

The National Operational Wave Observation Plan, 2012 Draft Update

updated December 5, 2012



Note: This Document is the readme tab to an Excel spreadsheet containing the Wave Plan 2012 update which lists active and proposed wave observing locations. If you aren't reading this from within the spreadsheet, you are probably reading it in a pdf file created from the spreadsheet. For the latest information concerning the waves plan update, the spreadsheet, a companion KMZ map file (loads in Google Earth) and a document describing the plan in more detail, please link to <http://www.ioos.gov/waves/>. This information is being provided in order to encourage feedback on the plan as it is being written. Please send comments to wavesplan@noaa.gov.

Background: The National Operational Wave Observation Plan ("Waves Plan") is an effort under the Interagency Ocean Observation Committee (IOOC) and the Integrated Ocean Observing System (IOOS) to coordinate the wave observing activities and products of IOOS. The first Waves Plan was completed and published in 2009 (*Waves Plan 2009*). An update led by the IOOS program office, NDBC, the Navy and the US Army Corps of Engineers started in 2012 (*Waves Plan 2012*) and is a FY15 milestone of the Administration's National Ocean Policy Implementation Plan.

Design Approach: The update to the network is designed to reflect the network changes that have taken place since 2009 and to better recognize the fiscal realities of today. Design features that are different from 2009 include:

- Strategic recommendations for directional sensor upgrades;
- A reassessment of the number, location of, and priority for new locations recommended in 2009
- Tighter integration between wave observations and wave modeling
- Identifying the longest running wave sensors as **Sentinel** locations critical to wave climate studies.

Whereas in the 2009 Waves Plan, every existing wave sensor was automatically included in the design, in the 2012 update, the design is based on the sensors required to create a national perimeter of **Backbone Observations** for deep ocean, shelf, mid-shelf and coastal wave observations. Backbone locations are of the highest priority for long-term sustainment. Although traditionally the responsibility of the federal agencies, backbone locations may be supported by non-federal IOOS partners.

Sensor locations that fall outside the backbone are identified as **Supporting Observations**. Supporting observations may be important, even critical locally, but are not as important from a national perspective. All rover buoys, gauges that are redundant or too shallow and Environment Canada locations are considered to be Supporting. Supporting Observations are the responsibility of local IOOS regions and partners.

Exploring the Spreadsheet: This workbook provides detailed information including summary tables on existing and proposed wave measurement locations. (The companion KMZ file provides a more visual display - get it here: <http://www.ioos.gov/waves/>). The listing is based on multiple queries of the NDBC and IOOS observation databases during 2012 and on the original 2009 Waves Plan inventory.

Worksheets are locked from change to preserve the integrity of the underlying formulas and layout.

Worksheet tab *WavePlan* - contains the primary location database. Locations are listed as rows; columns provide parameter details including WMO station number, subnet, location, owner, years of service, etc. Some supporting columns are hidden using the grouping feature in Excel - expand the groups to see all and to get access to web links for each station (rightmost columns, unprotect the worksheet to expand the group).

If you sort the spreadsheet, Column A is to help resort.

By default each column has a filtering button that can be used to quickly display a subset of the rows based on their column values.

The workbook is formatted to print on a few landscape pages with the groups collapsed. We suggest using a filter option on the "Status" column (E) to hide the "Omit" rows (they are filtered by default). These are sensor locations that exist, but which are not included in the Plan.

Proposed locations are identified with WMO-like station numbers beginning with a digit that defines the basin (6-Atlantic, 7-Gulf of Mexico, 8-Pacific, 9-Great Lakes) followed by a digit associated with the subnet (1-Offshore, 2-Outer-Shelf, 3-Inner-Shelf, 4-Coastal and 5-Rover Buoy) which is followed by a two digit sequential number.

Network Status: In comparison to the 180 locations in 2009, in 2012 there are 200 active wave sites in the US being operated by a number of data partner organizations and reported through the National Data Buoy Center (<http://www.ndbc.noaa.gov>). Of these, 157 make up the Backbone and 43 are Supporting observations. An additional 17 of the locations operated by Environment Canada are considered as Supporting since they provide useful wave observations into adjacent, Canadian waters.

Ranking: The table includes proposed locations designed to fill in spatial gaps in the **Backbone Observations**. To help with prioritizing proposed locations and directional sensor upgrades, a point system was established to score/rank each location based on five draft criteria:

- Length of service (>20 yrs, 1 point; >35 yrs, 2 points)
- Proximity to a major US port (<80 km, 1 point)
- Directional capability (directional, 1 pt, High resolution or *First-5* directional, 2 points)
- Proximity to nearest backbone station (>100 km, 1 pt.)
- Network Location (Backbone, 2 pts; Supporting, 1 pt.)

The maximum score under this system is 8 points (6 points for a new location) and although these are draft criteria, it was found to have useful skill in identifying the highest priority network changes and upgrades. Scores can be found in **WavePlan, Column L** (supporting data are grouped and collapsed but can be revealed by unprotecting the worksheet).

A logical criteria to add is a measure of the quality of a location's historic record so that the Length of Service score reflects the completeness and accuracy of the record.

Table1 - summarizes the active locations by basin, platform, and whether the location measures wave direction or not.

Table2a summarizes just the Backbone locations. That 66% of the sensors are directional is an increase over the 57% in 2009. There's also been a shift in the observing platforms. In 2009 there were 13 10-m and 12-m discus buoys in use, now down to 4. The number of 6-m ship-like NOMAD buoys is also down from 38 to 23. The 3-m discus buoy (aluminum or foam) is the most popular platform with 73, up from 57. Supporting Observations are summarized in **Table2b**.

Table3 contains summary information of the station count by region and subnet including active, proposed and supporting columns.

Table4 & 5 summarizes the station scoring/ranking information overall (Active and Proposed locations) and separately for Active and Proposed locations based on the criteria described above under **Ranking**.

RA Build-Out - This tab lists any information related to wave observations provided in the IOOS 10-yr Regional Build-out Plans completed in 2011.

Key - Most acronyms and abbreviations used in the tables

Have a correction, comment, or addition? Please email:
wavesplan@noaa.gov.

When using the information in this spreadsheet please acknowledge the **National Operational Wave Observation Plan, 2012 Update**

IOOS National Operational Wave Observation Plan, 2012 - Active and Proposed Locations

