objectives:**
- The project objective is to provide boarding team members a more effective and efficient narcotic identification/validation capability for use during maritime counterdrug missions.

**Sponsor:** CG-MLE

**Stakeholder(s):** CG-761

**Key Milestone / Deliverable Schedule:**

<table>
<thead>
<tr>
<th>Event Description</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maritime Trace Narcotics Detection Key Performance Parameters (KPP) and Devices</td>
<td>16 May 12</td>
</tr>
<tr>
<td>KDP (Go/No-Go Phase I to Phase II)</td>
<td>18 Jun 12</td>
</tr>
<tr>
<td>Begin Field Deployment Testing</td>
<td>Jul 13</td>
</tr>
<tr>
<td>Maritime Narcotic ID/V Capability Report</td>
<td>Sep 13</td>
</tr>
<tr>
<td>Project End</td>
<td>Sep 13</td>
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</tbody>
</table>

**Notes:**

- Indicates RDC product.

**Project #:** 5802  
**Tier:** 3  
**RDC POC:** Mr. Brian Dolph  
860-271-2817  
**CG-926 Domain Lead:** LCDR Anthony Erickson  
202-475-3748  

**Expected Benefit:**
- Direct Product Line/Core Technology Support (Tech refresh, DMS, etc)
Mobile 10-print Biometric Field Test

Mission Need: Decision support information relating to field use of mobile 10-print multi-modal biometric systems.

**Project Objectives:**
- Evaluation using Two Print System Architecture.
- Full 10-Print System Configuration Development.
- Evaluate Facial and Iris Image.
- Implementation and Final Field Test.
- Analyze and report results.

**Sponsor:** CG-7612
**Stakeholder(s):** DHS S&T (RSD)

**Key Milestone / Deliverable Schedule:**
- Project Start …………………………………………... 10 Sep 11 ✓
- Phase 1 System Design and Implementation…… 8 Aug 12 ✓
- Phase 1 Field Deployment (10-print, facial image)28 Aug 12 ✓
- Phase 2 Iris Image Evaluation Brief……………… 31 Jan 13 ✓
- **Mobile 10-Print Biometrics Field Test Brief…… Sep 13**
- Project End …………………………………………… Sep 13

**Project #:** 5682  **Tier:** 2  **RDC POC:**
- Dr. Thomas Amerson
- 860-271-2894

**CG-926 Domain Lead:**
- Mr. Shannon Jenkins
- 202-475-3490

**Expected Benefit:**
Direct Product Line/Core Technology Support (Tech refresh, DMS, etc)

**Notes:**

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 Indicates RDC product.
RDC FY13 Project Portfolio

Additional R&D Opportunities
(Not listed in priority order)
Lighting Assessment for the Cutter Bridge

Mission Need: The ability to effectively maintain dark adaptation on the bridge of Coast Guard cutters.

**Project Objectives:**
- Measure and understand the lighting problems on the Bridge.
- Determine whether existing solutions (e.g., Navy) could be implemented on CG cutters.

**Sponsor:** CG-1B3  
**Stakeholder(s):** CG-751

**Key Milestone / Deliverable Schedule:**
- **Project Start** …………………………………………………… TBD
- **Cutter Visits** …………………………………………………… TBD+5 Mos.
- **Lighting Recommendations for the Cutter Bridge** ……………………………… TBD+9 Mos.
- **Project End** …………………………………………………… TBD+10 Mos.

**Expected Benefit:**
Add to general R&D knowledge base

**Notes:**

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**Project #:** 2012.038  
**Tier:** 3  
**RDC POC:** Dr. Anita Rothblum  
860-271-2847  
**CG-926 Domain Lead:** Mr. Jaurin Joseph  
202-475-3493

---

Indicates RDC product.
Method to Evaluate Command Center (CC) Capabilities

Mission Need: A methodology to assess how well CCs meet capability requirements.

**Project Objectives:**
- Develop a systems approach for assessing CC capabilities and capacities.
- Develop a tool to automate the evaluation strategy.

