INTEGRATED COASTAL AND OCEAN OBSERVING SYSTEM (ICOOS) ACT OF 2009 IMPLEMENTATION PLAN

ACTIVITY: "develop and be responsible for a data management and communication system, in accordance with standards and protocols established by the Council, by which all data collected by the System regarding ocean and coastal waters of the United States including the Great Lakes, are processed, stored, integrated, and made available to all end-user communities."

ICOOS ACT REFERENCE: §12304 (c)(3)(J)

PLAN:

- **Objectives/Milestones:**
    1. Publish the final Data Integration Framework (DIF) report.
    2. Expand data management and communication (DMAC) based on a focus area approach with climate change and ecosystems as two of the focus areas
        a. Determine which variables, data structures and data providers will be incorporated arraying against time
        b. Implement the plan in FY10 and FY11
    3. Determine Ocean Observatories Initiative (OOI)-IOOS data management alignment

- **Execution Plan:**
  A. **Complete Data Integration Framework assessment report**
      a. Conduct customer project assessment with the four DIF customers
      b. Conduct in-depth assessment of technical decisions made (i.e. selected services, encodings, metadata standards, etc.)
      c. Develop initial outline/layout/content for final report
      d. Complete documentation of lessons learned
      e. DIF assessment report completed (includes PowerPoint presentation)
  B. **Begin establishing shared components of DMAC, including Service Registry, Data Catalog and Map Viewer**
      a. **Expand DMAC to ecosystem customer focus area**
      b. Develop a region-based project plan for one or more biological observation variables
      c. Establish a customer-based context (i.e. population assessments for reef fishes) to establish requirements and target at least one data stream (i.e. presence/absence/ abundance of reef fishes in Hawai'i/Pacific region) Define preliminary community based "standards" for representing and accessing the selected biological variables
  C. **Potentially expand DMAC to a climate customer focus area**
      1: Climatologies for marine protected areas
      a. Identify critical sources of priority data sets for establishing historic climate-related trends at one or more MPAs (initial target location is Florida Keys NMS)
      a. Implement DMAC data interoperability standards at critical data providers to improve access to and use of these data sets for analysis
      b. Conduct a test-case analysis for at least one data source to evaluate before/after performance metrics and prospects for an expanded approach
  D. **Determine IOOS-OOI data management alignment**
      a. Establish a jointly defined (IOOS/OOI) customer-based project to expose mutual data management priorities [completed – focus is on developing tools/protocols for a more standardized access to ocean observation data for coastal modelers]

b. Implement initial data access tools and protocols in Mid-Atlantic region and evaluate performance

c. Investigate expansion of tools/protocols to a broader range of regional users/customers via IOOS/DMAC and OOI's cyber-infrastructure.

- **Dependent Activities:**
  - Expanded implementation of DMAC across U.S. IOOS will depend in part on how and when a re-charted DMAC Steering Team emerges from the IWGOO
  - Expanding DMAC to a climate customer focus will depend on sustained customer interest at NOAA's National Marine Sanctuary Program and, per modeling, on the feasibility of emergent ideas and available of current and future resources to execute
  - Level of IOOS/OOI interaction will depend in part on the relative success of OOI's initial cyber-infrastructure release (Spring 2011)

- **Additional Needs:** None at this time

GROUP RESPONSIBLE: NOAA/IOOS/Operations Division

DELIVERABLES:
  a. DIF Assessment report [Sep 2010]
  b. Proposed community standard(s) for at least one type of biological observation data [Sep 2010]
  c. Initial IOOS/OOI collaboration results per improving ocean modeler's access to priority data sets [Sep 2010]

DUE DATE: See Deliverables above. Completion of all tasks by Sept 2010

OUTSTANDING DECISIONS NEEDED:
  a. Re-chartering of a new DMAC Steering Team by IWGOO
  b. Feasibility of a climate/modeling customer project for IOOS
  c. Expansion path for continued IOOS/OOI interaction based on first OOI cyber-infrastructure release (Spring 2011)