WMO No.	Station Description	Network Position	Status (summer 2012)	Total Score of 8 (Service Length, Directional)	Upgrade or Deployment Year (1-5)	Comment (as of Summer, 2012)	Owner	Latitude (deg)	Longitude (deg)	Depth (m)	Years of Data	Subnet	Buoy/Gauge Type	Hull Diameter (m)	Measurement Device	Wave Spectra	Directional Upgrade	
Alaskan Coast																		
46001	Gulf of Alaska 88NM S Kodiak, AK	Backbone	Active	5	5		NDBC	56.300	-148.021	4,206	38.0	Offshore	NOMAD	6	Schaevitz LSOC	1D	upgrade	
46004	Middle Nomad, Canada	Supporting	Canadian	4			Env. Canada	50.933	-136.100	3,600	36.3	Offshore	NOMAD	6	Datawell Hippy	1D	no upgrade	
46035	Bering Sea 310NM N Adak, AK	Backbone	Active	4	3		NDBC	57.051	-177.576	3,717	27.2	Outer-Shelf	Discus	12	Schaevitz LSOC	1D	upgrade	
46060	West Orca Bay 36NM SSW Valdez AK	Supporting	Active	4			NDBC	60.584	-146.784	439	17.6	Coastal	Discus	3	DDWM/3DMG	2D	no upgrade	
46061	Seal Rocks 55NM SSW Valdez AK	Backbone	Active	3			NDBC	60.233	-146.834	219	11.6	Coastal	NOMAD	6	Schaevitz LSOC	1D	no upgrade	
46066	S Aleutians 390NM SW Kodiak, AK	Backbone	Active/Offline	3	5	stopped 10/25/2011, no schedule	NDBC	52.737	-154.961	4,642	11.5	Offshore	NOMAD	6	Schaevitz LSOC	1D	upgrade	
46070	SW Bering Sea, AK	Backbone	Active	3	5		NDBC	55.003	-175.284	3,804	6.2	Offshore	NOMAD	6	Schaevitz LSOC	1D	upgrade	
46071	Western Aleutians, AK	Backbone	Active	3	5	Missing 2010 & 2011, returned to serv	NDBC	51.157	-179.050	1,269	4.2	Offshore	NOMAD	6	Schaevitz LSOC	1D	upgrade	
46072	Central Aleutians 230NM Southwest of Dutch Harbor	Backbone	Active	3	5		NDBC	51.663	-172.162	3,641	10.4	Offshore	NOMAD	6	Schaevitz LSOC	1D	upgrade	
46073	Southeast Bering Sea	Backbone	Active/Offline	3	4	stopped 4/07/2011, no schedule	NDBC	54.942	-172.029	4,184	5.9	Outer-Shelf	Discus	12	Schaevitz LSOC	1D	upgrade	
46075	Shumagin Islands, AK	Backbone	Active	3			NDBC	53.926	-160.806	2,345	8.6	Outer-Shelf	NOMAD	6	Schaevitz LSOC	1D	no upgrade	
46076	Cape Clear AK	Backbone	Active	3	4		NDBC	59.498	-147.983	201	7.5	Outer-Shelf	NOMAD	6	Schaevitz LSOC	1D	upgrade	
46077	Shelikof Strait, AK	Supporting	Active	2			NDBC	57.920	-154.254	213	7.2	Coastal	NOMAD	6	Schaevitz LSOC	1D	no upgrade	
46078	Albatross Banks, AK	Backbone	Active/Offline	3		stopped 1/18/2012	NDBC	56.074	-152.572	3,404	7.7	Outer-Shelf	NOMAD	6	Schaevitz LSOC	1D	no upgrade	
46080	Northwest Gulf 57NM E Kodiak AK	Backbone	Active	3			NDBC	58.036	-149.985	2,474	9.9	Outer-Shelf	NOMAD	6	Schaevitz LSOC	1D	no upgrade	
46081	Western Prince William Sound, AK	Supporting	Active	2			NDBC	60.803	-148.263	434	9.2	Coastal	NOMAD	6	Schaevitz LSOC	1D	no upgrade	
46082	Cape Suckling 84NM SE Cordova, AK	Backbone	Active	3	4		NDBC	59.668	-143.392	296	10.3	Outer-Shelf	NOMAD	6	Schaevitz LSOC	1D	upgrade	
46083	Fairweather Grounds 92NM SE Yakutat, AK	Backbone	Active	3	4		NDBC	58.249	-137.993	137	11.4	Outer-Shelf	NOMAD	6	Schaevitz LSOC	1D	upgrade	
46084	Cape Edgcombe, AK	Backbone	Active	3	4		NDBC	56.993	-136.162	1,280	10.4	Outer-Shelf	NOMAD	6	Schaevitz LSOC	1D	upgrade	
46085	Central Gulf of Alaska Buoy, AK	Backbone	Active	3			NDBC	55.868	-142.492	3,722	5.6	Offshore	NOMAD	6	Schaevitz LSOC	1D	no upgrade	
46108	175 Central Cook Inlet, AK	Backbone	Active	5			CDIP/AOOS	59.757	-152.092	46	1.6	Coastal	Waverider	1	Datawell Hippy	2D	First5	
46132	South Brooks, Canada	Supporting	Canadian	2			Env. Canada	49.734	-127.918	2,040	19.6	Offshore	Discus	3	Schaevitz LSOC	1D	no upgrade	
46147	South Moresby, Canada	Supporting	Canadian	2			Env. Canada	51.833	-131.233	2,000	19.5	Offshore	Discus	3	Schaevitz LSOC	1D	no upgrade	
46184	North Nomad, Canada	Supporting	Canadian	3		This is the Test NOMAD for directional	Env. Canada	53.917	-138.850	3,600	25.2	Offshore	NOMAD	6	Datawell Hippy	1D	Testing	
46205	West Dixon Entrance, Canada	Supporting	Canadian	3			Env. Canada	54.167	-134.269	2,675	24.1	Offshore	NOMAD	6	Schaevitz LSOC	1D	no upgrade	
46207	East Delwood, Canada	Supporting	Canadian	3			Env. Canada	50.883	-129.933	2,125	23.2	Offshore	Discus	3	Schaevitz LSOC	1D	no upgrade	
46208	West Moresby, Canada	Supporting	Canadian	3			Env. Canada	52.517	-132.668	2,950	22.4	Offshore	Discus	3	Schaevitz LSOC	1D	no upgrade	
46246	166 Ocean Station PAPA	Backbone	Active	5			CDIP/U-WA	49.985	-145.089	4,253	2.5	Offshore	Waverider	1	Datawell Hippy	2D	First5	
83010	Proposed - Chukchi Sea, AK	Backbone	Proposed	5	3		Proposed	70.878	-165.244	50	0.0	Inner-Shelf					2D	First5
83020	Proposed - Bering Strait, AK	Backbone	Proposed	5	4		Proposed	65.806	-168.726	50	0.0	Inner-Shelf					2D	First5
83030	Proposed - Norton Sound, AK	Backbone	Proposed	5	3		Proposed	63.937	-164.534	20	0.0	Inner-Shelf					2D	First5
83040	Proposed - Kokechik Bay, AK	Backbone	Proposed	5	4		Proposed	61.857	-167.158	20	0.0	Inner-Shelf					2D	First5
83050	Proposed - Bristol Bay, AK	Backbone	Proposed	5	1		Proposed	57.704	-159.542	50	0.0	Inner-Shelf					2D	First5
85010	Rover Buoy - Alaska	Supporting	Proposed	4	4		Proposed	71.321	-157.002	30	0.0	Rover Buoy					2D	First5
85020	Rover Buoy - Alaska	Supporting	Proposed	4	4		Proposed	66.955	-165.000	10	0.0	Rover Buoy					2D	First5
85030	Rover Buoy - Alaska	Supporting	Proposed	4	4		Proposed	57.917	-152.001	30	0.0	Rover Buoy					2D	First5
85040	Rover Buoy - Alaska	Supporting	Proposed	4	4		Proposed	59.389	-140.062	80	0.0	Rover Buoy					2D	First5
85050	Rover Buoy - Alaska	Supporting	Proposed	4	4		Proposed	57.926	-136.707	440	0.0	Rover Buoy					2D	First5
Atlantic Coast																		
41001	150 NM East of Cape Hatteras, NC	Backbone	Active	6	5		NDBC	34.729	-72.678	4,426	36.5	Offshore	Discus	3	DDWM/3DMG	2D	upgrade	
41002	S Hatteras 250 NM E Charleston, SC	Backbone	Active	6	5		NDBC	32.319	-75.360	3,316	37.5	Offshore	Discus	3	DDWM/3DMG	2D	upgrade	
41004	EDISTO-41 NM SE Charleston, SC	Backbone	Active	4	4		NDBC	32.501	-79.999	34	32.6	Inner-Shelf	Discus	3	Schaevitz LSOC	1D	upgrade	
41008	Grays Reef 40NM SE Savannah, GA	Backbone	Active	5	3		NDBC	31.402	-80.871	18	24.7	Coastal	Discus	3	DDWM/3DMG	2D	upgrade	
41009	Canaveral 20NM E Cape Canaveral, FL	Backbone	Active	5	1		NDBC/NASA	28.523	-80.184	41	24.3	Outer-Shelf	Discus	3	DDWM/3DMG	2D	upgrade	
41010	Canaveral E 120NM E Cape Canaveral, FL	Backbone	Active	4	4		NDBC/NASA	28.906	-78.471	873	24.1	Offshore	NOMAD	6	Schaevitz LSOC	1D	upgrade	
41012	ST Augustine, FL 40NM ENE ST Augustine	Backbone	Active	3	3		NDBC/Coastal Storms	30.042	-80.534	37	10.5	Inner-Shelf	Discus	3	DDWM/3DMG Ar	2D	upgrade	
41013	Frying Pan Shoals, NC	Backbone	Active	3	4	Replaced Frying Pan Shoals FPS7N (1	NDBC	33.436	-77.743	24	9.1	Inner-Shelf	Discus	3	DDWM/3DMG Ar	2D	upgrade	
41025	Diamond Shoals	Backbone	Active/Offline	2	4	replaced Diamond Shoals DSLN7 (198	NDBC	35.006	-75.402	68	9.5	Outer-Shelf	Discus	3	Schaevitz LSOC	1D	upgrade	
41036	Onslow Bay, NC	Supporting	Active	3	3	Move to 62020 Location	NDBC/UINC	34.211	-76.953	31	6.4	Inner-Shelf	Discus	3	DDWM/3DMG Ar	2D	no upgrade	
41040	Western Atlantic	Backbone	Active	3	3		NDBC	14.480	-53.039	4,801	7.5	Offshore	NOMAD	6	Schaevitz LSOC	1D	upgrade	
41041	Middle Atlantic	Backbone	Active	3	3		NDBC	14.175	-45.998	3,353	7.5	Offshore	NOMAD	6	Schaevitz LSOC	1D	no upgrade	
41043	Southwest Atlantic	Backbone	Active	4	3		NDBC	20.990	-65.010	5,375	5.7	Offshore	Discus	3	DDWM/3DMG	2D	upgrade	
41044	South Atlantic	Backbone	Active	3	4		NDBC	21.652	-58.695	5,374	3.6	Offshore	NOMAD	6	Schaevitz LSOC	1D	upgrade	
41046	E Bahamas	Backbone	Active	3	4	moved	NDBC	23.338	-68.333	5,500	5.2	Offshore	NOMAD	6	Schaevitz LSOC	1D	no upgrade	
41047	NE Bahamas	Backbone	Active	4	4	moved, May 2012. 3m buoy replaced 1	NDBC	27.517	-71.483	5,221	5.2	Offshore	Discus-F	3	DDWM/3DMG	2D	no upgrade	
41048	W Bermuda	Backbone	Active	4	4		NDBC	31.978	-69.649	5,261	5.2	Offshore	Discus	3	DWPM/ARS Ang	2D	no upgrade	
41049	Atlantic (South)	Backbone	Active	4	5		NDBC	27.500	-63.000	4,885	3.6	Offshore	Discus	3	DWMM/3DMG	2D	upgrade	
41060	Woods Hole Northwest Tropical Atlantic Wave Station	Supporting	Active	2			WHOI	14.750	-50.950	4,978	1.0	Offshore	Discus	3		1D	no upgrade	
41109	190 NW River Inlet, NC	Supporting	Active	5		1 year deployment	CDIP/USACE	34.484	-77.300	13	0.6	Coastal	Waverider	1	Datawell Hippy	2D	First5	
41110	150 Masonboro Inlet, ILM2, NC	Backbone	Active	5			CDIP/UINC-CORMP	34.141	-77.709	16	4.7	Coastal	Waverider	1	Datawell Hippy	2D	First5	
41112	132 Fernandina Beach, FL	Backbone	Active	5			CDIP/NAVY	30.719	-81.293	16	6.8	Coastal	Waverider	1	Datawell Hippy	2D	First5	
41113	143 Cape Canaveral nearshore, FL	Backbone	Active	5			CDIP/NAVY	28.400	-80.530	10	6.3	Coastal	Waverider	1	Datawell Hippy	2D	First5	
41114	134 Fort Pierce, FL	Backbone	Active	4			CDIP/USACE	27.562	-80.220	16	6.3	Coastal	Waverider	1	Datawell Hippy	2D	First5	
44005	Gulf of Maine 28NM Portsmouth, NH	Backbone	Active	4	5		NDBC	43.204	-69.128	201	34.0	Inner-Shelf	NOMAD	6	Schaevitz LSOC	1D	upgrade	
44007	Portland 12 NM SE Portland, ME	Backbone	Active	5	5		NDBC	43.531	-70.144	24	30.8	Coastal	Discus	3	MicroStrain 3DM	1D	upgrade	
44008	Nantucket 54NM SE Nantucket, MA	Backbone	Active	6	3		NDBC	40.500	-69.431	59	30.3	Outer-Shelf	Discus	3	Angular Rate Sen	2D	upgrade	
44009	Delaware Bay 26NM SE Cape May, NJ	Backbone	Active	3	4		NDBC	38.464	-74.702	24	26.5	Inner-Shelf	Discus	3	Schaevitz LSOC	1D	upgrade	
44011	Georges Bank 170NM E Hyannis MA	Backbone	Active	4	3		NDBC	41.114	-66.580	87	28.6	Outer-Shelf	Discus	3	Schaevitz LSOC	1D	upgrade	
44013	Boston 16NM E Boston, MA	Backbone	Active	4	5		NDBC	42.354	-70.691	55	26.5	Coastal	Discus	3	Schaevitz LSOC	1D	upgrade	
44014	Virginia Beach 64NM E Virginia Beach, VA	Backbone	Active	5			NDBC/USACE	36.611	-74.836	54	22.2	Outer-Shelf	Discus	3	DWPM/Hippy DD	2D	First5	
44017	23NM SW Montauk Point, NY	Backbone	Active/Offline	2	2	stopped 8/20/2011	NDBC	40.692	-72.948	45	9.0	Inner-Shelf	Discus-F	3	Schaevitz LSOC	1D	upgrade	
44018	NE Cape Cod 30NM E Nantucket, MA	Backbone	Active/Offline	3	2	relocated, stopped 3/6/2012	NDBC	42.126	-69.630	74	9.6	Inner-Shelf	Discus-F	3	DDWM/3DMG	2D	upgrade	
44020	(LLNR 13665) - NANTUCKET SOUND	Backbone	Active															

