

University of Maine									
Environmental Observation	Buoy A01	Buoy B01	Buoy E01	Buoy F01	Buoy I01	Buoy M01	Buoy N01	Equipment Manufacturer & Type	Operating Procedures (hyperlinked to asset manuals):
Wind Speed/Direction	•	•	•	•	•	•	•	Gill Instruments UltraSonic Wind Sensor	WindSonic-M-manual-issue-5
								Gill Instruments Maximet 500	Maximet-Manual-Issue-7.pdf
								Marine Wind Monitor Model 05106	RM_Young_05106-900 Manual
Barometric Pressure	•	•	•	•	•	•	•	Setra 270 Barometric Pressure Transducer	Setra_Model_270_Operating_Instructions
Air Temperature	•	•	•	•	•	•	•	Campbell 107 Temperature Probe	Campbell Scientific Temp Probe Manual
Visibility	•	•	•	•	•	•	•	Aanderaa Mira Visibility Sensor 3544	Aanderaa Mira visibility sensor- 3544 Datasheet
Wave Height	•	•	•	•	•	•	•	Summit 34203A 3-axis	Estimating Significant Wave Height and Dominant Wave Period from Buoy Mounted, Strap-down Accelerometer Observations
Wave Period	•	•	•	•	•	•	•	Summit 34203A 3-axis	Summit 34203A Manual
Wave Height Wave Period Wave Direction	•	•	•	•	•	•	•	In-house (UMaine) developed directional wave sensor	UMaine DDWM Manual v 3.0 Microstrain Service Instructions UMaine DDWM Report Formats
Surface Water Temperature	•	•	•	•	•	•	•	Seabird SBE37SM	Sea-Bird Manual SBE37SM rs232_043
Surface Salinity	•	•	•	•	•	•	•	Seabird Microcat 37-SM Seabird 16plus-IM	Sea-Bird Manual SBE37SM rs232_043 Sea-Bird SBE16plusIM_012_v1.2b_firmware
Near-surface ocean currents	•	•	•	•	•	•	•	Aanderaa RCM9/11 Aanderaa Seaguard	Aanderaa RCM 9/11 TD211 Aanderaa Seaguard_RCM TD262b_001
Ocean Currents/Direction Profile	•	•	•	•	•	•	•	Teledyne-RDI Acoustic Doppler Current Profiler (ADCP)	Teledyne RD Workhorse Operators Manual Teledyne RD Quartermaster Datasheet Teledyne RD Long Ranger Datasheet
Sub-surface Water Temperature Depth in meters	2, 10,20 , 50	2,10,20,50	2,10,20, 50, 87	2,10,20, 50	2,10,20, 50, 87	2, 10,20, 50,100,150, 200, 250	20, 50, 100, 150, 180	Seabird Microcat 37-IM Seabird 16plus-IM	Sea-Bird SBE37IM Operators Manual (032) Sea-Bird SBE16plusIM_012_v1.2b_firmware
Sub-surface Salinity	2,10,20, 50	10,20, 50	10,20, 50, 87	10,20,50	10,20, 50, 87	10,20, 50,100,150, 200, 250	20, 50, 100, 150, 180	Seabird Microcat 37-IM Seabird 16plus-IM	Sea-Bird SBE37IM Operators Manual (032) Sea-Bird SBE16plusIM_012_v1.2b_firmware
Sub-surface Dissolved Oxygen	50							Seabird SBE43	Sea-Bird SBEDO43 datashhet (Jun16)
Sub-surface Nitrate			50		50	1, 20,50,100,150, 200, 250	50, 100, 180	Satlantic ISUS SUNA nitrate sensors	Satlantic ISUS v3 Operators Manual Sea-Bird SUNA v2 Operators Manual
Dissolved Oxygen (buoys and glider)	50							Aanderaa Optode (model 3835,4385)	Aanderaa Optode 3830 Operators Manual Aanderaa Optode 4330, 4835, 4831 Operators Manual
								Seabird SBE43 Dissolved Oxygen Sensor	Aanderaa Oxygen Optodes Best Practices Info Sea-Bird SBEDO43 datashhet (Jun16)
Chlorophyll Concentration	3					2		WET Labs ECO-FLSB	Sea-Bird/Wetlabs ECO Sensors Operators Manual
CDOM	3							WET Labs ECO-FLCDS	
Turbidity	3							WET Labs ECO-FLNTUS	

Woods Hole Group, Inc.					
