

# **Regional Association Fiscal Support Proposal Milestones**

Compiled by the National Oceanic and Atmospheric Administration (NOAA)  
Coastal Services Center

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The following materials examine Integrated Ocean Observing System (IOOS) Regional Association milestones from fiscal year (FY) 2008 support proposals, specifically comparing these milestones with the objectives originally set out in NOAA's FY 2008 Regional Association support funding announcement. The milestones listed in the following table reflect only those listed in submitted Regional Association support proposals, typically listed within a milestone table or specific milestone section. In other sections of these proposals, the Regional Associations often elaborated on milestones and other proposed activities; however, to retain a consistent approach, this study does not include this information.

The milestone table most likely does not reflect all activities proposed by the Regional Associations, but information was compiled to illustrate the need for clear timelines and outcomes of proposed activities. This information was also gathered to evaluate the progress in reaching the objectives required in the FY 2008 funding announcement. Criteria identified in NOAA's funding announcement are listed along the left side and the 11 Regional Associations are listed along the top. Associations were given credit for each funding criteria listed in their milestones.

The pages following the milestone table include the actual milestone pages extracted from each Regional Association proposal. The milestone pages vary in length but follow the same order as the table.

<b>Proposal Criteria</b>	<b>Regional Associations</b>										
	GLOS	NERACOOS	MACOORA	SECOORA	GCOOS	CaRA	PacIOOS	SCCOOS	CeNCOOS	NANOOS	AOOS
Formalization & active engagement of RA gov structure, including stakeholder council			X	X	X	X	X	X	X	X	X
Refinement & updating of business plan that guides RA's communications, managmt, & operations	X	X	X	X	X	X	X	X	X	X	X
Completion & refinement of needs assessment for regional IOOS info.	X	X	X	X	X	X		X	X	X	
Developmt & refinemt of website displaying common identity with IOOS & other RAs & common pathways to obtain info.			X	X		X				X	
Refinemt & documentation of regional priorities & requiremts for observing system info.		X	X	X		X				X	
Desgn of regional observing system to address priorities: types/locsite sensors, dmac/distribution operations, product developmt	X	X	X	X	X	X		X	X	X	X
Concept of Operations doc. prepared/approved by governance body	X	X	X	X		X		X	X	X	X
Communication/coordination with other Ras & fed agencies to ensure interoperability of data and info products			X	X		X		X	X	X	
Incorporate previous sub-regional NOAA investments			X		X	X		X			
Engage/coordinate with stakeholders			X	X	X	X	X	X	X	X	X

\*Information gathered from FY2008 RA Support proposal milestone schedules and response letters to NOAA. Produced 12/17/2007

GLOS Milestones

**Detailed Milestone Schedule for Proposal: “Management of the Great Lakes Observing System (GLOS)” Under Funding Opportunity Number: NOS-CSC-2008-2001073**

Project Tasks	Quarters (beginning on 6/01/08 )											
	1	2	3	4	5	6	7	8	9	10	11	12
RA Operations, Membership and Staffing												
Leadership		X	X			X	X			X	X	
Dedicated Staff	X	X	X	X	X	X	X	X	X	X	X	X
Facilities	X	X	X	X	X	X	X	X	X	X	X	X
Membership and Membership Agreements	X	X	X	X	X	X	X	X	X	X	X	X
Data Sharing Agreements	X	X	X	X	X	X	X	X	X	X	X	X
Business Plan Revision	X	X	X	X								
Annual Work Plan Development		X	X			X	X			X	X	
User Needs Assessments	X	X	X	X	X	X	X	X	X	X	X	X
Subsystem Cost-Benefit Assessments	X	X	X	X	X	X	X	X	X	X	X	X
RCOOS Operations and Coordination	X	X	X	X	X	X	X	X	X	X	X	X
Regional DMAC Operations/Development												
Regional Data Processing Center	X	X	X	X	X	X	X	X	X	X	X	X
Regional Data Indexing			X				X				X	
Model Output	X	X	X	X	X	X	X	X	X	X	X	X
Web Products	X	X	X	X			X	X			X	X
Education/Outreach Coordination												
GLOS Web Site	X	X	X	X	X	X	X	X	X	X	X	X
Mobile Learning	X	X	X	X			X	X			X	X
CD-ROM	X	X	X									
“Harbor View” Outreach	X	X	X	X	X	X			X	X		

**NERACOOS Milestones**

enable NERACOOS to achieve its observational, management, and service objectives efficiently, in addition to enabling NERACOOS to respond effectively to new opportunities.

**3f. Milestone Schedule**

<b>Item</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
<b>Products and Product Development Plan</b>			
Augment existing user needs survey to include Southern New England Bight	↔		
Prioritize user needs and products for entire region	↔		
Advance two selected existing prototypes to preoperational phase		↔	
Develop two new prototype products			↔
Draft, refine and review products plan		↔	↔
<b>Science and Technology Plan</b>			
Develop regional plan for inundation	↔		
Develop regional plan for water quality		↔	
Develop regional plan for HABs or living marine resources			↔
<b>Regional Data Plan</b>			
Establish Ocean Data Partnership for Southern New England Bight	↔		
Complete service registry	↔		
Deploy prototype aggregation node & data-access portal	↔		
Draft quality assurance plan	↔		
Trial implementation of quality assurance (QA) plan		↔	
Draft data system implementation plan		↔	
Reviews of QA & system implementation plans			↔
Finalize, distribute, review QA & system implementation plans			↔
Preparation of manual for data providers			↔

**3g. Project Budget**

Please see the Budget Narrative Attachment Form and the Mandatory Detailed Budget Information in the Appendices.