WMO No.	Station Description	Network Position	Status (summer 2012)	Total Score 0-8 (Service Length, Directional)	Upgrade or Deployment Year (1-5)	Comment (as of Summer, 2012)	Owner	Latitude (deg)	Longitude (deg)	Depth (m)	Years of Data	Subnet	Buoy/Gauge Type	Hull Diameter (m)	Measurement Device	Wave Spectra	Directional Upgrade	
44039	Central Long Island Sound	Backbone	Active	4			UConnDMS	41.138	-72.655	27	8.9	Coastal	Discus-F	2	TRIAXYS	2D	no upgrade	
44040	Western Long Island Sound	Supporting	Active	2			UConnDMS	40.956	-73.580	18	6.6	Coastal	Discus-F	2	Neptune Sciences	1D	no upgrade	
44041	Jamestown, VA	Supporting	Active	4			Chesapeake Bay Interpretive	37.204	-76.777	-	5.3	Coastal	XYX Watchkeeper	2	TRIAXYS	2D	no upgrade	
44042	Potomac, MD	Supporting	Active	2			Chesapeake Bay Interpretive	38.033	-76.336	-	5.3	Coastal	XYX Watchkeeper	2	TRIAXYS	2D	no upgrade	
44043	Patapsco, MD	Supporting	Active	4			Chesapeake Bay Interpretive	39.152	-76.391	-	5.3	Coastal	XYX Watchkeeper	2	TRIAXYS	2D	no upgrade	
44056	630 FRF Waverider, Duck, NC	Backbone	Active	6		Was Station #620 and nondirectional	USAACE	35.200	-75.714	17	32.2	Coastal	Waverider	1	Datawell Hippy	2D	First5	
44058	Slingsay Point, VA	Supporting	Active	3			Chesapeake Bay Interpretive	37.557	-76.251	-	4.1	Coastal	XYX Watchkeeper	2	TRIAXYS	2D	no upgrade	
44062	Gooses Reef, MD	Backbone	Active	5			Chesapeake Bay Interpretive	38.553	-76.415	-	2.4	Coastal	XYX Watchkeeper	2	TRIAXYS	2D	no upgrade	
44063	Annapolis, MD	Supporting	Active	4			Chesapeake Bay Interpretive	38.963	-76.448	-	2.6	Coastal	XYX Watchkeeper	2	TRIAXYS	2D	no upgrade	
44064	First Landing	Supporting	Active	3			Chesapeake Bay Interpretive	36.979	-76.043	-	1.3	Coastal	XYX Watchkeeper	2	TRIAXYS	2D	no upgrade	
44065	(LLNR 725) - Entrance to New York Harbor	Backbone	Active	4	2	Replaced Ambrose Light ALSN6 (1989)	NDBC	40.369	-73.703	50	4.1	Coastal	Discus	3	DDWM/3DMG	2D	upgrade	
44066	Texas Tower #4	Backbone	Active/Offline	5	2	Stopped 1/9/2012, no schedule	NDBC	39.601	-72.618	78	2.6	Outer-Shelf	Discus	3	Schaevitz LSOC	1D	upgrade	
44095	192 Oregon Inlet, NC	Backbone	Active	4			CDIP/LUNC	35.583	-75.317	18	0.7	Coastal	Waverider	1	Datawell Hippy	2D	First5	
44096	186 Cape Charles, VA	Supporting	Active	4			CDIP/Navy	37.023	-75.810	11	0.8	Coastal	Waverider	1	Datawell Hippy	2D	First5	
44097	154 Block Island, RI	Backbone	Active	4			CDIP/USACE	40.981	-71.117	49	3.3	Inner-Shelf	Waverider	1	Datawell Hippy	2D	First5	
44098	160 Jeffrey's Ledge, NH	Backbone	Active	5			CDIP/LUNC	42.801	-70.169	77	4.4	Coastal	Waverider	1	Datawell Hippy	2D	First5	
44099	147 Cape Henry, VA	Backbone	Active	5		replaced: 44010 (1994-1995), CHLV2	CDIP/USACE	36.908	-75.775	19	4.6	Coastal	Waverider	1	Datawell Hippy	2D	First5	
44100	26 m FRF waverider	Backbone	Active	4			CDIP/USACE	36.258	-75.591	26	4.7	Coastal	Waverider	1	Datawell Hippy	2D	First5	
44137	East Scotia Slope, Canada	Supporting	Canadian	3			Env. Canada	42.300	-62.000	4,000	24.0	Outer-Shelf	NOMAD	6	Schaevitz LSOC	1D	no upgrade	
44150	LaHave Bank, Canada	Supporting	Canadian	2			Env. Canada	42.505	-64.018	1,300	6.8	Outer-Shelf	NOMAD	6	Schaevitz LSOC	1D	no upgrade	
61010	Proposed - Replaces Sentinel 44004	Backbone	Proposed	5	1	Was 44004	Proposed	38.484	-70.433	1,370		Offshore				2D	First5	
61020	Proposed - Bahamas Offshore	Backbone	Proposed	5	2		Proposed	25.000	-76.450	4,700		Offshore				2D	First5	
62010	Proposed - Delaware Bay, Outer Shelf	Backbone	Proposed	4	3		Proposed	38.170	-73.780	600		Outer-Shelf				2D	First5	
62020	Proposed - Onstow Bay, Outer Shelf	Backbone	Proposed	5	3	Could move 41013 or 41036 to here	Proposed	33.800	-76.570	181		Outer-Shelf				2D	First5	
62030	Proposed - Georgia/Florida Outer Shelf	Backbone	Proposed	4	3		Proposed	31.100	-80.000	100		Outer-Shelf				2D	First5	
63010	Proposed - Middle Keys, FL	Backbone	Proposed	5	4		Proposed	24.614	-80.757	200		Inner-Shelf				2D	First5	
64010	Proposed - Montauk Point, NY	Backbone	Proposed	4	3		Proposed	41.000	-71.800	23		Coastal				2D	First5	
64020	Proposed - Moriches Inlet, NJ	Backbone	Proposed	4	2		Proposed	40.720	-72.620	25		Coastal				2D	First5	
64030	Proposed - Sandy Hook, NJ	Backbone	Proposed	5	1		Proposed	40.420	-73.910	11		Coastal				2D	First5	
64040	Proposed - Barnegat Inlet, NJ	Backbone	Proposed	4	3		Proposed	39.740	-74.050	10		Coastal				2D	First5	
64050	Proposed - Cape May, NJ	Backbone	Proposed	4	2		Proposed	38.850	-74.820	8		Coastal				2D	First5	
64060	Proposed - Wallops Island, VA	Backbone	Proposed	4	3		Proposed	37.761	-75.360	11		Coastal				2D	First5	
64070	Proposed - Cape Fear, NC	Backbone	Proposed	5	2		Proposed	33.803	-78.058	10		Coastal				2D	First5	
64080	Proposed - Charleston, SC	Backbone	Proposed	5	2		Proposed	32.700	-79.600	10		Coastal				2D	First5	
64090	Proposed - Savannah, GA	Backbone	Proposed	5	2		Proposed	31.850	-80.520	15		Coastal				2D	First5	
64100	Proposed - Jacksonville, FL	Backbone	Proposed	5	2		Proposed	30.340	-81.270	17		Coastal				2D	First5	
64110	Proposed - Miami, FL	Backbone	Proposed	6	2		Proposed	25.668	-80.085	50		Coastal				2D	First5	
64120	Proposed - Key West, FL	Backbone	Proposed	5	4		Proposed	24.400	-81.900	50		Coastal				2D	First5	
65110	Rover Buoy - Atlantic Coast	Supporting	Proposed	5	1		Proposed	34.932	-78.077	15		Rover Buoy				2D	First5	
65120	Rover Buoy - Cape Lookout	Supporting	Proposed	5	1		Proposed	34.526	-76.433	25		Rover Buoy				2D	First5	
65130	Rover Buoy - Atlantic Coast	Supporting	Proposed	4	1		Proposed	29.827	-81.155	17		Rover Buoy				2D	First5	
65140	Rover Buoy - Atlantic Coast	Supporting	Proposed	5	1		Proposed	26.609	-79.992	110		Rover Buoy				2D	First5	
DE002	Coast Del DE002	Backbone	Active	4		data not on NDBC	USACE	38.540	-75.040	10	6.8	Coastal	Pressure	Bottom Mo	Pressure	2D	First5	
FRFLA	111 FRF - Linear Array, Duck, NC	Supporting	Active/Offline	4		data not on NDBC	USACE	36.187	-75.743	9	25.3	Coastal	Pressure	Bottom Mo	Pressure	2D	First5	
MD002	Ocean City, MD MD002	Backbone	Active	4		data not on NDBC	USACE	38.340	-75.070	9	19.2	Coastal	Pressure	Bottom Mo	Pressure	2D	First5	
Caribbean Sea																		
41052	V1102 South of St. John, Virgin Islands	Backbone	Active	4	3		CariCOOS	18.251	-64.763	45	1.6	Coastal	ODAS	3	Summit 34203A	1D	no upgrade	
41053	PR203 San Juan, Puerto Rico	Backbone	Active	4			CariCOOS	18.474	-66.099	36	2.4	Coastal	ODAS	3	Summit 34203A	1D	no upgrade	
41115	181 Rincon, Puerto Rico	Backbone	Active	6			CDIP/CariCOOS	18.376	-67.280	33	1.7	Coastal	Waverider	1	Datawell Hippy	2D	First5	
42056	Yucatan Basin	Backbone	Active	4	2		NDBC	19.802	-84.857	4,684	7.6	Offshore	Discus	3	DDMW/3DMG	2D	upgrade	
42057	Western Caribbean	Backbone	Active	4	4		NDBC	17.002	-81.501	293	7.2	Offshore	Discus	3	DDMW/3DMG	2D	upgrade	
42058	Central Caribbean	Backbone	Active	4	2		NDBC	14.923	-74.918	4,042	7.5	Offshore	Discus	3	DDMW/3DMG	2D	upgrade	
42059	Eastern Caribbean	Backbone	Active	3	4		NDBC	15.006	-67.496	4,900	5.6	Offshore	NOMAD	6	Schaevitz LSOC	1D	upgrade	
42080	Eastern Caribbean	Backbone	Active	3	5		NDBC	16.500	-63.500	1,426	3.6	Offshore	NOMAD	6	Schaevitz LSOC	1D	upgrade	
42085	PR105 Southeast of Ponce, PR	Backbone	Active	5			CariCOOS	17.860	-66.524	18	3.4	Coastal	ODAS	3	Summit 34203A	2D	no upgrade	
Great Lakes																		
45001	Mid Superior 60NM NNE Hancock MI	Backbone	Active	6	4		NDBC	48.064	-87.777	262	33.6	Inner-Shelf	Discus-F	3	DDMW/3DMG	2D	upgrade	
45002	N Michigan N Manitowish Washington Islands	Backbone	Active	7	3		NDBC	45.344	-86.411	175	33.3	Inner-Shelf	Discus-F	2	DDMW/3DMG	2D	upgrade	
45003	N Huron 37NM NE Alpena MI	Backbone	Active	7	3		NDBC	45.350	-82.838	146	32.6	Inner-Shelf	Discus-F	2	DDMW/3DMG	2D	upgrade	
45004	78NM EW Marquette MI	Backbone	Active	5	3		NDBC	47.584	-86.587	226	32.6	Inner-Shelf	Discus-F	2	Schaevitz LSOC	1D	upgrade	
45005	W Erie 28NM NW Cleveland, OH	Backbone	Active	6	4		NDBC	41.677	-82.398	13	32.5	Inner-Shelf	Discus-F	3	DDMW/3DMG	2D	upgrade	
45006	W Superior 48NM N Ironwood MI	Backbone	Active	4	2		NDBC	47.348	-89.825	178	31.5	Inner-Shelf	Discus-F	3	Schaevitz LSOC	1D	upgrade	
45007	S Michigan 43NM SE Milwaukee, WI	Backbone	Active	6	5		NDBC	42.676	-87.025	165	31.4	Inner-Shelf	Discus-F	3	DDMW/3DMG	2D	upgrade	
45008	S Huron 43NM E Oscoda MI	Backbone	Active	6	5		NDBC	44.289	-82.415	58	31.2	Inner-Shelf	Discus	3	DWPM/ARS	2D	upgrade	
45012	L Ontario 20NM NNE Rochester NY	Backbone	Active	3	3		NDBC	43.621	-77.406	145	10.7	Inner-Shelf	Discus-F	2	Schaevitz LSOC	1D	upgrade	
45020	Grand Traverse Bay - Station 1	Supporting	Active/Offline	4		waiting redeployment, not deployed in 2	U-Mich	44.789	-85.604	150	2.2	Coastal	S2 TIDAS 900 Bu	1	Inertial Wave Ser	2D	First5	
45022	Little Traverse Bay - Station 1	Supporting	Active	4			U-Mich	45.403	-85.088	120	3.4	Coastal	S2 TIDAS 900 Bu	1	Inertial Wave Ser	2D	First5	
45023	Portage Canal, MI	Backbone	Active	4			Michigan Technological Univ	47.279	-88.611	150	0.2	Coastal	S2 TIDAS 900 Bu	1	Inertial Wave Ser	2D	First5	
45024	Ludington, MI	Backbone	Active	4			U-Mich	43.977	-86.560	142	1.6	Coastal	S2 TIDAS 900 Bu	1	Inertial Wave Ser	2D	First5	
45025	South Entrance to Keweenaw Waterway, MI	Backbone	Active	4			Michigan Technological Univ	46.950	-88.409	150	0.4	Coastal	S2 TIDAS 900 Bu	1	Inertial Wave Ser	2D	First5	
45026	St. Joseph, MI - Near Cook Nuclear Plant	Backbone	Active	5			Limno Tech	41.983	-86.617	160	1.5	Coastal	S2 TIDAS 900 Bu	1	Inertial Wave Ser	2D	First5	
45132	Port Stanley	Supporting	Canadian	4			Env. Canada	42.483	-81.233	21	23.3	Inner-Shelf	Discus	3	Schaevitz LSOC	1D	no upgrade	
45135	Prince Edward Pt	Supporting	Canadian	3			Env. Canada	43.900	-78.868	68	23.3	Inner-Shelf	Discus	3	Schaevitz LSOC	1D	no upgrade	
45139	West Lake Ontario	Supporting	Canadian	2			Env. Canada	43.277	-78.540	35	6.7	Inner-Shelf	Discus	3	Schaevitz LSOC	1D	no upgrade	
45142	Port Colborne	Supporting	Canadian	2			Env. Canada	42.734	-79.350	27	18.4	Inner-Shelf	Discus	3	Schaevitz LSOC	1D	no upgrade	
45147	Lake St. Clair	Supporting	Canadian	3			Env. Canada	42.417	-82.668	6	12.6	Inner-Shelf	XYX Watchkeeper	2	TRIAXYS	1D	no upgrade	
45149	Southern Lake Huron	Supporting	Canadian	2			Env. Canada	43.550	-82.083	58	12.6	Inner-Shelf	XYX Watchkeeper	2	TRIAXYS	1D	no upgrade	
93010	Proposed - Lake Erie	Backbone	Proposed	6	2		Proposed	42.425	-79.923	130		Inner-Shelf				2D	First5	
93020	Proposed - Lake Erie	Backbone	Proposed	5	3	GLOS location	Proposed	42.040	-81.520	155		Inner-Shelf				2D	First5	
93210	Proposed - Lake Michigan	Backbone	Proposed	4	2		Proposed	43.780	-87.050	44		Inner-Shelf				2D	First5	
95010	Rover Buoy - Lake Erie	Supporting	Proposed	5	3	GLOS location	Proposed	41.852	-83.113	170		Rover Buoy				2D	First5	
95020	Rover Buoy - Lake Erie	Supporting	Proposed	4	3	GLOS location	Proposed	42.854	-78.916	170		Rover Buoy				2D	First5	
95110	Rover Buoy - Lake Superior	Supporting	Proposed	3	5		Proposed	47.568	-87.885	120		Rover Buoy				2D	First5	
95120	Rover Buoy - Lake Superior	Supporting	Proposed	5	5		Proposed	46.852	-91.598	170		Rover Buoy				2D	First5	
95130	Rover Buoy - Lake Superior	Supporting	Proposed	4	5		Proposed	46.856	-85.066	150		Rover Buoy				2D	First5	
95210	Rover Buoy - Lake Michigan	Supporting	Proposed	4	5		Proposed	44.040	-87.514	130		Rover Buoy				2D	First5	