**Sponsor:** CG-7412
**Stakeholder(s):**

**Key Milestone / Deliverable Schedule:**

<table>
<thead>
<tr>
<th>Project Event</th>
<th>Tier</th>
<th>RDC POC:</th>
<th>CG-926 Domain Lead:</th>
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<tbody>
<tr>
<td>Project Start</td>
<td>TBD</td>
<td>Dr. Anita Rothblum 860-271-2847</td>
<td>CDR Tung Ly 202-475-3011</td>
</tr>
<tr>
<td>Develop and Pilot Test Evaluation Strategy</td>
<td>TBD+7 Mos.</td>
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<tr>
<td>Annotated Briefing on Evaluation Strategy</td>
<td>TBD+10 Mos.</td>
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<tr>
<td>Extend Evaluation Strategy to Other Missions</td>
<td>TBD+19 Mos.</td>
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<tr>
<td>Develop and Pilot Test Automated Eval Tool</td>
<td>TBD+22 Mos.</td>
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<tr>
<td>Complete and Test CC Evaluation Tool</td>
<td>TBD+32 Mos.</td>
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<tr>
<td>Deliver CC Evaluation Tool and Briefing</td>
<td>TBD+32 Mos.</td>
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<tr>
<td>Project End</td>
<td>TBD+33 Mos.</td>
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</table>

**Expected Benefit:**
Improved Doctrine/CONOPs/TTPs

**Notes:**

Reorganized
Develop In Situ Devices to Enable Protection of Sunken Military Vessels

Mission Need: A capability to thwart and/or catch looters at historical sites and war graves.

**Project Objectives:**
- Research an apparatus that can be deployed at wreck sites, especially passive acoustic monitoring system.
- Develop the best fitting apparatus.
- Test the best fitting apparatus.
- Develop the CONOP for the best fitting system.

**Sponsor:** CG-5RE

**Stakeholder(s):**

**Key Milestone / Deliverable Schedule:**

- **Project Start** ................................................................. TBD
- **Determine Feasibility of Apparatus** ............. TBD+5 Mos.
- **Develop Apparatus** .............................. TBD+11 Mos.
- **Project End** ................................................................. TBD+12 Mos.

**Expected Benefit:**
Improve operational performance/efficiency/mission execution/resiliency

**Notes:**

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**Indicates RDC product.**
Airborne Oil Spill Remote Sensing and Reporting

Mission Need: Tactics, Techniques, and Procedures (TTP) for optimizing the use of existing USCG airborne sensors to support oil spill response operations.

Project Objectives:
- Baseline current CG airborne capabilities for Detecting, Mapping and Reporting (DMR) oil spills.
- Analyze results of DHR oil spill surveillance efforts by CG maritime patrol aircraft (MPA)
- Conduct airborne oil spill DMR testing.
- Document issues in CG oil spill DMR within context of hardware, operator training and environmental conditions; then work with ATC Mobile to develop TTPs.

Sponsor: CG-761
Stakeholder(s): CG-926, FORCENCOM

Key Milestone / Deliverable Schedule:
Project Start ............................................ TBD
Baseline Development ................................ TBD+3 Mos.
Analyze DHR Efforts............................... TBD+6 Mos.
Conduct Field Evaluations ...................... TBD+10 Mos.

USCG Airborne Oil Spill Remote Sensing and Reporting Final Report.............. TBD+15 Mos.
Project End ............................................ TBD+16 Mos.

Expected Benefit:
Improved Doctrine/CONOPs/TTPs

Notes:

Version date 7/11/2013
Evaluate Technologies to Optimize CG Tactical Data Transmission

Mission Need: An enterprise level technology capable of transferring “real-time” SAR pattern or Tactical tasking data to its fleet of operational vessels and aircraft.

**Project Objectives:**
- Assess current CG communications (Sea, Air, and Land assets) infrastructure to determine feasibility of solving current Gap.
- Identify interoperability & other CG enterprise constraints.
- Leverage OGA to identify potentially suitable technologies.
- Submit RFI & investigate suitable public/industry technologies.
- Identify/catalogue impacted or required software & hardware across spectrum of CG communications enterprise.
- Determine top-3 potential solutions & perform cost/benefit analyses.
- Report findings to sponsor.