**MACOORA Milestones**

Lisa Holmes  
10/19/2007  
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8. *Section D. Benefits. We don't see anything in this statement of benefits that reflects the information garnered through MACOORA's inundation workshop. When & how do the emergency managers gain benefit?*

The CSO/ MACOORA Inundation Workshop has benefited Emergency Managers already by:

- Enhancing relationships between the emergency management and ocean observing communities
- Strengthening emergency managers understanding about the interaction of near-shore and off-shore processes
- Communicating and documenting emergency managers' ocean observing needs

This relationship will be nurtured and expanded by MACOORA over the course of the proposal period and beyond by:

- Expanding outreach to other Mid-Atlantic emergency managers
- Describing cost/benefit for emergency managers
- Encouraging emergency managers' participation in MACOORA
- Sustaining regional interaction between emergency managers and other MACOORA stakeholders to devise common strategies for employing ocean observing technologies and products

9. *Milestone Schedule. The schedule seems to have the key milestones in it but also seems to not reflect a number of the objectives listed for the project. Please enhance this schedule (possibly in a table as suggested by a reviewer) to be more complete.*

MILESTONE SCHEDULE		6/07-5/08				6/08-5/09				6/09-5/10				6/10-5/11			
		Pre-award				Quarter				Quarter				Quarter			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
	Water Quality User Needs Assessment Workshop, March 2008																
	Water Quality User Needs Assessment Workshop report and presentation to NWQMNC Conference, May 2008																
	Anticipated start date, June 2008																
	Submit RA Certification application, July 2008																
	Workshop I: User's Council workshop																
	Semi-annual Reports, including updated reports of continuing user needs assessment activity																
	User Council activity reports																
	Workshop II: Interoperability; MARCOOS workshop																
	Workshop III: Progress evaluation; stakeholder/user consensus for MACOORA's future direction																
	Final report																
MACOORA Objective																	
1	Formalize and actively engage the MACOORA governance structure, including a stakeholder (User) Council																

MILESTONE SCHEDULE (Continued)		6/07-5/08				6/08-5/09				6/09-5/10				6/10-5/11			
		Pre-award				Quarter				Quarter				Quarter			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
2	Refine and update an organizational operating plan (e.g., business plan) that guides MACOORA's communications, management, and operations																
3	Complete and refine a needs assessment for IOOS information in the region																
3.1	• Prepare and disseminate a comprehensive report of regional needs assessment findings																
4	Develop and refine a website that displays a common identity with other components of IOOS, including other regional associations and has common pathways to obtain information																
5	Refine and document regional priorities and requirements for observing system information																
6	Design a regional observing system to address the priorities; this plan will articulate types and locations of sensors, data management and distribution operations, and product development																
6.1	• Incorporate concepts developed at the October 2007 IOOS Regional Coordination Workshop for DMAC plan																
7	Develop Concept of Operations document and obtain approval by governance body																
8	Communicate and coordinate with other Regional Associations and with federal agencies to ensure interoperability of data and information products																
9	Apply for certification as a Regional Association, subject to adoption of certification criteria and implementation of a certification process by NOAA.																
10	Plan and seek funding for regional pilot demonstration projects																
11	Coordinate education and outreach activities with Sea Grant, COSEE, NERR, EPA's NEP (National Estuary Program), and others																
11.1	• Engage COSEE-NOW Community Center to provide an online collaborative work/exchange space where scientists and education and public outreach professionals can interact with each other, as well as with other COSEE-NOW audiences																

SECOORA Milestones

7.0 Milestone Schedule

Task	2008-2009 (1 May - 30 April)												2009-2010 (1 May - 30 April)												2010-2011 (1 May - 30 April)											
	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A
Maintain dialogue with Ocean.US and other RAs through NFRA.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Incorporate SECOORA as a non-profit in SC; and establish SECOORA as an independent organization.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Identify/engage participants through a Stakeholders Advisory Council (SAC), and other relevant mechanisms.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Implement the SECOORA Business Plan (administration, operations, products, marketing).	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Complete Needs Assessments for Southeast region audiences.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Develop and implement education, outreach, and training activities to engage regional stakeholders.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Develop and complete RCOOS Design Plan for a regional observing system to address stakeholders' priorities; articulate types/locations of sensors; define data management operations; and develop products.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Define and implement strategies for: user-defined products/applications; marketing data and information products; and evaluating benefits to user communities and IOOS.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Continue developing the RA DMAC Plan that establishes data integration and common format standards, and transport protocols to ensure regional and sub-regional interoperability.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Continue to establish the ODP and integrate ocean observations with coastal resource management and ecosystem information.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Develop the secoora.org web site and provide appropriate user-defined content to identified audiences/public.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Prepare and submit the requisite materials to Ocean.US in support of certification for the RA.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
RCOOS: Initiate pilot programs that integrate and enhance the ability to provide 24/7, near real-time observations for the region.	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Submit NOAA progress reports.																																				

**GCOOS Milestones**

Table 1. Time lines for milestones associated with major tasks to develop the GCOOS-RA (E=estimated completion). The numbers are correlated with the activities given in Section 2.1.