WMO No.	Station Description	Network Position	Status (summer 2012)	Total Score 0-8 (Service Length, Directional)	Upgrade or Deployment Year (1-5)	Comment (as of Summer, 2012)	Owner	Latitude (deg)	Longitude (deg)	Depth (m)	Years of Data	Subnet	Buoy/Gauge Type	Hull Diameter (m)	Measurement Device	Wave Spectra	Directional Upgrade	
95220	Rover Buoy - Lake Michigan	Supporting	Proposed	4	5		Proposed	42.042	-87.409	140		Rover Buoy				2D	First5	
95230	Rover Buoy - Lake Michigan	Supporting	Proposed	5	5	GLOS location	Proposed	44.746	-87.809	170		Rover Buoy				2D	First5	
95240	Rover Buoy - Lake Michigan	Supporting	Proposed	4	5	GLOS location	Proposed	43.026	-87.633	100		Rover Buoy				2D	First5	
95310	Rover Buoy - Lake Huron	Supporting	Proposed	4	3	GLOS location	Proposed	43.819	-83.669	170		Rover Buoy				2D	First5	
95320	Rover Buoy - Lake Huron	Supporting	Proposed	5	3		Proposed	43.128	-82.459	170		Rover Buoy				2D	First5	
95410	Rover Buoy - Lake St. Clair	Supporting	Proposed	5	3		Proposed	42.450	-82.830	160		Rover Buoy				2D	First5	
95510	Rover Buoy - Lake Ontario	Supporting	Proposed	4	3	GLOS location	Proposed	43.325	-77.537	20		Rover Buoy				2D	First5	
95520	Proposed - Lake Ontario	Backbone	Proposed	6	2		Proposed	43.543	-78.891	60		Inner-Shelf				2D	First5	
Gulf of Mexico																		
42001	Middle GoM 180NM S Southwest Pass LA	Backbone	Active	5	3		NDBC	25.900	-89.667	3,274	36.2	Offshore	Discus-F	3	DWMM/3DMG	1D	upgrade	
42002	West GoM 240NM SSE Sabine TX	Backbone	Active	6	3	intermittent starting 4/12 - Change to 3M	NDBC	25.790	-93.666	3,200	36.2	Offshore	Discus	10	DWPM/ARS Angl	2D	no upgrade	
42003	E GoM 262NM S Panama City FL	Backbone	Active	6	3	Upgrade to Hippy	NDBC	26.044	-85.612	3,233	35.4	Offshore	Discus	3	DDWM/3DMG	2D	upgrade	
42012	Orange Beach AL Buoy	Backbone	Active	5	2	No data between 1985-2008	NDBC	30.065	-87.555	26	5.1	Coastal	Discus	3	DDWM/3DMG	2D	upgrade	
42019	Freeport TX 60NM S Freeport TX	Backbone	Active	4	1		NDBC	27.913	-95.353	79	22.6	Outer-Shelf	Discus	3	DDWM/3DMG	2D	upgrade	
42020	Corpus Christi TX 50NM SE Corpus Christi TX	Backbone	Active	4	3		NDBC	26.944	-96.696	88	22.6	Inner-Shelf	Discus	3	DDWM/3DMG	2D	upgrade	
42035	Galveston 22NM E Galveston TX	Backbone	Active	4	4	Upgrade to Hippy	NDBC	29.232	-94.413	14	19.6	Coastal	Discus	3	DDWM/3DMG	2D	upgrade	
42036	West Tampa 106NM WNW Tampa FL	Backbone	Active	4	3		NDBC	28.500	-84.517	55	18.9	Inner-Shelf	Discus-F	3	DDWM/3DMG	2D	upgrade	
42039	Pensacola 115 ESE Pensacola FL	Backbone	Active	3	1	intermittent transmission 5/19	NDBC	28.794	-86.021	291	17.0	Inner-Shelf	Discus	3	Angular Rate Sen	2D	upgrade	
42040	Mobile South 64NM S Dauphin Island AL	Backbone	Active	4	1		NDBC	29.185	-88.214	274	17.0	Outer-Shelf	Discus-F	10	DWPM/ARS	2D	upgrade	
42055	Bay of Campeche	Backbone	Active	4	4		NDBC	22.203	-94.000	3,566	7.6	Offshore	Discus-F	3	DDWM/3DMG	2D	upgrade	
42059	144 ST, Petersburg, offshore, FL	Backbone	Active	5	4		CDIP/USACE	27.340	-84.275	94	5.5	Inner-Shelf	Waverider	1	Datawell Hippy	2D	First5	
42380	BW Pioneer buoy - Walker Ridge 249	Supporting	Active	2	2		Petrobras	26.700	-90.460	2,499	2.8	Offshore	Unknown	unknown	unknown	1D	no upgrade	
72010	Proposed - Replaces Sentinel 42020	Backbone	Proposed	5	2		Proposed	24.914	-83.690	210		Outer-Shelf				2D	First5	
72020	Proposed - Northern Florida Escarpment	Backbone	Proposed	4	2		Proposed	27.990	-86.280	400		Outer-Shelf				2D	First5	
72040	Proposed - Timbalier Bay Outer Shelf	Backbone	Proposed	4	2		Proposed	28.150	-90.200	270		Outer-Shelf				2D	First5	
72050	Proposed - McGrail Bank, Outer Shelf	Backbone	Proposed	5	2		Proposed	27.913	-92.655	300		Outer-Shelf				2D	First5	
73010	Proposed - Florida Canyon, Outer Shelf	Backbone	Proposed	4	4	Replaces 42020 which will no longer be	Proposed	26.944	-96.696	88		Inner-Shelf				2D	First5	
74010	Proposed - Tampa	Backbone	Proposed	6	5		Proposed	27.480	-82.860	9		Coastal				2D	First5	
74020	Proposed - Panama City	Backbone	Proposed	5	3		Proposed	29.962	-85.780	30		Coastal				2D	First5	
74030	Proposed - Gulfport	Backbone	Proposed	6	1	Old 42007 location	Proposed	30.090	-88.769	15		Coastal				2D	First5	
74040	Proposed - New Orleans	Backbone	Proposed	5	3		Proposed	28.892	-89.297	-		Coastal				2D	First5	
74050	Proposed - Sabine	Backbone	Proposed	5	3		Proposed	29.628	-93.550	10		Coastal				2D	First5	
74060	Proposed - Freeport	Backbone	Proposed	5	3		Proposed	28.780	-95.290	20		Coastal				2D	First5	
74080	Proposed - Corpus Christi	Backbone	Proposed	5	4		Proposed	27.696	-97.050	12		Coastal				2D	First5	
74090	Proposed - Brazos Island	Backbone	Proposed	6	4	Moved to new location	Proposed	26.100	-97.052	20		Coastal				2D	First5	
75010	Rover Buoy - Fort Myers	Supporting	Proposed	4	2		Proposed	26.228	-82.176	20		Rover Buoy				2D	First5	
LOPL1	Louisiana Offshore Oil Port, LA	Supporting	Active	2	2		Louisiana Offshore Oil Port	28.885	-90.024	30		Coastal	Unknown	unknown	unknown	1D	no upgrade	
MRSL1	CSI-03 - South of Vermilion Bay	Supporting	Active	3	1	Tower mounted	CSI-LSU	29.441	-92.061	6	10	Coastal	ADCP	Bottom Mo	ADCP	2D	no upgrade	
SPLL1	CSI-06 - Chevron Platform, ST-52B, South of Terrebonne	Supporting	Active	2	1	Tower mounted	CSI-LSU	28.867	-90.493	21	11	Coastal	ADCP	Bottom Mo	ADCP	2D	no upgrade	
CS-09	CSI-09 - Grand Isle Blocks, LA	Supporting	Active	3	2	Tower mounted, not on NDBC	CSI-LSU	29.102	-89.978	16	6	Coastal	ADCP	Bottom Mo	ADCP	2D	no upgrade	
Pacific Coast																		
46002	Oregon 275NM W Coos Bay OR	Backbone	Active	5	2		NDBC	42.589	-130.474	3,374	37	Offshore	Discus	3	Schaevitz LSOC	1D	upgrade	
46005	Washington 315NM W Aberdeen WA	Backbone	Active	5	2		NDBC	46.100	-131.001	2,780	36	Offshore	Discus	3	Schaevitz LSOC	1D	upgrade	