**Sponsor:** CG-761
**Stakeholder(s):** CG-6

**Key Milestone / Deliverable Schedule:**

<table>
<thead>
<tr>
<th>Event</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Start</td>
<td>TBD</td>
</tr>
<tr>
<td>OGA Systems Review</td>
<td>TBD+1 Mo.</td>
</tr>
<tr>
<td>Public/Industry RFI Submission &amp; Review</td>
<td>TBD+3 Mos.</td>
</tr>
<tr>
<td><strong>Final Report: Recommendations for CG Tactical Data Transmission</strong></td>
<td>TBD+6 Mos.</td>
</tr>
<tr>
<td>Project End</td>
<td>TBD+7 Mos.</td>
</tr>
</tbody>
</table>

**Project #:** 2013.004  **Tier:** 3  **RDC POC:** LCDR Tom Hickey 8760-271-2897  **CG-926 Domain Lead:** CDR Tung Ly 202-475-3011

**Expected Benefit:**
Direct Product Line/Core Technology Support (Tech refresh, DMS, etc)

**Notes:**

* Indicates RDC product.
Next Generation (NG) 911 to USCG Responder Demonstration

Mission Need: Capability to receive Internet Protocol (IP) Based 911 Emergency data from Public Safety Answering Points (PSAPs).

**Project Objectives:**
- Research and identify feasible alternatives to fill the NG911 to USCG Responder gap.
- Select and demonstrate a technology solution compatible with NG911 and USCG Sector operations.
- Investigate NG911 and R21 software compatibility and connectivity requirements.

**Sponsor:** CG-761  
**Stakeholder(s):** CG-652

**Key Milestone / Deliverable Schedule:**

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Target Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Start</td>
<td>*TBD</td>
</tr>
<tr>
<td>Determine Requirements for USCG to Accept NG911 Calls as a 3rd Party Responder</td>
<td>TBD + 2 Mos.</td>
</tr>
<tr>
<td>Procure HW/SW</td>
<td>TBD + 12 Mos.</td>
</tr>
<tr>
<td>Establish NG911 Connectivity</td>
<td>TBD + 14 Mos.</td>
</tr>
<tr>
<td>Establish IOC</td>
<td>TBD + 15 Mos.</td>
</tr>
<tr>
<td>Complete Demonstration</td>
<td>TBD + 21 Mos.</td>
</tr>
<tr>
<td><strong>RDC Final Report</strong></td>
<td><strong>TBD + 24 Mos.</strong></td>
</tr>
<tr>
<td>Project End</td>
<td>TBD + 25 Mos.</td>
</tr>
</tbody>
</table>

**Expected Benefit:**
Direct Product Line/Core Technology Support (Tech refresh, DMS, etc)

**Notes:**
*Project start date is to coincide with NG-911’s readiness to accept 3rd party responders at the New London PSAP.*
Prototype Hoax Location System Development

Mission Need: Capability to precisely geo-locate VHF marine channel hoax transmissions.

**Project Objectives:**

- Establish functional requirements for hoax location system.
- Conduct market research, identify, assess, and obtain state of the market COTS/GOTS geo-locating system(s).
- Develop a prototype geo-locating system.
- Test & evaluate geo-locating systems effectiveness.
- Recommend feasible and cost-effective solutions with potential to precisely geo-locate hoaxers.

**Sponsor:** CG-761

**Stakeholder(s):** CGD One (DT), Others TBD

**Key Milestone / Deliverable Schedule:**

- Project Start ............................................................ TBD
- Conduct Market Research.............................. TBD+4 Mos.
- Develop Demonstration Test Plan.............. TBD+8 Mos.
- Obtain COTS/GOTS Alternative for Demo...... TBD+9 Mos.
- Develop Prototype Candidate............... TBD+10 Mos.
- Conduct Demonstration............................. TBD+11 Mos.