ACTIVITIES	Year 1				Year 2				Year 3			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1.1 Revise the GCOOS Observing System Plan			E				E				E	
1.2 Revise the GCOOS Business Plan				E			E					E
1.3 Complete (C) and revise (E) the GCOOS Communication Plan		C				E				E		
1.4 Revise the Action Plans for GCOOS Committees			E				E				E	
Revise the Action Plan for the Education & Outreach Council	E				E				E			
Revise the Action Plan for the Stakeholder Council				E				E				E
1.7 Hold meetings of the OSC, PSC, and DMACC			E			E						
1.9 Hold meetings of Board of Directors		E				E				E		
2.2 Hold workshops focused on specific stakeholder sectors		E				E				E		
2.4 Hold meetings of the Education and Outreach Council	E				E				E			
2.5 Hold meetings of the Parties to the GCOOS-RA				E				E				E
Hold meetings of the GCOOS Stakeholder Council				E								E
2.6 Hold meetings of the GCOOS Task Teams & Working Groups (times approximate)			E				E				E	
2.7 Prepare/revise a needs assessment for IOOS information in the region			E				E				E	
3.1 Complete/revise the inventory of non-federal regional observations				E				E				E
3.3 Incorporate information into the Observing System (O) and Business (B) Plans						B	O			B	O	
4.1 Plan gap analysis			E									
4.2 Perform the initial gap analysis					E							
4.3 Refine the gap analysis									E			
4.4 Incorporate information into the Observing System (O) and Business (B) Plans						B	O			B	O	
5.2 Hold meetings as required for conceptual design on priority systems			E		E				E			
6.2 Add DMAC information page to the GCOOS web site	E											
6.3 Complete (C) and test (T) the GCOOS Data Portal [Support from other grants]	C	C	T	T	T	T	T					
7.4 Attend National Federation of Regional Associations meetings	E		E		E		E		E		E	
7.5 Participate in the national IOOS regional coordination workshop and meetings			E				E				E	



## **Autonomous Underwater Glider Collaboration (Coastal Ocean Observing Laboratory Rutgers)**

Rutgers University's Coastal Ocean Observing Laboratory and CaRA PI's at UPRM are currently collaboration in a Department of Energy (DoE) project to characterize the structure of river plumes in tropical environments. In this context, we expect to implement the first autonomous underwater glider mission in the Caribbean this coming October. We expect that, following this experience CaRA can establish an operational launching point for gliders that monitor upper ocean conditions during hurricane season.

## **COSEE-NOW**

CaRA and COOL also collaborate in the NSF Centers for Ocean Sciences Education Excellence – Networked Ocean World (COSEE-NOW), specifically dedicated to using ocean observatories to inspire students and facilitate teaching in ocean science. Collaboration with CaRA will provide educational access to the home ocean of the large Puerto Rican community in the New York/New Jersey area. Educational activities developed by COSEE-NOW that use CaRA datasets will be available to both regions.

### ***f. Milestone Schedule***

#### **FY08**

- Convene CaRA Stakeholders and elect CaRA Stakeholders Council and Executive Committee Officers.
- Procure accessions to the CaRA MOA
- Convene regular sessions of CaRA Stakeholder Council and Executive Committee.
- Empanel and convene standing committees as per CaRA MOA

- Schedule continued outreach activities to the general community and stakeholders.
- Identify experts for technical assessment and collaboration in phased CarICOOS development and implementation plan design.
- Recruit CaRA interns
- Contract modeling and data presentation services
- Recruit additional VI outreach personnel
- Schedule one on one exchange and focused sector meetings with Department of Homeland Security, US Coast Guard and PR and VI State Police and Municipal Police departments.
- Schedule focused sector meetings with PR Seismic Network, PR-DRNA, PR Planning Board, VI Department of Planning and Natural Resources, Federal and State emergency agencies, Insurance Commissioners and the Insurance Industry.
- Continues coordinating activities with PR Tourism Company
- Commence implementation of sector-focused increased resolution observational and forecast products.
- Consult with Ocean.US and collaborating RA's regarding procedures for DMAC data standards.
- Commence implementation of digital data product display initiative.
- Develop, through the Alliance, a master plan for sub-regional wind, wave, storm surge and current modeling.
- Draft a master plan for the Regional and Sub regional observing system delivery of data and information products and submit to stakeholders for comment and review.
- Continue implementation of scheduled focused sector meetings.

- Attend NFRA and IOOS meetings
- Consult NFRA and IOOS regarding common web page and product delivery format.
- Draft and submit year-end report
- **FY09**
- Convene sessions of CaRA Stakeholder Council for the review of Business Plan
- Conduct formal, objective assessment of FY 2008 activities.
- Contract technical assessment for the phased design of the Caribbean Integrated Coastal Ocean Observing System.
- Continue engaging committed partners in CaRA and signatories to the MOU.
- Attain qualifications for RA certification.
- Draft and submit proposals for system implementation as resulting from funding identification efforts
- Assure full participation in DMAC and achievement of its data standards by continuous full-involvement in DMAC.
- Continue internship and visiting expert program.
- Implement enhancement of CaRA web site to conform to ICOOS template
- Continue communication and coordination with other RA's and Federal agencies.
- Develop web-based wind, wave and storm surge prediction products based on Alliance model outputs.
- Identify and initiate new pilot and demonstration projects in consultation with stakeholder council and standing committees.

- Convene focused workshops to establish priorities, optimum number and location of in situ observing assets for operational observation of individual variables and forecasting needs as prioritized through our previous efforts.

**FY10**

- Finalize a master plan for the Regional and Sub regional observatory networks.
- Finalize installation of demonstration digital display units at selected sites.
- Continue internship and visiting expert program.
- Proffer recommendations for expanding ocean observation in national backbone.
- Schedule contacts and implement meetings with foreign sovereigns with contiguous foreign sovereigns (British Virgin Islands) as active CaRA associates.
- Review pilot projects and publicize results.
- Provide final project report.

4. **Enhanced Water Quality:** Coastal communities, especially those that derive economic and social livelihoods from the sea, are especially sensitive to events that can affect the local water quality. These events, including sewage and oil spills, ballast water discharge, and polluted terrestrial runoff are oftentimes noted after their impact has been felt by the populace. Data, delivered in near-real time, can mitigate the problem caused by delays between initial identification of potential water quality altering events and the resultant implementation of water quality alerts and mitigation efforts.