Environmental Observation	Cape Cod Bay Buoy (CDIP221)	Buzzards Bay Buoy (CDIP260)	Cape Cod Canal, West End (NOAA ca0101)	Equipment Manufacturer & Type	Operating Procedures (hyperlinked to asset manuals):
Current Speed/Direction, cross-channel profile			•	Sontek ADP 250-kHz	instrument discontinued, manual hyperlink no longer valid
Wave Height		•	•	Datawell BV, DWR4/ACM	https://datawell.nl/wp-content/uploads/2022/09/datawell_manual_dwr4.pdf
Wave Period		•	•	Datawell BV, DWR4/ACM	https://datawell.nl/wp-content/uploads/2022/09/datawell_manual_dwr4.pdf
Wave Direction		•	•	Datawell BV, DWR4/ACM	https://datawell.nl/wp-content/uploads/2022/09/datawell_manual_dwr4.pdf
Wave Direction		•	•	Datawell BV, DWR4/ACM	https://datawell.nl/wp-content/uploads/2022/09/datawell_manual_dwr4.pdf
Surface Water Temperature	•	•		Datawell BV, DWR4/ACM	https://datawell.nl/wp-content/uploads/2022/09/datawell_manual_dwr4.pdf

University of New Hampshire					
Environmental Observation	Great Bay Buoy	CO2 Buoy	Coastal Marine Lab	Equipment Manufacturer & Type	Operating Procedures (hyperlinked to asset manuals):
Wind Speed/Direction	•	•	•	Coastal Environmental Systems Weatherpak WindSonic RM Young	http://www.coastalenvironmental.com/downloads/WP-2000.manual.NW.pdf http://gillinstruments.com/data/manuals/windsonic-manual.pdf?iss=21_20150501 https://www.youngusa.com/wp-content/uploads/2021/02/05106-900.pdf
Relative Humidity	•	•	•	Coastal Environmental Systems Weatherpak Rotronics MP101A-T7 RM Young	http://www.coastalenvironmental.com/downloads/WP-2000.manual.NW.pdf http://www.rotronic-usa.com/en-us/mp10xa-mp40xa.html https://www.youngusa.com/wp-content/uploads/2008/01/413821C2-9028C29.pdf
Wind Speed/Direction	•			RM Young 5106	https://www.youngusa.com/wp-content/uploads/2021/02/05106-900.pdf
Air Temperature	•	•	•	Coastal Environmental Systems Weatherpak Rotronics MP101A-T7 RM Young	http://www.coastalenvironmental.com/downloads/WP-2000.manual.NW.pdf http://www.rotronic-usa.com/en-us/mp10xa-mp40xa.html https://www.youngusa.com/wp-content/uploads/2008/01/413821C2-9028C29.pdf
Barometric Pressure	•			RM Young	https://www.youngusa.com/wp-content/uploads/2021/02/61402V-90B.pdf
Visibility	•	•	•	Coastal Environmental Systems Weatherpak	http://www.coastalenvironmental.com/downloads/WP-2000.manual.NW.pdf
Surface Water Temperature	•	•	•	Seabird SBE37 or Aanderaa or YSI	http://www.seabird.com/sites/default/files/documents/37SM_rs232_039.pdf https://www.ysi.com/file%20library/documents/manuals/exo-user-manual-web.pdf http://ccg.sr.unh.edu/doc/conductivity-sensor-4319.pdf
Surface Salinity	•	•	•	Seabird SBE37 or Aanderaa or YSI	http://www.seabird.com/sites/default/files/documents/37SM_rs232_039.pdf https://www.ysi.com/file%20library/documents/manuals/exo-user-manual-web.pdf http://ccg.sr.unh.edu/doc/conductivity-sensor-4319.pdf
UV Spectra	•			Satlantic SUNA	http://satlantic.com/sites/all/modules/pubdlcnt/pubdlcnt.php?file=http://satlantic.com/sites/default/files/documents/Satlantic-SUNA-V2-Manual-Rev-E.pdf&nid=474
Nitrate	•			Satlantic SUNA	http://satlantic.com/sites/all/modules/pubdlcnt/pubdlcnt.php?file=http://satlantic.com/sites/default/files/documents/Satlantic-SUNA-V2-Manual-Rev-E.pdf&nid=474