46006	SE PAPA 600NM W Eureka CA	Backbone	Active	5	5		NDBC	40.754	-137.464	4,151	36	Offshore	Discus	3	Schaevitz LSOC	1D	upgrade	
46011	Santa Maria 21 NM NW Point Arguello CA	Backbone	Active	5	3		NDBC	35.000	-120.992	188	32	Outer-Shelf	Discus	3	DDWM/3DMG	2D	upgrade	
46012	Half Moon Bay 24NM SSW San Francisco CA	Backbone	Active	6	3		NDBC	37.357	-122.881	213	32	Outer-Shelf	Discus	3	DDWM/3DMG	2D	upgrade	
46013	Bodega Bay 48NM NNW San Francisco CA	Backbone	Active	4	4		NDBC	38.225	-123.317	127	32	Outer-Shelf	Discus	3	Schaevitz LSOC	1D	upgrade	
46014	Pt Arena 19NM N Point Arena CA	Backbone	Active	5	2		NDBC	39.235	-123.974	284	32	Outer-Shelf	Discus	3	Schaevitz LSOC	1D	upgrade	
46015	Port Orford 16NM W Point Orford OR	Backbone	Active	4	2		NDBC	42.747	-124.847	424	10	Outer-Shelf	Discus-F	3	DDWM/3DMG	2D	upgrade	
46022	Eel river 17NM WSW Eureka CA	Backbone	Active	4	1		NDBC	40.781	-124.542	509	31	Outer-Shelf	Discus	3	Schaevitz LSOC	1D	upgrade	
46025	Santa Monica Basin 33NM WSW, CA	Backbone	Active/Offline	5	3	stopped 4/11/2011, no schedule, no sta	NDBC	33.746	-119.076	860	30	Offshore	Discus	3	DDWM/3DMG	2D	no upgrade	
46026	San Francisco 18NM W San Francisco CA	Backbone	Active	6	1	Add Hippy, then not need 46247	NDBC	37.759	-122.833	55	30	Outer-Shelf	Discus	3	DDWM/3DMG	2D	upgrade	
46027	St Georges 8NM WNW Crescent City CA	Backbone	Active	5	1	Add Hippy, then not need 85103	NDBC	41.850	-124.381	48	28	Outer-Shelf	Discus	3	DDWM/3DMG	2D	upgrade	
46028	Cape San Martin 55NM WNW Morro Bay CA	Backbone	Active	5	3		NDBC	35.373	-121.889	1,112	29	Outer-Shelf	Discus	3	DDWM/3DMG	2D	upgrade	
46029	Columbia River Bar 78NM SSW Aberdeen WA	Backbone	Active	5	3		NDBC	46.144	-124.512	135	29	Outer-Shelf	Discus	3	DWPM/Hippy DD	2D	First5	
46036	South Nomad	Supporting	Canadian	3	2		Env. Canada	48.351	-133.940	3,500	20	Offshore	NOMAD	6	Schaevitz LSOC	1D	no upgrade	
46041	Cape Elizabeth 460NM NW Aberdeen WA	Backbone	Active	4	2		NDBC	47.353	-124.731	115	26	Outer-Shelf	Discus	3	DDWM/3DMG	1D	upgrade	
46042	Monterey 27NM W Monterey Bay CA	Backbone	Active	5	5		NDBC	36.753	-122.423	2,115	25	Outer-Shelf	Discus	3	DWPM/Hippy DD	2D	First5	
46047	Tanner Bank 121NM W San Diego CA	Backbone	Active	4	2		NDBC	32.433	-119.533	1,394	21	Offshore	Discus	3	DDWM/3DMG	2D	upgrade	
46050	Stonewall Bank 20NM W Newport OR	Backbone	Active	3	4		NDBC	44.639	-124.534	118	21	Outer-Shelf	Discus	3	DDWM/3DMG	1D	upgrade	
46053	Santa Barbara East 121NM SW Santa Barbara CA	Backbone	Active	3	4	Existed but not included in 2009 plan, r	NDBC	34.243	-119.856	449	19	Outer-Shelf	Discus	3	DDWM/3DMG	1D	no upgrade	
46054	Santa Barbara West 38NM W, CA	Backbone	Active	2	4		NDBC	34.274	-120.459	447	19	Outer-Shelf	Discus	3	Schaevitz LSOC	1D	upgrade	
46059	California 357NM W San Francisco CA	Backbone	Active/Offline	3	2	stopped 5/19/2012	NDBC	38.033	-130.000	4,717	18	Offshore	Discus	3	Schaevitz LSOC	1D	upgrade	
46069	South Santa Rosa Island CA	Backbone	Active	3	5		NDBC	33.670	-120.200	1,005	9	Offshore	Discus	3	DDWM/3DMG	2D	upgrade	
46086	San Clemente Basin	Backbone	Active	4	2		NDBC	32.498	-117.999	1,856	9	Offshore	Discus	3	Datawell Hippy	2D	First5	
46087	Neah Bay WA	Backbone	Active	4	1		NDBC/USCG	48.494	-124.728	257	8	Coastal	Discus	3	DDWM/3DMG	2D	upgrade	
46088	New Dungeness- Hein Bank WA	Supporting	Active	4	4		NDBC/USCG	48.333	-123.167	115	8	Coastal	Discus	3	DDWM/3DMG	2D	no upgrade	
46089	Tillamook OR	Backbone	Active	4	5		NDBC/Coastal Storms	45.889	-125.830	2,230	8	Offshore	Discus	3	DDWM/3DMG	2D	upgrade	
46114	185 Monterey Bay West, CA	Supporting	Active	3	3		CDIP/NDBC	36.717	-122.350	1,463	1	Outer-Shelf	Waverider	1	Datawell Hippy	2D	First5	
46206	LaPerouseBank	Supporting	Canadian	3	3		Env. Canada	48.834	-126.000	73	24	Inner-Shelf	Discus	3	Schaevitz LSOC	1D	no upgrade	
46211	036 Grays Harbor, WA	Backbone	Active	7	8		CDIP/USACE	46.860	-124.245	40	31	Coastal	Waverider	1	Datawell Hippy	2D	First5	
46212	128 Humbolt Bay, South Spit, CA	Backbone	Active	4	3		CDIP/USACE	40.753	-124.313	40	9	Coastal	Waverider	1	Datawell Hippy	2D	First5	
46213	084 Cape Mendocino, CA	Backbone	Active	4	4		CDIP/CDBW	42.293	-124.739	319	14	Outer-Shelf	Waverider	1	Datawell Hippy	2D	First5	
46214	029 Point Reyes, CA	Backbone	Active	5	5		CDIP/CDBW	37.946	-123.470	550	26	Outer-Shelf	Waverider	1	Datawell Hippy	2D	First5	
46215	076 Diablo Canyon, CA	Backbone	Active	5	3		CDIP/PGPE	35.204	-120.859	23	30	Coastal	Waverider	1	Datawell Hippy	2D	First5	
46216	107 Goleta Point, CA	Supporting	Active	4	3		CDIP/CDBW/USACE	34.333	-119.803	183	11	Coastal	Waverider	1	Datawell Hippy	2D	First5	
46217	111 Anacapa Passage, CA	Supporting	Active	4	4		CDIP/CDBW/USACE	34.170	-119.436	105	11	Outer-Shelf	Waverider	1	Datawell Hippy	2D	First5	
46218	071 Harvest, CA	Backbone	Active	5	5		CDIP/CDBW	34.454	-120.781	549	21	Outer-Shelf	Waverider	1	Datawell Hippy	2D	First5	
46219	067 San Nicolas Island, CA	Backbone	Active	5	5		CDIP/Navy	33.221	-119.882	335	22	Offshore	Waverider	1	Datawell Hippy	2D	First5	
46221	028 Santa Monica Bay, CA	Backbone	Active	7	7		CDIP/CDBW/USACE	33.855	-118.633	363	32	Outer-Shelf	Waverider	1	Datawell Hippy	2D	First5	
46222	092 San Pedro, CA	Backbone	Active	7	8		CDIP/CDBW/USACE	33.618	-118.317	457	32	Outer-Shelf	Waverider	1	Datawell Hippy	2D	First5	
46223	096 Dana Point, CA	Supporting	Active	4	5		CDIP/CDBW/USACE	33.459	-117.768	370	12	Coastal	Waverider	1	Datawell Hippy	2D	First5	
46224	045 Oceanside offshore, CA	Backbone	Active	5	5		CDIP/CDBW	33.179	-117.471	223	16	Coastal	Waverider	1	Datawell Hippy	2D	First5	
46225	100 Torrey Pines, outer, CA	Backbone	Active	5	5		CDIP/CDBW	32.930	-117.392	549	12	Coastal	Waverider	1	Datawell Hippy	2D	First5	
46229	139 Umpqua offshore, OR	Backbone	Active	5	5		CDIP/USACE	43.770	-124.549	187	6	Outer-Shelf	Waverider	1	Datawell Hippy	2D</		