5. **Effective Marine Ecosystem Stewardship:** Instrument arrays and fish tags to track pelagic fish and cetacean populations are useful in producing forecasts of marine population fluctuations due to human influence (fishing, tourism, pollution), environmental variability, and long-term climate change).

**f. Milestones**

- 1.1 Broaden the engagement with stakeholders in Hawaii and the U.S.-affiliated Pacific islands.
- 1.2 Establish a governance structure for the Hawaiian sub-region of PacIOOS and perform a feasibility study for the formation of sub-regional governance structures for American Samoa; Guam and the Commonwealth of the Northern Mariana Islands; and the Republic of Palau, Federated States of Micronesia, and the Republic of the Marshall Islands.
- 1.3 Establish a business plan for the Hawaiian sub-region of PacIOOS and undertake a feasibility study for an appropriate business plan for each of the remaining three PacIOOS sub-regions.
- 1.4 Conduct a series of meetings with U.S.-affiliated Pacific stakeholders by the U.S. Pacific

Coordinator, Pacific liaisons, and staff from the PacIOOS data management and outreach teams, to provide technical assistance and exchange information on PacIOOS needs and products. Work with them to demonstrate how to access and apply National Backbone and PacIOOS products for their purposes, as well as to make their own products available to the region and nation.

SCCOOS Milestones

**SCCOOS Regional Association Task and Milestone Schedule**

**YEAR 1**

PROGRAM ELEMENT	TASK	QUARTER				MILESTONE or OUTCOME
		1	2	3	4	
<b>Regional Association Governance</b>	Conduct 2 Board of Governors meetings	x		x		Direction on RA matters and RCC operations
	Communicate regularly with Board of Governors (monthly updates, quarterly conference calls, email)	x	x	x	x	Ongoing direction and input on RA matters
	Conduct quarterly conference calls of Executive Steering Committee	x	x	x	x	Recommendations for action by E of Governors
	Conduct 2 Senior Advisory Committee meetings	x		x		Guidance on status of RCOOS operations, data product development regional needs. Work on Concept Design document.
	Communicate regularly with Senior Advisory Committee (monthly updates, quarterly conference calls, email)	x	x	x	x	Ongoing engagement with SAC a guidance on RCOOS operations, DMAC issues and integration with and IOOS efforts
	Complete any needed revisions to Strategic Business Plan	x				Revised and approved SCCOOS Strategic Business Plan
	Stay apprised of developing Regional Association certification criteria	x	x	x	x	Meet criteria for RA certification
	Coordinate with Working Groups on development of RCOOS Conceptual Design document	x	x	x	x	Draft RCOOS Conceptual Design document
	Present draft RCOOS Conceptual Design document to Senior Advisory Committee			x		Revised RCOOS Conceptual Design document

	Engage with NFRA, IOOS program office and Ocean.US on Regional Association and RCOOS matters	x	x	x	x	SCCOOS input to developments affecting Regional Associations a RCOOSs
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PROGRAM ELEMENT	TASK	QUARTER				MILESTONE or OUTCOME
		1	2	3	4	
<b>User Outreach and Customer Development</b>	Work with existing groups of end users to assess usage and refine data products					
	Survey/meet with water quality end users (City and county environmental health departments; regional water quality control boards; POTWs and sanitation districts)	x	x			Feedback on SCCOOS data serv and products to use in refining thc products
	Survey/meet with maritime safety and transport end users (OSPR, USCG, lifeguard agencies)			x	x	Feedback on SCCOOS data serv and products to use in refining thc products
	Conduct user outreach to expand customer base					
	Organize and conduct workshop with regional coastal municipalities/commissions, council of governments (cities and counties in five-country SCCOOS region; SANDAG, BEACON)		x			Understanding of user data needs; input on the development of new SCCOOS products
	Organize and conduct workshop with regional non-governmental organizations (Heal the Bay; Wildcoast; Ocean Conservancy; chapters of California Coastkeeper and Baykeeper, Surfrider Foundation, Sierra Club)				x	Understanding of user data needs; input on the development of new SCCOOS products
PROGRAM ELEMENT	TASK	QUARTER				MILESTONE or OUTCOME
		1	2	3	4	

<b>Product Development</b>	Continue data aggregation, data development, and maintenance of web-based data products	x	x	x	x	Continuous provision of data products by SCCOOS
	Based on assessment of usage by end users surveyed in Year 1, refine and/or enhance existing data products	x	x	x	x	Refined and improved SCCOOS data products
	Based on outreach to stakeholders in Year 1, develop new products to meet end user needs	x	x	x	x	New and additional SCCOOS data products
	Manage SCCOOS information technology efforts	x	x	x	x	Ongoing, consistent access to SCCOOS data products
<b>PROGRAM ELEMENT</b>	<b>TASK</b>	<b>QUARTER</b>				<b>MILESTONE or OUTCOME</b>
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	
<b>Regional Integration</b>	Continue working with agencies and organizations submitting and retrieving data from the SCCOOS regional data system (data from NPDES monitoring, AB411 monitoring, CALCOFI, CCELTER, shoreline stations, NDBC, etc.)	x	x	x	x	Ongoing regional integration, provision and use of data
	Participate in IOOS national data integration efforts - SCCOOS Operators and programmer/analyst staff to participate in DMAC meetings and forums - SCCOOS COO and Manager to engage with NFRA, IOOS program office, and Ocean.US on national data integration efforts	x	x	x	x	SCCOOS input to national data management efforts
	Contribute to maintenance and refinement of IOOS Regional Observations Registry	x	x	x	x	SCCOOS non-federal assets included in IOOS Registry