CDOM Fluorescence	•	•	•	WET Labs ECO-FLCDS or YSI	http://wetlabs.com/sites/all/modules/pubdlcnt/pubdlcnt.php?file=http://wetlabs.com/sites/default/files/documents/WLECOMPARben.pdf&nid=976 https://www.ysi.com/file%20library/documents/manuals/exo-user-manual-web.pdf
Conductivity	•	•	•	Seabird SBE37 or Aanderaa or YSI	http://www.seabird.com/sites/default/files/documents/37SM_rs232_039.pdf https://www.ysi.com/file%20library/documents/manuals/exo-user-manual-web.pdf http://ccg.sr.unh.edu/doc/conductivity-sensor-4319.pdf
Chlorophyll- a	•	•		WET Labs ECO-FLNTUS or YSI	http://wetlabs.com/sites/default/files/documents/WLECOMasterben.pdf https://www.ysi.com/file%20library/documents/manuals/exo-user-manual-web.pdf

Turbidity		•	•	•	WET Labs ECO-FLCDS or YSI	http://wetlabs.com/sites/default/files/documents/WLECOMasterben.pdf
						https://www.yesi.com/file%20library/documents/manuals/exo-user-manual-web.pdf
Surface Dissolved Oxygen		•	•	•	Aanderaa Optode or YSI	http://ccg.sr.unh.edu/doc/oxygen-optode-4835.pdf
						https://www.yesi.com/file%20library/documents/manuals/exo-user-manual-web.pdf
Sub-surface Water Temperature		•	•	•	Seabird SBE37 or Aanderaa or YSI	http://www.seabird.com/sites/default/files/documents/37SM_rs232_039.pdf
						https://www.yesi.com/file%20library/documents/manuals/exo-user-manual-web.pdf
						http://ccg.sr.unh.edu/doc/conductivity-sensor-4319.pdf
Sub-surface Salinity		•	•	•	Seabird SBE37 or Aanderaa or YSI	http://www.seabird.com/sites/default/files/documents/37SM_rs232_039.pdf
						https://www.yesi.com/file%20library/documents/manuals/exo-user-manual-web.pdf
						http://ccg.sr.unh.edu/doc/conductivity-sensor-4319.pdf
Surface Irradiance		•			Apogee Quantum PAR	https://www.apogeeinstruments.com/content/SQ-512-515-manual.pdf
Downwelling Irradiance		•			Seabird ECOPAR	https://www.seabird.com/asset-get.download.jsa?id=54627862518
pCO2		•	•		Sunburst SAMI or Turner C-Sense	http://www.sunburstensors.com/products/oceanographic-carbon-dioxide-sensor.html
						http://docs.turnerdesigns.com/t2/doc/manuals/998-2410.pdf

University of Connecticut					
Environmental Observation	Execution Rocks (EXRX)	Western Sound (WLIS)	Central Sound (CLIS)	Equipment Manufacturer & Type	Operating Procedures (hyperlinked to asset manuals):
Wind Speed/Direction	•	•	•	R.M. Young ResponseOne 92500	https://www.youngusa.com/wp-content/uploads/2016/12/92500-90A.pdf
Barometric Pressure	•	•	•	R.M. Young ResponseOne 92500	https://www.youngusa.com/wp-content/uploads/2016/12/92500-90A.pdf
Air Temperature	•	•	•	R.M. Young ResponseOne 92500	https://www.youngusa.com/wp-content/uploads/2016/12/92500-90A.pdf
Relative Humidity	•	•	•	R.M. Young ResponseOne 92500	https://www.youngusa.com/wp-content/uploads/2016/12/92500-90A.pdf
Photosynthetically Active Radiation		•	•	Li-COR Quantum PAR 190R	https://s.campbellsci.com/documents/us/manuals/li190sb.pdf
Wave Height		•	•	Neptune Sciences Wave Module TriAxis Directional Wave Sensor Seaview Systems SVS603 HR	http://neracoos.org/sites/neracoos.org/files/documents/Appendix%20A%20-%20NDWM%20Manual%20Rev007.pdf http://neracoos.org/sites/neracoos.org/files/documents/Appendix%20B%20-TRIAXYS%20Directional%20Wave%20Sensor%20Manual.pdf