WMO No.	Station Description	Network Position	Status (summer 2012)	Total Score 0-8 (Service Length, Directional)	Upgrade or Deployment Year (1-5)	Comment (as of Summer, 2012)	Owner	Latitude (deg)	Longitude (deg)	Depth (m)	Years of Data	Subnet	Buoy/Gauge Type	Hull Diameter (m)	Measurement Device	Wave Spectra	Directional Upgrade	
46232	191 Point Loma South, CA	Backbone	Active	5			CDIP/CDBW	32.530	-117.431	1,143	5	Outer-Shelf	Waverider	1	Datawell Hippy	2D	First5	
46236	156 Monterey Canyon, outer, CA	Supporting	Active	4			CDIP/CDBW/USACE	36.761	-121.947	168	6	Coastal	Waverider	1	Datawell Hippy	2D	First5	
46237	142 San Francisco bar, CA	Backbone	Active	5			CDIP/USACE	37.781	-122.999	15	5	Coastal	Waverider	1	Datawell Hippy	2D	First5	
46238	167 San Nicolas Island North, CA	Supporting	Active	3			CDIP/Navy	33.405	-119.467	772	2	Offshore	Waverider	1	Datawell Hippy	2D	First5	
46239	157 Point Sur, CA	Supporting	Active	3			CDIP/CDBW/USACE	36.338	-122.101	366	4	Outer-Shelf	Waverider	1	Datawell Hippy	2D	First5	
46240	158 Cabrillo Point, Monterey Bay, CA	Supporting	Active	3			CDIP/Haskins Marine Lab	36.626	-121.907	19	4	Coastal	Waverider	1	Datawell Hippy	2D	First5	
46242	043 Camp Pendleton Nearshore, CA	Supporting	Active	4			CDIP/Navy	33.220	-117.440	20	5	Coastal	Waverider	1	Datawell Hippy	2D	First5	
46243	162 Clatsop Spit, OR	Backbone	Active	5			CDIP/USACE	46.200	-124.117	25	3	Coastal	Waverider	1	Datawell Hippy	2D	First5	
46244	168 Humboldt Bay, North Spit, CA	Supporting	Active	3			CDIP/USACE	40.888	-124.357	112	3	Outer-Shelf	Waverider	1	Datawell Hippy	2D	First5	
46247	180 San Francisco Offshore, CA	Supporting	Active	4			CDIP/USACE	37.763	-122.833	53	2	Coastal	Waverider	1	Datawell Hippy	2D	First5	
46248	179 Astoria Canyon, OR	Supporting	Active	3			CDIP/USACE	46.133	-124.667	192	2	Outer-Shelf	Waverider	1	Datawell Hippy	2D	First5	
46249	182 Santa Cruz Island South, CA	Supporting	Active	4			CDIP/Navy	33.821	-119.708	1,737	2	Offshore	Waverider	1	Datawell Hippy	2D	First5	
81010	Proposed - Santa Cruz Offshore	Backbone	Proposed	5	3		Proposed	33.330	-123.090	4,300		Offshore				2D	First5	
85100	Rover Buoy - Pacific Coast	Supporting	Proposed	3	4		Proposed	47.901	-124.667	20		Rover Buoy				2D	First5	
85101	Rover Buoy - Pacific Coast	Supporting	Proposed	4	4		Proposed	44.623	-124.114	30		Rover Buoy				2D	First5	
85102	Rover Buoy - Pacific Coast	Supporting	Proposed	5	4		Proposed	42.867	-124.569	20		Rover Buoy				2D	First5	
85103	Rover Buoy - Pacific Coast	Supporting	Proposed	4	4	Add Hippy to 46027, not need 85103	Proposed	41.797	-124.307	20		Rover Buoy				2D	First5	
LJPC1	073 Scripps Pier, La Jolla, CA	Supporting	Active	4			CDIP	32.867	-117.257	6	37	Coastal	Pressure	Pier mount	Pressure	1D	no upgrade	
Pacific Islands																		
32012	Woods Hole Stratus Wave Station	Backbone	Active	4			WHOI	-19.713	-85.585	4,440		Offshore		2		2D	no upgrade	
51000	(LLNR 28007.5) - Northern Hawaii	Backbone	Active	3	2	Dual Station with 51100	NDBC	23.546	-154.056	4,097	4	Offshore	Discus-F	3	DDWM/3DMG	2D	upgrade	
51001	NW Hawaii 170NM WNW Kauai, HI	Backbone	Active/Offline	6		stopped 12/25/2009, dual location with	NDBC	23.432	-162.208	3,252	29	Offshore	Discus	3	Datawell Hippy	2D	First5	
51002	SW Hawaii 215NM SSE Hilo, HI	Backbone	Active	4	5		NDBC	17.084	-157.820	5,002	28	Offshore	Discus	3	Schaevitz LSOC	1D	upgrade	
51003	W Hawaii 205NM SW Honolulu, HI	Backbone	Active	4	3		NDBC	19.018	-160.582	4,920	28	Offshore	Discus	3	Schaevitz LSOC	1D	upgrade	
51004	SE Hawaii 185NM SE Hilo, HI	Backbone	Active	5	3		NDBC	17.525	-152.382	4,901	28	Offshore	Discus	3	DDWM/3DMG	2D	upgrade	
51100	Northern Hawaii	Backbone	Active	3	5	Dual Station with 51000	NDBC	23.558	-153.900	4,755	4	Offshore	Discus	3	DDWM/3DMG	2D	upgrade	
51101	(LLNR 28009) - NW Hawaii	Backbone	Active	4	5	Dual station with 51001	NDBC	24.321	-162.058	4,792	4	Offshore	Discus	3	DDWM/3DMG	2D	upgrade	
51201	106 Waimea Bay, HI	Backbone	Active	5			CDIP/PaciOOS	21.673	-158.116	200	11	Coastal	Waverider	1	Datawell Hippy	2D	First5	
51202	098 Mokapu Point, HI	Backbone	Active	5			CDIP/PaciOOS	21.415	-157.678	100	12	Coastal	Waverider	1	Datawell Hippy	2D	First5	
51203	146 Kaunapali, Lanai, HI	Backbone	Active	6			CDIP/PaciOOS	20.788	-157.010	201	6	Coastal	Waverider	1	Datawell Hippy	2D	First5	
51204	165 Barbers Point, HI	Backbone	Active	5			CDIP/PaciOOS	21.281	-158.124	3,000	2	Offshore	Waverider	1	Datawell Hippy	2D	First5	
51205	187 Pauwela, Maui, HI	Backbone	Active	6			CDIP/PaciOOS	21.020	-156.427	213	1	Coastal	Waverider	1	Datawell Hippy	2D	First5	
51206	188 Hilo, Hawaii, HI	Backbone	Active	6			CDIP/PaciOOS	19.781	-154.968	347	1	Coastal	Waverider	1	Datawell Hippy	2D	First5	
51207	198 Kaneohe Bay, HI	Supporting	Active	4			CDIP/PaciOOS	21.478	-157.753	81	0	Coastal	Waverider	1	Datawell Hippy	2D	First5	
52200	121 Ipan, Guam	Backbone	Active	5			CDIP/PaciOOS	13.354	144.788	200	9	Outer-Shelf	Waverider	1	Datawell Hippy	2D	First5	
52201	163 Kalo Majuro, Marshall Islands	Backbone	Active	5			CDIP/NSF	7.092	171.394	465	3	Coastal	Waverider	1	Datawell Hippy	2D	First5	
52202	196 Ritidian Point, Guam	Backbone	Active	5			CDIP/PaciOOS	13.683	144.812	515	0	Coastal	Waverider	1	Datawell Hippy	2D	First5	
52211	197 Tanapag, Saipan, CNMI	Backbone	Active	4			CDIP/PaciOOS	15.267	145.662	475	0	Coastal	Waverider	1	Datawell Hippy	2D	First5	
81020	Proposed - Christmas Island DWA	Backbone	Proposed	4	2	51028 ended 4/08, Proposed	Proposed	0.000	-153.913	4,572	10	Offshore				2D	First5	
84110	Proposed - Tutuila, American Samoa	Backbone	Proposed	5	3	PaciOOS location (2013)	Proposed	-14.400	-170.660	2,500		Coastal				2D	First5	
84130	Proposed - Kotor Palau	Backbone	Proposed	5	4	PaciOOS location (2014)	Proposed	7.117	135.150	5,000		Coastal				2D	First5	
84140	Rover Buoy - Hanalei, Kauai, HI	Supporting	Proposed	5	4	PaciOOS location (2014)	Proposed	22.270	-159.510	122		Rover Buoy				2D	First5	
84160	Rover Buoy - Midway Atoll, HI	Supporting	Proposed	4	2	PaciOOS location (2013)	Proposed	28.180	-177.360	200		Rover Buoy				2D	First5	