PROGRAM ELEMENT	TASK	QUARTER				MILESTONE or OUTCOME
		1	2	3	4	
Education and Outreach	Continue work with Ocean Institute in provision of real-time data and development of website for 5th grade Weather and Water curriculum	x	x	x	x	Standards-based 5th grade science curriculum using SCCOOS data products
	Coordinate with COSEE, Birch Aquarium, and Aquarium of the Pacific on opportunities to further education and outreach through their programs	x	x	x	x	Promote IOOS and SCCOOS data products for use by ocean and science educators
	Maintain SCCOOS web site to communicate news and information about observing activities and to provide access to data and data products					Provision of up-to-date news and information, and provision of data products
	Prepare and distribute SCCOOS News on a bi-monthly basis	x	x	x	x	Raise awareness of SCCOOS and keep stakeholders and interested parties apprised of SCCOOS, regional state ocean observing, and federal IOOS news
	Prepare and place articles about SCCOOS operations and activities in targeted publications including local and regional coastal community newspapers; trade publications targeted to user groups such as sports and recreational fishermen, sailors and boaters; and, ocean observing community.	x	x	x	x	Increased awareness of SCCOOS; serve as a means to increase engagement with stakeholders

**SCCOOS Regional Association Task and Milestone Schedule**

**YEAR 2**

PROGRAM ELEMENT	TASK	QUARTER				MILESTONE or OUTCOME
		1	2	3	4	
<b>Regional Association Governance</b>	Conduct 2 Board of Governors meetings	x		x		Direction on RA matters and RCOOS operations
	Communicate regularly with Board of Governors (monthly updates, quarterly conference calls, email)	x	x	x	x	Ongoing direction and input on R matters
	Conduct quarterly conference calls of Executive Steering Committee	x	x	x	x	Recommendations for action by Board of Governors
	Conduct 2 Senior Advisory Committee meetings	x		x		Guidance on status of RCOOS operations, data product development, regional needs. Work on Conceptual Design document.
	Communicate regularly with Senior Advisory Committee (monthly updates, quarterly conference calls, email)	x	x	x	x	Ongoing engagement with SAC and guidance on RCOOS operations, DMAC issues and integration with state and IOOS efforts
	Review Strategic Business Plan for possible refinement based on current status of certification criteria or other changes	x				Possible refinement of SCCOOS Strategic Business Plan
	Stay apprised of developing Regional Association certification criteria	x	x	x	x	Meet criteria for RA certification
	Revise SAC reviewed document and present RCOOS Conceptual Design document to Board of Governors	x				Approved RCOOS Conceptual Design document

	Review RCOOS Conceptual Design for possible necessary update	x				Approved RCOOS Conceptual Design document
	Engage with NFRA, IOOS program office and Ocean.US on Regional Association and RCOOS matters	x	x	x	x	SCCOOS input to developments affecting Regional Associations and RCOOSs
PROGRAM ELEMENT	TASK	QUARTER				MILESTONE or OUTCOME
		1	2	3	4	
<b>User Outreach and Customer Development</b>	Work with existing groups of end users to assess usage and refine data products					
	Survey/meet with new and additional groups of water quality end users (HABs, SCCWRP)	x	x			Feedback on SCCOOS data services and products to use in refining those products
	Survey/meet with maritime community end users (Marine Exchange of Southern California, LA/LB port Harbor Committee, pilot services)			x	x	Feedback on SCCOOS data services and products to use in refining those products
	Conduct user outreach to expand customer base					
	Conduct workshop with recreational ocean and beach users (individual and associations of boaters, sailors, yachters, kayakers, surfers such as Southern California Yachting Association, Southern California Marine Association)		x			Understanding of user data need and input on the development of new SCCOOS products

	Conduct workshop targeting end user groups and agencies involved with stormwater runoff management and				x	Understanding of user data need and input on the development of new SCCOOS products
PROGRAM ELEMENT	TASK	QUARTER				MILESTONE or OUTCOME
		1	2	3	4	
<b>Product Development</b>	Continue data aggregation, data development, and maintenance of web-based data products	x	x	x	x	Continuous provision of data products by SCCOOS
	Based on assessment of usage by end users surveyed in Year 1, refine and/or enhance existing data products	x	x	x	x	Refined and improved SCCOOS data products
	Based on outreach to stakeholders in Year 1, develop new products to meet end user needs	x	x	x	x	New and additional SCCOOS data products
	Manage SCCOOS information technology efforts	x	x	x	x	Ongoing, consistent access to SCCOOS data products
PROGRAM ELEMENT	TASK	QUARTER				MILESTONE or OUTCOME
		1	2	3	4	
<b>Regional Integration</b>	Continue working with agencies and organizations submitting and retrieving data from the SCCOOS regional data system (existing data providers/data users and new end users)	x	x	x	x	Ongoing regional integration, provision, and use of data

	Participate in IOOS national data integration efforts - SCCOOS Operatons and programmer/analyst staff to participate in DMAC meetings and forums - SCCOOS COO and Manager to engage with NFRA, IOOS program office, and Ocean.US on national data integration efforts	x	x	x	x	SCCOOS input to national data management efforts
	Contribute to maintenance and refinement of IOOS Regional Observations Registry	x	x	x	x	SCCOOS non-federal assets included in IOOS Registry
PROGRAM ELEMENT	TASK	QUARTER				MILESTONE or OUTCOME
		1	2	3	4	
Education and Outreach	Continue work with Ocean Institute in provision of real-time data and development of website for 5th grade Weather and Water curriculum	x	x	x	x	Standards-based 5th grade science curriculum using SCCOOS data products
	Coordinate with COSEE, Birch Aquarium, and Aquarium of the Pacific on opportunities to further education and outreach through their programs	x	x	x	x	Promote IOOS and SCCOOS da products for use by ocean and science educators
	Maintain SCCOOS web site to communicate news and information about observing activities and to provide access to data and data products	x	x	x	x	Provision of up-to-date news anc information, and provision of dat: products