Wave Period		•	•	TriAxis Directional Wave Sensor Seaview Systems SVS603 HR	https://www.seaviewsystems.com/wp-content/uploads/2022/07/SVS-603HR-SVS-603HRB-Data-Sheet.pdf http://neracoos.org/sites/neracoos.org/files/documents/Appendix%20B%20-TRIAXYS%20Directional%20Wave%20Sensor%20Manual.pdf
Wave Direction		•	•	TriAxis Directional Wave Sensor Seaview Systems SVS603 HR	https://www.seaviewsystems.com/wp-content/uploads/2022/07/SVS-603HR-SVS-603HRB-Data-Sheet.pdf http://neracoos.org/sites/neracoos.org/files/documents/Appendix%20B%20-TRIAXYS%20Directional%20Wave%20Sensor%20Manual.pdf
Surface Water Temperature	•	•	•	Sea-Bird Electronics MicroCat 37SMP w/ Integrated Temperature	https://www.seabird.com/asset-get.download.jsa?id=54627861945
Surface Salinity	•	•	•	Sea-Bird Electronics MicroCat 37SMP w/ Integrated Conductivity	https://www.seabird.com/asset-get.download.jsa?id=54627861945
Surface Dissolved Oxygen	•	•	•	Sea-Bird Electronics MicroCat 37SMP w/ Optical DO Model 63	https://www.seabird.com/asset-get.download.jsa?id=54627861945
Mid-Depth Water Temperature	•	•		Sea-Bird Electronics MicroCat 37SMP w/ Integrated Temperature	https://www.seabird.com/asset-get.download.jsa?id=54627861945
Mid-Depth Salinity	•	•		Sea-Bird Electronics MicroCat 37SMP w/ Integrated Conductivity	https://www.seabird.com/asset-get.download.jsa?id=54627861945
Mid-Depth Dissolved Oxygen	•	•		Sea-Bird Electronics MicroCat 37SMP w/ Optical DO Model 63	https://www.seabird.com/asset-get.download.jsa?id=54627861945
Bottom Water Temperature	•	•		Sea-Bird Electronics MicroCat 37SMP w/ Integrated Temperature	https://www.seabird.com/asset-get.download.jsa?id=54627861945
Bottom Salinity	•	•		Sea-Bird Electronics MicroCat 37SMP w/ Integrated Conductivity	https://www.seabird.com/asset-get.download.jsa?id=54627861945
Bottom Dissolved Oxygen	•	•		Sea-Bird Electronics MicroCat 37SMP w/ Optical DO Model 63	https://www.seabird.com/asset-get.download.jsa?id=54627861945
Surface Nitrate		•		Sea-Bird SUNA V2	http://sea-birdcoastal.com/sites/all/modules/pubdlcnt/pubdlcnt.php?file=http://sea-birdcoastal.com/sites/default/files/documents/SUNAA160321.pdf&nid=818
Bottom pCO2		•		Sunburst SAMI	http://www.sunburstensors.com/products/oceanographic-carbon-dioxide-sensor.html
Bottom pH		•		Sea-Bird Scientific Ocean SeaFET V2	http://satlantic.com/sites/default/files/documents/SeaFET-1.2.4-Manual_0_0.pdf
Current Speed/Direction Profile	•	•	•	RDI Workhorse ADCP	http://www.moist.it/doc/RDI%20WorkHorse%20-%20Manual.pdf

Charybdis						
Environmental Observation Types	Gloucester	Scituate	Hampton	Chatham	Equipment Manufacturer & Type	Operating Procedures (hyperlinked to asset manuals):
Water Level	•	•	•		Hendress & Hauser FMR51 Microwave Radar W/ NOAA Protocol	https://portal.endress.com/wa001/dla/5000574/5162/000/04/BA01049FEN_0516.pdf
				•	Design Analysis NOAA-Nile Radar Water Level Sensor 20m Range	https://www.ysi.com/File%20Library/Documents/Manuals/Nile-Radar-Sensor-Manual--D73-05-1116.pdf