**Hoax Location Systems Demonstration Summary Report**............................. TBD+16 Mos.

**Project End............................................................ TBD+17 Mos.**

**Project #:** 2013.012  **Tier: 3**  **RDC POC:** Mr. Dave Larson 860-271-2845  **CG-926 Domain Lead:** CDR Tung Ly 202-475-3011

**Expected Benefit:**

Direct Product Line/Core Technology Support (Tech refresh, DMS, etc)

**Notes:**
# Identify Navigation, Communications, and Detection (NC&D) Equipment for Ice Rescue Teams

**Mission Need:** The robust electronic equipment needed for Ice SAR cases.

## Project Objectives:
- Research necessary equipment needed to complete Ice Rescue Team (SPC and on foot) missions, with a focus on multi-purpose, weatherproof equipment for Ice Rescue Teams.
- Document requirements and performance gaps.
- Post an RFI for test products/candidates.
- Test products on ice (D-9 environment) to determine viability and to narrow, then finalize the list of potential products.

**Sponsor:** CG-5RI  
**Stakeholder(s):** LANT-7, CGD-9

## Key Milestone / Deliverable Schedule:

<table>
<thead>
<tr>
<th>milestone</th>
<th>start</th>
<th>end</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Start</td>
<td></td>
<td>TBD</td>
</tr>
<tr>
<td>Document Requirements and Identified Gaps</td>
<td>TBD</td>
<td>TBD+4 Mos.</td>
</tr>
<tr>
<td>Phase 1 Post RFI</td>
<td>TBD</td>
<td>TBD+6 Mos.</td>
</tr>
<tr>
<td>Phase 1 Review, Evaluation, and Down-Selection</td>
<td>TBD</td>
<td>TBD+9 Mos.</td>
</tr>
<tr>
<td>Interim Brief: Lessons Learned and Preliminary Product Selections for Follow-On Testing</td>
<td>TBD</td>
<td>TBD+10 Mos.</td>
</tr>
<tr>
<td>Phase 2 Field Testing</td>
<td>TBD</td>
<td>TBD+15 Mos.</td>
</tr>
<tr>
<td>Project End</td>
<td></td>
<td>TBD+22 Mos.</td>
</tr>
</tbody>
</table>

**Project #:** 2013.013  
**Tier:** 3  
**RDC POC:** Mr. Don Decker  
860-271-2701  
**CG-926 Domain Lead:** LCDR Anthony Erickson  
202-475-3748

## Expected Benefit:
Improve operational performance/efficiency/mission execution/resiliency.

## Notes:
Evaluate Rotary Wing Surface Search Radar (SSR)

**Mission Need:** To employ advances in commercially available SSR in Coast Guard Rotary Wing aircraft to their maximum benefit.

### Project Objectives:
- Evaluate commercially available SSR system for MH-60T or MH-65.
- Determine the best system for the CG.
- Model the system operating in a variety of environmental conditions and mission scenarios.

**Sponsor:** CG-711  
**Stakeholder(s):** CG-931

### Key Milestone / Deliverable Schedule:

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Start</td>
<td>TBD</td>
</tr>
<tr>
<td>Determine Best System</td>
<td>TBD+5 Mos.</td>
</tr>
<tr>
<td>Model System</td>
<td>TBD+10 Mos.</td>
</tr>
<tr>
<td><strong>RDC System Demonstration</strong></td>
<td>TBD+11 Mos.</td>
</tr>
<tr>
<td>Project End</td>
<td>TBD+12 Mos.</td>
</tr>
</tbody>
</table>

### Project #:
- **2013.017**

### Tier:
- **3**

### RDC POC:
- **Mr. Dave Larson**  
  - 860-271-2845

### CG-926 Domain Lead:
- **CDR Albert Antaran**  
  - 202-475-3049

### Expected Benefit:
- Improve operational performance/efficiency/mission execution/resiliency

### Notes:
- Scope not yet confirmed with CG-931 requestor (inquiries made).
Assess Electro-Optics/Infrared Sensors Utilizing Laser Gated Intensified (LGI) Technology

Mission Need: Thermal infrared and visible spectrum image intensification ($I^2$) systems which can penetrate through obscurants.