Table 1. Summary of Active Wave Observing Platforms

Region	Discus		Nomad	3-m	Other Buoy Configurations							Shallow			Total
	12	10	6	3	2.5	2.4	2	1.8	1.75	1.12	0.9	Bottom Mount	Pier Mount	Unknown	
Atlantic Coast			8	27		1	8		7		12	3			66
Non-Directional			8	10			8								26
Directional				17		1			7		12	3			40
Gulf of Mexico		2		9							1	3		2	17
Non-Directional				1										2	3
Directional	2			8							1	3			14
Pacific Coast			1	27							29		1		58
Non-Directional			1	12									1		14
Directional				15							29				44
Alaskan Coast	2		19	5							2				28
Non-Directional	2		19	4											25
Directional				1							2				3
Pacific Islands				7		1					11				19
Non-Directional				2											2
Directional				5		1					11				17
Great Lakes				9		4			2	6					21
Non-Directional				5		2			2						9
Directional				4		2				6					12
Caribbean			2	3	3						1				9
Non-directional			2		2										4
Directional				3	1						1				5
Total	2	2	30	87	3	6	8	8	9	6	56	6	1	2	218
Non-directional	2		30	34	2	2	8		2				1	2	83
Directional		2		53	1	4			7	6	56	6			135
Canadian			6	9					2						17

Note: Number of Canadian sites is included in the totals

Table 2a. Summary of Active Backbone Wave Observing Platforms
(diameters in m)

Region	Discus		Nomad	Discus	Other Buoy Configurations							Bottom Mount	Total
	12	10	6	3	2.5	2.4	2	1.8	1.75	1.12	0.9		
Atlantic Coast			6	25		1	1		1		10	2	46
Non-Directional			6	9			1						16
Directional				16		1			1		10	2	30
Gulf of Mexico		2		9							1		12
Non-Directional				1									1
Directional		2		8							1		11
Pacific Coast				25							16		41
Non-Directional				11									11
Directional				14							16		30
Alaskan Coast	2		14								2		18
Non-Directional	2		14										16
Directional											2		2
Pacific Islands				7		1					10		18
Non-Directional				2									2
Directional				5		1					10		16
Great Lakes				5		4				4			13
Non-Directional				1		2							3
Directional				4		2				4			10
Caribbean			2	3	3						1		9
Non-directional			2		2								4
Directional				3	1						1		5
Total	2	2	22	74	3	6	1		1	4	40	2	157
Non-directional	2		22	24	2	2	1						53
Directional		2		50	1	4			1	4	40	2	104

Table 2b. Summary of Active Supporting Wave Observation Platforms
(diameters in m)

Region	Discus		Nomad	Discus	Other Buoy Configurations							Shallow			Total
	12	10	6	3	2.5	2.4	2	1.8	1.75	1.12	0.9	Bottom Mount	Pier Mount	Unknown	
Atlantic Coast			2	2			7		6		2	1			20
Non-Directional			2	1			7								10
Directional				1					6		2	1			10
Gulf of Mexico												3		2	5
Non-Directional														2	2
Directional												3		3	3
Pacific Coast			1	2							13		1		17
Non-Directional			1	1									1	3	3
Directional				1							13			14	14
Alaskan Coast			5	5											10
Non-Directional			5	4										9	9
Directional				1										1	1
Pacific Islands											1				1
Non-Directional															
Directional											1			1	1
Great Lakes				4					2	2					8
Non-Directional				4					2						6
Directional										2				2	2
Caribbean															
Non-directional															
Directional															
Total			8	13			7		8	2	16	4	1	2	61
Non-directional			8	10			7		2				1	2	30
Directional				3					6	2	16	4		31	31
Canadian			6	9					2						17

Note: Table totals include Canadian sites, which are also totaled in the bottom row

Table 3. Summary of Proposed and Active Wave Observation Locations

Region	Subnet																								Total											
	Offshore						Outer-Shelf						Inner-Shelf						Coastal																	
	Backbone Design	Exists	Proposed	Directional Upgrade	Supporting	Sentinel	Sentinel, Supporting	Backbone Design	Exists	Proposed	Directional Upgrade	Supporting	Sentinel	Sentinel, Supporting	Backbone Design	Exists	Proposed	Directional Upgrade	Supporting	Sentinel	Sentinel, Supporting	Backbone Design	Exists	Proposed	Directional Upgrade	Supporting	Sentinel	Sentinel, Supporting	Backbone Design	Exists	Proposed	Directional Upgrade	Supporting	Sentinel	Sentinel, Supporting	Rover Buoy
Atlantic Coast	13	11	2	8	1	3	10	7	3	5	2	4	1	11	10	1	8	2	4		30	18	12	5	15	4	1	64	46	18	26	20	15	2	4	
Gulf of Mexico	4	4		3	1	3	6	2	4	2		1		5	4	1	3		1		10	2	8	2	4			25	12	13	10	5	5		1	
Pacific Coast	11	10	1	7	3	6	1	23	23		12	5	17						1		1	8	8		1	8	2	1	42	41	1	20	17	25	3	4
Alaskan Coast	7	7		5	7	1	5	9	9		6		1		5		5					2	2			3			23	18	5	11	10	2	5	5
Pacific Islands	10	9	1	6		4		1	1													10	8	2		1			21	18	3	6	1	4		2
Great Lakes															13	9	4	9	6	8	2	4	4			2			17	13	4	9	8	8	2	13
Caribbean	5	5		5																		4	4						9	9		5				
Total	50	46	4	34	12	17	6	49	42	7	25	7	23	1	34	23	11	20	9	13	3	68	46	22	8	33	6	2	201	157	44	87	61	59	12	29