				•	Design Analysis H-3551T-50 "Smart-Gas" Bubbler System (SDI-12)	https://www.ysi.com/File%20Library/Documents/Manuals%20for%20Discontinued%20Products/h-3551t-manual--web-.pdf

Woods Hole Oceanographic Institution							
Environmental Observation Types	Race Point	Eastern Point	Fourth Cliff	Salisbury	GoM Glider Survey	Equipment Manufacturer & Type	Operating Procedures (hyperlinked to asset manuals):
13 MHz HF radar surface currents	•	•				CODAR SeaSonde	http://support.codar.com/
25 MHz HF radar surface currents			•			CODAR SeaSonde	http://support.codar.com/
5 MHz HF radar surface currents				•		CODAR SeaSonde	http://support.codar.com/
Fluorometer					•	SeaBird, Model FLNTU-SLC	https://www.seabird.com/asset-get.download.jsa?id=56310811251
Digital acoustic monitoring (DMON) instrument					•	WHOI, Model DMON2	robots4whales.whoi.edu
Glider Payload CTD					•	SeaBird, Model GPCTD	https://www.seabird.com/asset-get.download.jsa?id=54627862520

Narragansett Bay				
Environmental Observation	GSO Dock	Greenwich Bay	Equipment Manufacturer & Type	Operating Procedures (hyperlinked to asset manuals):
Nitrate			SUNA V1 Optical Nitrate Sensor	http://satlantic.com/sites/default/files/documents/SUNA-V1-Manual.pdf
Nitrate	•	•	SUNA V2 Optical Nitrate Sensor	http://satlantic.com/sites/default/files/documents/SUNA-V1-Manual.pdf
Bottom Salinity		•	YSI MultiParameter Sonde 6600	https://www.ysi.com/File%20Library/Documents/Manuals/069300-YSI-6-Series-Manual-RevJ.pdf
Bottom Dissolved Oxygen		•	YSI MultiParameter Sonde 6600	https://www.ysi.com/File%20Library/Documents/Manuals/069300-YSI-6-Series-Manual-RevJ.pdf
Bottom Temperature		•	YSI MultiParameter Sonde 6600	https://www.ysi.com/File%20Library/Documents/Manuals/069300-YSI-6-Series-Manual-RevJ.pdf
Bottom pH		•	YSI MultiParameter Sonde 6600	https://www.ysi.com/File%20Library/Documents/Manuals/069300-YSI-6-Series-Manual-RevJ.pdf
Bottom Chlorophyll		•	YSI MultiParameter Sonde 6600	https://www.ysi.com/File%20Library/Documents/Manuals/069300-YSI-6-Series-Manual-RevJ.pdf
Bottom Depth		•	YSI MultiParameter Sonde 6600	https://www.ysi.com/File%20Library/Documents/Manuals/069300-YSI-6-Series-Manual-RevJ.pdf
Surface Salinity	•	•	YSI MultiParameter Sonde 6600	https://www.ysi.com/File%20Library/Documents/Manuals/069300-YSI-6-Series-Manual-RevJ.pdf
Surface Dissolved Oxygen	•	•	YSI MultiParameter Sonde 6600	https://www.ysi.com/File%20Library/Documents/Manuals/069300-YSI-6-Series-Manual-RevJ.pdf
Surface Temperature	•	•	YSI MultiParameter Sonde 6600	https://www.ysi.com/File%20Library/Documents/Manuals/069300-YSI-6-Series-Manual-RevJ.pdf
Surface pH	•	•	YSI MultiParameter Sonde 6600	https://www.ysi.com/File%20Library/Documents/Manuals/069300-YSI-6-Series-Manual-RevJ.pdf
Surface Chlorophyll	•	•	YSI MultiParameter Sonde 6600	https://www.ysi.com/File%20Library/Documents/Manuals/069300-YSI-6-Series-Manual-RevJ.pdf
Surface Depth	•	•	YSI MultiParameter Sonde 6600	https://www.ysi.com/File%20Library/Documents/Manuals/069300-YSI-6-Series-Manual-RevJ.pdf
Surface Phosphate		•	Sea-Bird Coastal Cycle PO4	http://sea-birdcoastal.com/sites/all/modules/pubdlnet/pubdlnet.php?file=http://sea-birdcoastal.com/sites/default/files/documents/HydroCyclePO4Reva.pdf&nid=968