### Project Objectives:
- Analyze the known advantages/disadvantages of thermal infrared and $I^2$ cameras vs. LGI cameras through review of RDC Project 7723 and more recent literature. In addition, address eye safety of the LGI unit.
- Evaluate potential feasibility (technical, operational, time and costs) of augmenting or replacing current CG sensor systems with LGI systems.
- Recommend LGI sensor technologies for CG demonstration and evaluation of LGI optical resolution, depth of range, and target identification capability through multiple atmospheric conditions.

**Sponsor:** CG-761  
**Stakeholder(s):**

### Key Milestone / Deliverable Schedule:

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Start</th>
<th>End</th>
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</thead>
<tbody>
<tr>
<td>Project Start</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>Review &amp; Analyze LGI Sensor Technology</td>
<td>TBD+3 Mos.</td>
<td>TBD+3 Mos.</td>
</tr>
<tr>
<td>Feasibility Assessment of LGI Technology for CG Applications</td>
<td>TBD+7 Mos.</td>
<td>TBD+7 Mos.</td>
</tr>
<tr>
<td>IPT Concurrence to Proceed with LGI Evaluation Recommendations</td>
<td>TBD+8 Mos.</td>
<td>TBD+8 Mos.</td>
</tr>
<tr>
<td>Recommendations for Demonstration and Evaluation of LGI Technologies</td>
<td>TBD+10 Mos.</td>
<td>TBD+10 Mos.</td>
</tr>
<tr>
<td>Project End</td>
<td>TBD+12 Mos.</td>
<td>TBD+12 Mos.</td>
</tr>
</tbody>
</table>

**Notes:**

- Add to general R&D knowledge base

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**Indicates RDC product.**
Selection & Testing of Solid State RADAR for VTS

Mission Need: A replacement for end of life VTS magnetron RADARs.

Project Objectives:

- Obtain quantitative data to enable the Coast Guard to decide whether to replace fielded, end of life magnetron-based RADARs with solid state RADARs or other magnetron-based RADARs.
- Provide a cost-benefit analysis on the purchase and long-term support cost of solid state RADARs relative to magnetron-based RADARs.

Sponsor: CG-64
Stakeholder(s): CG-741, C3CEN

Key Milestone / Deliverable Schedule:

<table>
<thead>
<tr>
<th>Task</th>
<th>Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Start</td>
<td>TBD</td>
</tr>
<tr>
<td>Identify Key Elements</td>
<td>TBD+2 Wks.</td>
</tr>
<tr>
<td>Identify KPPs</td>
<td>TBD+1 Mo.</td>
</tr>
<tr>
<td>Test Plan Developed</td>
<td>TBD+5 Mos.</td>
</tr>
<tr>
<td>Test Range and Targets Reserved</td>
<td>TBD+5 Mos.</td>
</tr>
<tr>
<td>CRADA or Other Agreement Approved</td>
<td>TBD+9 Mos.</td>
</tr>
<tr>
<td>Testing Complete</td>
<td>TBD+14 Mos.</td>
</tr>
<tr>
<td>Cost-Benefit Analysis</td>
<td>TBD+18 Mos.</td>
</tr>
<tr>
<td>Project End</td>
<td>TBD+20 Mos.</td>
</tr>
</tbody>
</table>

Expected Benefit:
Direct Product Line/Core Technology Support (Tech refresh, DMS, etc)

Notes:

Indicates RDC product.
Oil Spill Response Technology Gaps

Mission Need: A systematic review of recent events to establish the Government’s next steps toward improving the effectiveness of the integrated government and Responsible Party response.

**Project Objectives:**
- Summarize capability gaps based on reviews of spills before DWH and other major U.S. spills since 2007, including DWH.
- Identify technology gap areas for CG and industry response.
- Identify capability gaps to be addressed by ongoing R&D.
- Prioritize the remaining capability gaps for funding and develop briefs to publicize the CG priorities to the spill response and oversight communities.