Prepare and distribute SCCOOS News on a bi-monthly basis	x	x	x	x	Raise awareness of SCCOOS and keep stakeholders and interested parties apprised of SCCOOS, regional, state ocean observing, and federal IOOS news
Prepare and place articles about SCCOOS operations and activities in targeted publications including local and regional coastal community newspapers; trade publications targeted to user groups such as sports and recreational fishermen, sailors and boaters; and, ocean observing community.	x	x	x	x	Increased awareness of SCCOOS, and serve as a means to increase engagement with stakeholders



**SCCOOS Regional Association Task and Milestone Schedule**

**YEAR 3**

PROGRAM ELEMENT	TASK	QUARTER				MILESTONE or OUTCOME
		1	2	3	4	
<b>Regional Association Governance</b>	Conduct 2 Board of Governors meetings	x		x		Direction on RA matters and RCOOS operations
	Communicate regularly with Board of Governors (monthly updates, quarterly conference calls, email)	x	x	x	x	Ongoing direction and input on R matters
	Conduct quarterly conference calls of Executive Steering Committee	x	x	x	x	Recommendations for action by Board of Governors
	Conduct 2 Senior Advisory Committee meetings	x		x		Guidance on status of RCOOS operations, data product development, regional needs. Work on Conceptual Design document.
	Communicate regularly with Senior Advisory Committee (monthly updates, quarterly conference calls, email)	x	x	x	x	Ongoing engagement with SAC and guidance on RCOOS operations, DMAC issues and integration with state and IOOS efforts
	Stay apprised of developing Regional Association certification criteria	x	x	x	x	Meet criteria for RA certification
	Review SCCOOS Bylaws, Strategic Business Plan, and RCOOS Conceptual Design for necessary updates or revisions			x		As warranted, revised document for to take through review and governance approval process

	Engage with NFRA, IOOS program office and Ocean.US on Regional Association and RCOOS matters	x	x	x	x	SCCOOS input to developments affecting Regional Associations and RCOOSs
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PROGRAM ELEMENT	TASK	QUARTER				MILESTONE or OUTCOME
		1	2	3	4	
<b>User Outreach and Customer Development</b>	Work with existing groups of end users to assess usage and refine data products					
	Survey/meet with new and additional groups of water quality end users	x	x			Feedback on SCCOOS data services and products to use in refining those products
	Survey/meet with climate change end users (researchers, State Coastal Conservancy, coastal zone managers)			x	x	Feedback on SCCOOS data services and products to use in refining those products
	conduct follow-visits with key SCCOOS product users to solicit feedback	x	x	x	x	Iterative product development effort in built-test-build environment
	Conduct user outreach to expand customer base					
	Identify group of stakeholders not fully engaged yet with SCCOOS and conduct workshop to identify data needs and get input on products		x			Understanding of user data need and input on the development of new SCCOOS products
	Conduct a 2nd workshop targeting end user groups and agencies not fully engaged in SCCOOS data products and services				x	Understanding of user data need and input on the development of new SCCOOS products
PROGRAM ELEMENT	TASK	QUARTER				MILESTONE or OUTCOME
		1	2	3	4	
<b>Product Development</b>	Continue data aggregation, data development, and maintenance of web-based data products	x	x	x	x	Continuous provision of data products by SCCOOS

	Based on assessment of usage by end users surveyed in Year 1, refine and/or enhance existing data products	x	x	x	x	Refined and improved SCCOOS data products
	Based on outreach to stakeholders in Year 1, develop new products to meet end user needs	x	x	x	x	New and additional SCCOOS data products
	Manage SCCOOS information technology efforts	x	x	x	x	Ongoing, consistent access to SCCOOS data products
PROGRAM ELEMENT	TASK	QUARTER				MILESTONE or OUTCOME
		1	2	3	4	
Regional Integration	Continue working with agencies and organizations submitting and retrieving data from the SCCOOS regional data system (existing data providers/data users and new end users)	x	x	x	x	Ongoing regional integration, provision, and use of data
	Participate in IOOS national data integration efforts - SCCOOS Operators and programmer/analyst staff to participate in DMAC meetings and forums - SCCOOS COO and Manager to engage with NFRA, IOOS program office, and Ocean.US on national data integration efforts	x	x	x	x	SCCOOS input to national data management efforts
	Contribute to maintenance and refinement of IOOS Regional Observations Registry	x	x	x	x	SCCOOS non-federal assets included in IOOS Registry

Development of SCCOOS data system Plan	x				Draft plan to be circulated for comments/input -- review for consistency with national architecture
Begin transition and upgrade of existing SCCOOS data management system to meet identified system requirements		x			
Complete upgrade of SCCOOS data system to national standards				x	