Table 4. Ranking of Active & Proposed Wave Observing Locations, including Proposed Rover Buoys

Region	Ranking							Total
	1	2	3	4	5	6	7	
Atlantic Coast		11	17	31	24	5		88
Backbone	3	11	25	20	5			64
Supporting	8	6	6	4				24
Gulf of Mexico		3	3	10	10	5		31
Backbone		1	9	10	5			25
Supporting	3	2	1					6
Pacific Coast		1	13	21	22	2	4	63
Backbone	1	4	10	21	2	4		42
Supporting		9	11	1				21
Alaskan Coast		4	18	8	8			38
Backbone		14	1	8				23
Supporting	4	4	7					15
Pacific Islands			2	7	11	4		24
Backbone		2	5	10	4			21
Supporting			2	1				3
Great Lakes		3	4	15	8	6	2	38
Backbone		1	5	3	6	2		17
Supporting	3	3	10	5				21
Caribbean			3	4	1	1		9
Backbone		3	4	1	1			9
Supporting								
Total		22	60	96	84	23	6	291
Backbone	4	36	59	73	23	6		201
Supporting	18	24	37	11				90

Ranking Criteria (0-8 pts) - Sentinel location: >20 yrs, 1 pt., > 30 yrs, 2 pt.; Backbone Location: 2 pt, Supporting: 1 pt.; Port < 80 km: 1 pt; No other Backbone Buoy<100km: 1 pt; Directional: 1 pt, First-5 Directional: 2 pt

Table 5a. Ranking of Active Wave Observing Locations

Region	Ranking							Total
	1	2	3	4	5	6	7	
Atlantic Coast			11	17	23	11	4	66
Backbone	3	11	18	10	4			46
Supporting	8	6	5	1				20
Gulf of Mexico		3	3	6	3	2		17
Backbone		1	6	3	2			12
Supporting	3	2						5
Pacific Coast		1	12	19	20	2	4	58
Backbone	1	4	10	20	2	4		41
Supporting		8	9					17
Alaskan Coast		4	18	3	3			28
Backbone		14	1	3				18
Supporting	4	4	2					10
Pacific Islands			2	5	8	4		19
Backbone		2	4	8	4			18
Supporting			1					1
Great Lakes		3	3	7	2	4	2	21
Backbone		1	4	2	4	2		13
Supporting	3	2	3					8
Caribbean			3	4	1	1		9
Backbone		3	4	1	1			9
Supporting								
Total		22	58	67	48	17	6	218
Backbone	4	36	47	47	17	6		157
Supporting	18	22	20	1				61

Ranking Criteria (0-8 pts) - Sentinel location: >20 yrs, 1 pt., > 30 yrs, 2 pt.; Backbone Location: 2 pt, Supporting: 1 pt.; Port < 80 km: 1 pt; No other Backbone Buoy<100km: 1 pt; Directional: 1 pt, First-5 Directional: 2 pt

Table 5b. Ranking of Proposed Wave Observing Locations, including Proposed Rover Buoys

Region	Ranking							Total
	1	2	3	4	5	6	7	
Atlantic Coast				8	13	1		22
Backbone				7	10	1		18
Supporting				1	3			4
Gulf of Mexico				4	7	3		14
Backbone				3	7	3		13
Supporting				1				1
Pacific Coast				1	2	2		5
Backbone					1			1
Supporting				1	2	1		4
Alaskan Coast				5	5			10
Backbone					5			5
Supporting				5				5
Pacific Islands				2	3			5
Backbone				1	2			3
Supporting				1	1			2
Great Lakes				1	8	6	2	17
Backbone				1	1	2		4
Supporting				1	7	5		13
Caribbean								
Backbone								
Supporting								
Total				2	29	36	6	73
Backbone					12	26	6	44
Supporting				2	17	10		29

Ranking Criteria (0-8 pts) - Sentinel location: >20 yrs, 1 pt., > 30 yrs, 2 pt.; Backbone Location: 2 pt, Supporting: 1 pt.; Port < 80 km: 1 pt; No other Backbone Buoy<100km: 1 pt; Directional: 1 pt, First-5 Directional: 2 pt

**Table 6. Active Wave Observing Locations:
Total Scores**

Region	Score							Total Stations
	1	2	3	4	5	6	7	
Atlantic Coast		11	17	23	11	4		66
Gulf of Mexico		3	3	6	3	2		17
Pacific Coast		1	12	19	20	2	4	58
Alaskan Coast		4	18	3	3			28
Pacific Islands			2	5	8	4		19
Great Lakes		3	3	7	2	4	2	21
Caribbean			3	4	1	1		9
Total		22	58	67	48	17	6	218
Percent	0%	10%	27%	31%	22%	8%	3%	

Includes 17 Supporting Canadian Buoys

Regional Association	Wave Observation Information Extracted from the 2011 Regional Build-Out Plans
SCCOOS	15 datawells (3 nearshore, 9 shelf, 3 offshore) . Capital cost 900k, O&M 540k
A00S	15 datawells, one per area (100kmx100km)
CariCOOS	1 plain waverider, 2 waveriders with ADCP, 6 GoMOOS buoys
CenCOOS	assume existing buoys sustained, one mobile Datawell, 3 ADCP w/waves for harbors/entrances
GCOOS	10 multipurpose buoys >50m depth with waves. Couldn't tell from their map where these would go.
GLOS	wave sites not specified, used plan provided by Meadows. Build out plan does include 1 buoy/lake and sustain what's there
MARACOOS	50 estuary moorings, 14 Offshore moorings, 20 on platforms of opportunity - total 85
NERACOOS	CDIP - sufficient number to satisfy national wave plan - but exact number not clear; in addition: multipurpose buoys - 15 ocean, 15 nearshore/estuary, 15 shore/pier based - all with wave sensors
PacIOOS	CDIP - 11 new buoys in addition to the 8 they already have
SECOORA	<p>Models/Observations are integrated. Fixed platform statement mentions waveriders with bold comment: Note: We support the National waves plan, but a waverider buoy is not a multipurpose buoy and presently lacks capabilities to measure winds as well as other meteorological parameters. SECOORA will coordinate with NDBC waves plan within the SE region to leverage each others plan on locating resources. Therefore, the number of necessary buoys for column C (Fixed multipurpose) would decrease if Nat'l wave plan is implemented.</p> <p>50 pier/coastal stations with waves; 11 Ports and Harbors - 44 stations; 50 new multipurpose mooring stations w/waves; 24 buoys of National Waves Plan; add 4 bottom mount ADCPs to existing 4 on west shelf florida + 2 existing SC (waves? maybe)</p>
NANOOS	SWAN wave model plans; 15 Datawell buoys (3 open ocean, 9 shelf, 3 coastal) - 7 exist, need 8 - 5 spares

Key to ACRONYMS used

3DMG	MicroStrain 3DM-G sensor
ADCP	Acoustic Doppler Current Profiler
AMPS	NDBC payload package
AOOS	Alaska Ocean Observing System
ARES	NDBC payload package
ARS	Angular Rate Sensor
CariCOOS	Caribbean Coastal Ocean Observing System
CBIBS	Chesapeake Bay Interpretive Buoy System
CDBW	California Dept of Boating and Waterways
CDIP	Coastal Data Information Program (operated by the Scripps Institution of Oceanography)
CenCOOS	Central and Northern California Ocean Observing System
Coastal Storms	Coastal Storms Program (NOAA)
CORMP	UNCW Coastal Ocean Research and Monitoring Program
CSI-LSU	Coastal Studies Institute Louisiana State University
DACT	NDBC payload package
DCMP	Delaware Coastal Management Program
DDWM	Digital Directional Wave Module (DDWM)
DISCUS-F	Discus Buoy Foam
DWPM	Directional Wave Processing Module
GCOOS	Gulf of Mexico Ocean Observing System
GLOS	Great Lakes Observing System
GoMOOS	Gulf of Maine Ocean Observing System, now the <i>Gulf of Maine Moored Buoy Program</i>
IOOS	Integrated Ocean Observing System Joint Oceanographic Commission on Oceanography and Marine Meteorology (under the International Ocean Commission)
JCOMM	LimnoTech Inc., Ann Arbor Michigan
LimnoTech	LimnoTech Inc., Ann Arbor Michigan
MARACOOS	Mid-Atlantic Coastal Ocean Observing System
MARS	NDBC payload package
NANOOS	Northwest Association of Networked Ocean Observing Systems
NASA	National Aeronautic and Space Administration
NDBC	NOAA National Data Buoy Center
NERACOOS	Northeast Regional Association of Coastal Ocean Observing Systems
NOAA	National Oceanic and Atmospheric Administration
NSF	National Science Foundation
PacIOOS	Pacific Islands Ocean Observing System
PGE	Pacific Gas and Electric
SCCOOS	Southern California Coastal Ocean Observing System
SECOORA	Southeast Coastal Ocean Observing Regional Association
TRIAXYS	Axys Technologies Directional Wave Sensor
UConnDMS	University of Connecticut, Department of Marine Sciences
U-Mich	University of Michigan
UNC	University of North Carolina
UNCW	University of North Carolina, Wilmington
UNH	University of New Hampshire
USACE	United States Army Corps of Engineers
USCar	University of South Carolina
U-WA	University of Washington
VIMS	Virginia Institute of Marine Science