**Sponsor:** CG-5RI  
**Stakeholder(s):** BSEE

**Key Milestone / Deliverable Schedule:**
- Project Start …………………………………………………… TBD
- Identify Current Capability Gaps…………………. TBD+10 Mos.
- External Agency Reviews…………………………. TBD+12 Mos.
- Prioritize Capability Gaps and R&D Investment… TBD+15 Mos.
- **Priorities for Coast Guard Oil Spill Response Technology Investment**………………. TBD+16 Mos.
- Project End …………………………………………………. TBD+18 Mos.

**Project #:** 2011.024  
**Tier:** 3  
**RDC POC:** Mr. Chris Turner 860-271-2623  
**CG-926 Domain Lead:** Mr. Shannon Jenkins 202-475-3490

**Expected Benefit:**
Add to general R&D knowledge base

**Notes:**
Develop an Environmentally Friendly Buoy Mooring System

Mission Need: A buoy mooring system situated in environmentally sensitive areas that would avoid directly damaging nearby delicate plants and animals in the benthic zone.

**Project Objectives:**
- Conduct a market research to determine alternatives to traditional buoy mooring systems.
- Use BAA to develop and test prototypes and acquire final report to determine best available technology for environmentally sensitive areas.

**Sponsor:** CG-5PW

**Stakeholder(s):** CG-D7 (DPW), CG-MLE-4, CG-432

**Key Milestone / Deliverable Schedule:**

<table>
<thead>
<tr>
<th>Deliverable</th>
<th>Start Date</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Start</td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td>Conduct Market Research</td>
<td>TBD+4 Mos.</td>
<td></td>
</tr>
<tr>
<td>Brief Market Research Results</td>
<td>TBD+6 Mos.</td>
<td></td>
</tr>
<tr>
<td>Issue Broad Agency Announcement</td>
<td>TBD+7 Mos.</td>
<td></td>
</tr>
<tr>
<td>Prototype Design Report</td>
<td>TBD+16 Mos.</td>
<td></td>
</tr>
<tr>
<td>Prototype Testing</td>
<td>TBD+26 Mos.</td>
<td></td>
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<tr>
<td>Prototype Final Report</td>
<td>TBD+40 Mos.</td>
<td></td>
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<tr>
<td>Project End</td>
<td>TBD+41 Mos.</td>
<td></td>
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</tbody>
</table>

**Expected Benefit:**

Improve operational performance/efficiency/mission execution/resiliency

**Notes:**
Project includes BAA.
Detect DGPS/GPS Position/Time Anomalies through NAIS

Mission Need: An active automated GPS signal monitoring capability to identify local unavailability of GPS signals using information from the NAIS.

Project Objectives:

- Investigate and develop methods to identify GPS outages and signal interference based upon information available from the NAIS. The methods should be able to identify both local and broad geographic area GPS issues.

- Demonstrate the methods with an alpha level prototype, identify system architecture, interface standards, and middleware (if necessary) to enable detailed outage information with notification to NAVCEN.

Sponsor: CG-761
Stakeholder(s): CG-257, CG-NAV, NAVCEN, CAIT-SC

Key Milestone / Deliverable Schedule:

<table>
<thead>
<tr>
<th>Project Start</th>
<th>TBD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report Investigation Findings on Method(s)</td>
<td>TBD+6 Mos.</td>
</tr>
<tr>
<td>Prototype Automated Notification Tool</td>
<td>TBD+20 Mos.</td>
</tr>
<tr>
<td>Project End</td>
<td>TBD+21 Mos.</td>
</tr>
</tbody>
</table>

Expected Benefit:

Direct Product Line/Core Technology Support (Tech refresh, DMS, etc)

Notes:

RDC-ISR # 189

Indicates RDC product.
Existing Wrecks Potential Spill Response Assessment

Mission Need: Improve decision and recovery/mitigation tools for responding to oil in submerged wrecks.