PROGRAM ELEMENT	TASK	QUARTER				MILESTONE or OUTCOME
		1	2	3	4	
Education and Outreach	Continue work with Ocean Institute in provision of real-time data and development of website for 5th grade Weather and Water curriculum	x	x	x	x	Standards-based 5th grade science curriculum using SCCOOS data products
	Continue to coordinate with COSEE, Birch Aquarium, and Aquarium of the Pacific on opportunities to further education and outreach through their programs	x	x	x	x	Promote IOOS and SCCOOS data products for use by ocean and science educators
	Maintain SCCOOS web site to communicate news and information about observing activities and to provide access to data and data products	x	x	x	x	Provision of up-to-date news and information, and provision of data products
	Prepare and distribute SCCOOS News on a bi-monthly basis	x	x	x	x	Raise awareness of SCCOOS and keep stakeholders and interested parties apprised of SCCOOS, regional, state ocean observing, and federal IOOS news
	Prepare and place articles about SCCOOS operations and activities in targeted publications including local and regional coastal community newspapers; trade publications targeted to user groups such as sports and recreational fishermen, sailors and boaters; and, ocean observing community	x	x	x	x	Increased awareness of SCCOOS, and serve as a means to increase engagement with stakeholders

## CeNCOOS Milestones

### MILESTONE SCHEDULE

TASKS	2008				2009				2010			
<b>COORDINATION</b>												
Coordinate diverse institutions and individuals from academia, industry, government, and non-profit to work together on common central and northern California ocean observing issues												
Lead development of coordinated proposals to support management of the central and northern California coastal ocean												
Collaborate with neighboring regional associations (especially SCCOOS and NANOOS) to develop an integrated system for the west coast												
Maintain close communication with state and federal agencies such as OPC, WCGA, NFRA, IOOS, COL, and Ocean.US												
Host stakeholder workshops												
Host a workshop with the Pacific Ocean RAs focused on Pacific-Wide Ecosystem Modeling												
Provide Monthly Updates and semi-annual reports to IOOS office												
Develop Working Group Plans and Priorities												
Establish Performance Metrics												
<b>GOVERNANCE</b>												
Develop and Implement a Business Plan/Concept of Operations												
Achieve Organizational Certification Criteria												
Run Governing Council elections and meetings												
Establish new committees as necessary												
<b>DATA and PRODUCTS</b>												
Develop and Implement a DMAC Plan												
Maintain and enhance metadata inventory, OceanObs												
Integrate oceanOBs with existing inventories and National IOOS Registry												
Expand and improve data access through the CeNCOOS Data Integration Demonstration Project and Live Access Server												
Create web-based applications for two priority management issues in CeNCOOS												
Expand COAMPS/GODAE/ROMS to include 2 oceanographic variables and the entire CeNCOOS region												
WG 1: Provide a 'State of the MPAs' report to managers on the physical oceanographic and water quality conditions influencing MPAs												
WG 2: Host a web-based HAB tracking and prediction model for Monterey Bay, working with UCSC and NOAA programs												
WG 3: Develop a one-stop shop, web-based marine transportation site, specifically for SF Bar Pilots												
Host a Regional Data Management Workshop												
<b>OUTREACH AND EDUCATION</b>												
Create coordinated outreach and education strategy												
Maintain and Improve CeNCOOS website												
Create report on user needs assessment using stakeholder surveys												
Host MBARI EARTH Teacher Workshop												
Work with MBCORC and local programs to create exhibits												
Create a complete Public Relations Package												

Each of the Working Groups is in a different stage of development. To date, most of the Working Group efforts have been in response to an event, such as an oil spill, lost boater, sewage spill, mammal die off, or HAB event. The goal is for each Working Group to grow and progress continuously rather than in response to an event. Efforts described above will help reach this goal.

**Concern:** *“Business Plan – is this completed? Underway? This seems to be an important oversight in the proposal.”*

CeNCOOS has chosen to use the term ‘strategic plan’ rather than ‘business plan.’ The ‘business plan’ is referenced throughout the document (p. 2, 10, 14, 16, 20) as ‘strategic plan.’ In this following paragraph, the term ‘business plan’ will be used.

The CeNCOOS Business Plan is underway. CeNCOOS has completed extensive end user needs research and developed many components of the business plan, but efforts are

**NANOOS Milestones**

**Appendix 3.** Milestone Schedule and Project Timeline.

<b>Objective #</b>		<b><u>Y1</u></b>	<b><u>Y2</u></b>	<b><u>Y3</u></b>
1. Assure the continuance and active engagement of the NANOOS governance structure		-Hold quarterly meetings of the NANOOS GC -Utilize NANOOS ExCom and GC (composed of stakeholders) for decisions and direction for NANOOS	-Hold quarterly meetings of the NANOOS GC -Utilize NANOOS ExCom and GC for decisions and direction for NANOOS -Form Users Advisory Group (UAG) as RCOOS develops	-Hold quarterly meetings of the NANOOS GC -Utilize NANOOS ExCom and GC for decisions and direction for NANOOS -Utilize UAG for feedback on RCOOS products
2. Refine and update the draft NANOOS Business Plan to guide the communications, management and operations of NANOOS		-Present Business Plan to NANOOS Ex-Com for edits and approval -Present Business Plan to full NANOOS GC for discussion and adoption -Have vetted and approved Business Plan	-Update Business Plan as needed	-Update Business Plan as needed
3. Continue to refine the NANOOS region’s Needs Assessment for IOOS information.		-Meet with WA and OR Sea Grants regarding results of their “West Coast Regional Research and Information Needs Plan” -Conduct 2 NANOOS workshops to refine NANOOS understanding of user needs	-Conduct 2 NANOOS workshops that will present NANOOS RCOOS products and also allow input to refine NANOOS understanding of user needs	-Conduct 2 NANOOS workshops that will present NANOOS RCOOS products and also allow input to refine NANOOS understanding of user needs
4. Expand and refine our current NANOOS website, assuring that it displays a common IOOS identity and links to other regional associations.		-Assure that NANOOS web development in RCOOS funding is consistent with common IOOS identity and is linked to RAs	-Design how best to display targeted data products for NANOOS website -Develop outreach and education content for website	-Refine how best to display targeted data products for NANOOS website -Further develop outreach and education content for website