Project Objectives:
• Develop decision making tools for Federal On-scene Commander (FOSC) to aid in response planning for oil in submerged vessels.
• Develop suite of hardware that can be used for assessment and mitigation, building on industry’s past efforts.

Sponsor: CG-5RI
Stakeholder(s): NOAA

Key Milestone / Deliverable Schedule:

<table>
<thead>
<tr>
<th>Project Start</th>
<th>TBD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tools Assessment</td>
<td>TBD+7 Mos.</td>
</tr>
<tr>
<td>CRADA Development</td>
<td>TBD+20 Mos.</td>
</tr>
<tr>
<td>FOSC Tools Development</td>
<td>TBD+31 Mos.</td>
</tr>
<tr>
<td>Project End</td>
<td>TBD+55 Mos.</td>
</tr>
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</table>

Project #: 2013.022  Tier: 3  RDC POC: Mr. Kurt Hansen (860) 271-2865  CG-926 Domain Lead: Mr. Shannon Jenkins (202) 475-3490

Expected Benefit:
Improve operational performance/efficiency/mission execution/resiliency

Notes:
Autonomous Arctic Power Unit (AAPU)
Mission Need: Autonomous power capability to energize various sensors and communications equipment vital to mission success in the harsh Arctic environment.

**Project Objectives:**
- Design a scalable autonomous power unit suitable to meet required performance parameters and withstand the harsh environment and physical threats (i.e., bears) of the remote Arctic Region.
- Fabricate (or procure), deploy and operate one or more prototype AAPU at remote Arctic site(s) for preliminary developmental testing during Arctic Shield 2014.

**Sponsor:** CG-761  
**Stakeholder(s):** DHS, CIMES, CCGD17, MXAK, USNC S&T

**Key Milestone / Deliverable Schedule:**

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Start</td>
<td>TBD</td>
</tr>
<tr>
<td>Market Research Briefing and KDP</td>
<td>TBD+6 Mos.</td>
</tr>
<tr>
<td>AAPU Design Briefing</td>
<td>TBD+9 Mos.</td>
</tr>
<tr>
<td>Arctic Shield 2015 Prototype Demonstration</td>
<td>TBD+22 Mos.</td>
</tr>
<tr>
<td>Prototype Performance Report</td>
<td>TBD+27 Mos.</td>
</tr>
<tr>
<td>Project End</td>
<td>TBD+28 Mos.</td>
</tr>
</tbody>
</table>

**Expected Benefit:**  
Improve operational performance/efficiency/mission execution/resiliency

**Notes:**

[Indicates RDC product.]
Communication Networks Modeling and Simulation Tool

Mission Need: A Comms Network M&S tool that can support Acquisition Decisions.

Project Objectives:
- Identify critical demand infrastructure and requirements.
- Complete Market Research to identify candidate modeling tools and net-worthiness.
- Select and acquire most cost-effective modeling tool.
- Develop model architecture, interfaces, and libraries.

Sponsor: CG-64
Stakeholder(s): CAIT-SC

Key Milestone / Deliverable Schedule:

| Project Start | TBD |
| Requirements/Infrastructure Identification | TBD+3 Mos. |
| Market Research/Net Readiness Report | TBD+5 Mos. |
| Tool Downselect and Acquisition | TBD+6 Mos. |
| Model Development Complete | TBD+12 Mos. |
| VV&A Complete | TBD+13 Mos. |
| Project End | TBD+13 Mos. |

Project #: 2013.009
Tier: 3
RDC POC: CDR Sean Lester 860-271-2880
CG-926 Domain Lead: LT Derek Storolis 202-475-3492

Expected Benefit:
Direct Acquisition Support (MAR, MNS, CONOPS, ORD, AA, LCCE, T&E, etc)

Notes:
Cocaine Purity and Signature Test

Mission Need: More detailed field analyses to boost investigative efforts and increase awareness of maritime smuggling techniques and routes.

**Project Objectives:**

- The objective of this project is to create/develop a tool, for use by Boarding Team Members during maritime interdictions, capable of testing cocaine purity, signature (i.e., source country and processing location), and cutting agents (PSC/A).

**Sponsor:** CG-5RE

**Stakeholder(s):**

**Key Milestone / Deliverable Schedule:**

<table>
<thead>
<tr>
<th>Event</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Start</td>
<td>TBD</td>
</tr>
<tr>
<td>“Lab” Tests Converted to “Maritime/Field” Tests</td>
<td>TBD+9 Mos.</td>
</tr>
<tr>
<td>Begin Field Tests &amp; User Suitability Assessment</td>
<td>TBD+14 Mos.</td>
</tr>
<tr>
<td>Complete Field Tests &amp; User Suitability Assessment</td>
<td>TBD+18 Mos.</td>
</tr>
<tr>
<td>Final Report with PSC/A Kit Recommendation</td>
<td>TBD+12 Mos.</td>
</tr>
<tr>
<td>Project End</td>
<td>TBD+22 Mos.</td>
</tr>
</tbody>
</table>

**Project #:** 2013.026  
**Tier:** 3  
**RDC POC:** Mr. Brian Dolph  
860-271-2817  
**CG-926 Domain Lead:** LCDR Anthony Erickson  
202-475-3748

**Expected Benefit:**

Improve operational performance/efficiency/mission execution/resiliency

**Notes:**

* Indicates RDC product.
Operational Quality Assurance System (OQAS)

Mission Need: A quality assurance program for high speed, heavy weather and pursuit boat performance monitoring.

**Project Objectives:**
- Develop a dedicated data acquisition system for capturing operational performance parameters and real-time display for coxswains.
- Complete market survey of appropriate interfaces, instruments and displays synthesizing recent heavy weather and wireless sensing network studies on RB-M.
- Develop a system to analyze data and provide access to command leadership or maintenance personnel to 1) improve safety and 2) provide a data background to unanticipated damage events.

**Sponsor:** CG-731
**Stakeholder(s):** SFLC, CG-45, CG-1134

**Key Milestone / Deliverable Schedule:**

<table>
<thead>
<tr>
<th>Project Start</th>
<th>Complete Market Survey</th>
<th>Develop QA System</th>
<th>Develop Prototype</th>
<th>Install and Demonstrate</th>
<th>OQAS Project Report</th>
<th>Project End</th>
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</thead>
<tbody>
<tr>
<td>TBD</td>
<td>TBD+5 Mos.</td>
<td>TBD+9 Mos.</td>
<td>TBD+10 Mos.</td>
<td>TBD+14 Mos.</td>
<td>TBD+17 Mos.</td>
<td>TBD+18 Mos.</td>
</tr>
</tbody>
</table>

**Expected Benefit:**
Influence Mission Support efficiencies

**Notes:**

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**Indicates RDC product.**

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**Project #:** 2013.027  
**Tier:** 3  
**RDC POC:** Mr. Jay Carey  
860-271-2702  
**CG-926 Domain Lead:** LCDR Anthony Erickson  
202-475-3748

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**Version date**
7/11/2013
Underwater Latent Fingerprinting
Mission Need: Ability to collect latent fingerprints from vessels or evidence that have been exposed or submerged in sea water.

**Project Objectives:**
- Determine if latent fingerprints can be pulled off a submerged object (i.e., SPSS, fiberglass, aluminum, wooden hull, contraband) and the best process for doing so.
- Determine if latent fingerprints can be pulled off a salt water exposed object (i.e., SPSS, fiberglass, aluminum, wooden hull, contraband) and the best process for doing so.
- Provide an analysis of the effects (e.g., exposure time) of salt water on latent fingerprints.

**Sponsor:** CG-761  
**Stakeholder(s):** CG-2A

**Key Milestone / Deliverable Schedule:**
- Project Start ............................................................... TBD
- Design Testing ....................................................... TBD+5 Mos.
- Conduct Testing ..................................................... TBD+8 Mos.
- **Test Report** ...................................................... TBD+10 Mos.
- Project End ............................................................. TBD+11 Mos.

**Expected Benefit:**
Add to general R&D knowledge base

**Notes:**

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**Indicates RDC product.**