<b>Objective #</b>		<b><u>Y1</u></b>	<b><u>Y2</u></b>	<b><u>Y3</u></b>
5. Refine and document the regional priorities and information requirements that have already been established by NANOOS stakeholders through our workshop process.		-Meet with WA and OR Sea Grants regarding results of their “West Coast Regional Research and Information Needs Plan” -In the 2 NANOOS workshops, gather more user input for priorities and requirements -Fund education and outreach projects to reach targeted users and provide training	-In the 2 NANOOS workshops, present NANOOS RCOOS products and allow input to refine NANOOS understanding of user priorities and information requirements -Fund outreach and education projects to reach targeted users and provide training	-In the 2 NANOOS workshops, present NANOOS RCOOS products and allow input to refine NANOOS understanding of user priorities and information requirements -Fund outreach and education projects to reach targeted users and provide training
6. Continue to refine NANOOS’ Conceptual Design of an RCOOS that addresses regional priorities, including observing assets/locations, DMAC, modeling and products, and education and outreach.		-Use products of the 2 NANOOS workshops, to refine the existing NANOOS RCOOS Conceptual Design -Engage NANOOS members in national meetings on DMAC and Education/Outreach to gain input on refinements	-Use products of the 2 NANOOS workshops, to refine the NANOOS RCOOS Conceptual Design -Engage NANOOS members in national meetings on DMAC and Education/Outreach to gain input on refinements	-Use products of the 2 NANOOS workshops, to refine the NANOOS RCOOS Conceptual Design -Engage NANOOS members in national meetings on DMAC and Education/Outreach to gain input on refinements
7. Prepare a Concept of Operations document, pending guidance from IOOS, that is vetted and approved by the NANOOS Governing Council.		-Follow IOOS guidance on this objective -Assure that elements of the Con-Ops are documented by NANOOS	-Follow IOOS guidance on this objective -Assure that elements of the Con-Ops are documented and updated as needed by NANOOS	-Follow IOOS guidance on this objective -Assure that elements of the Con-Ops are documented and updated as needed by NANOOS
8. Continue to communicate and coordinate with other Regional Associations and with regional and national federal agencies to ensure interoperability.		-NANOOS ED&P attend NFRA and IOOS meetings and participate in calls, committees, etc. -NANOOS pay NFRA dues -NANOOS engage with other RAs via workshops -NANOOS work towards interoperability within its RCOOS development	-NANOOS ED&P attend NFRA and IOOS meetings and participate in calls, committees, etc. -NANOOS pay NFRA dues -NANOOS engage with other RAs via workshops -NANOOS work towards interoperability within its RCOOS development	-NANOOS ED&P attend NFRA and IOOS meetings and participate in calls, committees, etc. -NANOOS pay NFRA dues -NANOOS engage with other RAs via workshops -NANOOS work towards interoperability within its RCOOS development

## AOOS Milestones

- Collaborate with other IOOS regional associations on products of mutual interest.
- Participate in other activities such as regional ocean governance initiatives and collaborations between OOI and IOOS.

Because of Alaska's strategic location and since it is the only OOS in the U.S. Arctic, AOOS will necessarily have strong ties with other international ocean observing initiatives, especially those of the Arctic nations, and Canada, Russia and Japan. To the extent it has the resources (travel funds and staff time), AOOS will ensure that its efforts are consistent with those of these international efforts.

The five Pacific Regional Associations have met twice to share issues of mutual interest. Three in particular warrant further attention: development of large-scale Pacific basin ocean circulation models to provide the boundary conditions for smaller regional-scale models; development of coastal inundation products that are applicable to the conditions of the Pacific; and development of integrated ecosystem assessments for the California and Alaska currents. AOOS will pursue action on all these with Ocean.US, the NOAA IOOS Program Office, and the NOAA Coastal Services Center. AOOS also has mutual interests with other regional associations such as ice (Great Lakes), offshore oil and gas (Gulf of Mexico), and shellfish aquaculture (Northwest) that could lead to future collaborations.

*Funds are requested* for staff and travel costs to participate in these efforts.

## **MILESTONE SCHEDULE**

### May 1 – October 31, 2008

- Governance Committee finalizes new MOA for Governance (including approach to stakeholder participation) and adopts operating procedures for board and committees.
- Complete business/operations plan.
- Complete outreach plan for PWS and begin plans for other AOOS regions and subregions.
- Hold in-person Sea Ice Working Group workshop.
- Finish beta-testing new AOOS website navigation structure and launch new website navigation.

### November 1, 2008 – April 30, 2009

- Draft Concept of Operations document complete.

- Hold Bering Sea Stakeholders Workshop.
- AOOS governance structure and operations/business plan approved by NOAA.
- Formalize network of educators and scientists and enhance education web portal.
- Hold DMAC peer review workshop.

May 1 – October 31, 2009

- Revise DMAC Plan and operations based on peer review recommendations.
- Concept of Operations document completed and approved by NOAA.
- Conduct field test of PWSOS pilot project.

November 1, 2009 – April 30, 2010

- Implementation of education, outreach and public awareness plan underway.
- Sea Ice Working Group in-person meeting

May 1 – October 31, 2010

- Pilot test virtual field trips & multimedia for launch in 2011.
- Begin transition of PWSOS products to other regions of state.
- Review and revise AOOS Conceptual Designs.
- Workshop on use of fishing fleet to gather ocean observing information.

November 1, 2010 – April 30, 2011

- Evaluate and update education and outreach plans.
- Develop plan for AOOS Phase III: pre-operational.