

Pioneer Array

P1 - EOM

Surface Expression - Type I

Instrument	Manufacturer, Model	Unit purchase costs	Location	References
Wind Speed/ Direction, Sonic	Vaisala Inc., PN 425	\$1,607	Surface	CND_Tbl_3b
Relative Humidity - Air Temp.	ASIMET/Star Engineering	\$7,752	Surface	CND_Tbl_3b
Pressure, Barometric	ASIMET/Star Engineering	\$7,477	Surface	CND_Tbl_3b
Radiometer, Short-wave	ASIMET/Star Engineering	\$9,103	Surface	CND_Tbl_3b
Radiometer, Long-wave	ASIMET/Star Engineering	\$11,246	Surface	CND_Tbl_3b
Precipitation sensor	ASIMET/Star Engineering	\$8,200	Surface	CND_Tbl_3b
CTD	Seabird SBE 37SM Temp and Salinity with Paro pressure xducer	\$6,487	Surface	CND_Tbl_3b
Current Meter, ADCP, profiling 600m range	RD Instruments Workhorse Long Ranger	\$57,261	Surface	CND_Tbl_3b
Subtotals		\$109,133		

Benthic Expression

Instrument	Manufacturer, Model	Unit purchase costs	Location	References
CTD	Seabird SBE 37SM Temp and Salinity with Paro pressure xducer	\$6,487	Benthic	CND_Tbl_3b
Oxygen (optrode)	Aanderaa Instruments OXYGEN OPTRODE 0973830	\$4,687	Benthic	CND_Tbl_3b
Fluorometer/Backscatter, Wetlabs ECO triplett	Wetlabs ECO Triplett	\$10,583	Benthic	CND_Tbl_3b
Current meter, point measurement, 3 Axis acoustic	2ACM-7000 Falmouth Scientific Inc.	\$8,171	Benthic	CND_Tbl_3b
Current Meter, ADCP, profiling, 47 meter range	RD Instruments Workhorse Sentinel	\$31,923	Benthic	CND_Tbl_3b
Subtotals		\$61,850		

Vertical Profiler System (type McLane for cost estimating)

Instrument	Manufacturer, Model	Unit purchase costs	Location	References
Profiler CTD (SeaBird/McLane)	SBE-52MP SeaBird/McLane	\$10,275	Profiler	CND_Tbl_3b
Profiler O2 (Aanderaa/McLane)	AND-OPT Aanderaa/McLane	\$6,900	Profiler	CND_Tbl_3b
Fluorometer/Backscatter, Wetlabs ECO triplett	Wetlabs ECO Triplett	\$10,583	Profiler	CND_Tbl_3b
PAR sensor	QSP-2150 Biospherical Instruments Inc.	\$1,125	Profiler	CND_Tbl_3b
Turbidity, Nephelometer, C- Star, 6000m	Wetlabs Inc. C-star transmissometer, wavelength 660nm, pathlength 25cm, 6000m housing	\$4,589	Profiler	CND_Tbl_3b
Profiler current meter (FSI/McLane)	FSI-ACM FSI/McLane	\$10,450	Profiler	CND_Tbl_3b
Subtotals		\$43,922		

Pioneer Array

P2 - EOM

Surface Expression - Type I

Instrument	Manufacturer, Model	Unit purchase costs	Location	References
Wind Speed/ Direction, Sonic	Vaisala Inc., PN 425	\$1,607	Surface	CND_Tbl_3b
Relative Humidity - Air Temp.	ASIMET/Star Engineering	\$7,752	Surface	CND_Tbl_3b
Pressure, Barometric	ASIMET/Star Engineering	\$7,477	Surface	CND_Tbl_3b
Radiometer, Short-wave	ASIMET/Star Engineering	\$9,103	Surface	CND_Tbl_3b
Radiometer, Long-wave	ASIMET/Star Engineering	\$11,246	Surface	CND_Tbl_3b
Precipitation sensor	ASIMET/Star Engineering	\$8,200	Surface	CND_Tbl_3b
CTD	Seabird SBE 37SM Temp and Salinity with Paro pressure xducer	\$6,487	Surface	CND_Tbl_3b
Current Meter, ADCP, profiling 600m range	RD Instruments Workhorse Long Ranger	\$57,261	Surface	CND_Tbl_3b
Subtotals		\$109,133		

Vertical Profiler System (type McLane for cost estimating)

Instrument	Manufacturer, Model	Unit purchase costs	Location	References
Profiler CTD (SeaBird/McLane)	SBE-52MP SeaBird/McLane	\$10,275	Profiler	CND_Tbl_3b
Profiler O2 (Aanderaa/McLane)	AND-OPT Aanderaa/McLane	\$6,900	Profiler	CND_Tbl_3b
Fluorometer/Backscatter, Wetlabs ECO triplett	Wetlabs ECO Triplet	\$10,583	Profiler	CND_Tbl_3b
PAR sensor	QSP-2150 Biospherical Instruments Inc.	\$1,125	Profiler	CND_Tbl_3b
Turbidity, Nephelometer, C-Star, 6000m	Wetlabs Inc. C-star transmissometer, wavelength 660nm, pathlength 25cm, 6000m housing	\$4,589	Profiler	CND_Tbl_3b
Profiler current meter (FSI/McLane)	FSI-ACM FSI/McLane	\$10,450	Profiler	CND_Tbl_3b
Subtotals		\$43,922		

Pioneer Array

P3 - EOM

Surface Expression - Type I

Instrument	Manufacturer, Model	Unit purchase costs	Location	References
Wind Speed/ Direction, Sonic	Vaisala Inc., PN 425	\$1,607	Surface	CND_Tbl_3b
Relative Humidity - Air Temp.	ASIMET/Star Engineering	\$7,752	Surface	CND_Tbl_3b
Pressure, Barometric	ASIMET/Star Engineering	\$7,477	Surface	CND_Tbl_3b
Radiometer, Short-wave	ASIMET/Star Engineering	\$9,103	Surface	CND_Tbl_3b
Radiometer, Long-wave	ASIMET/Star Engineering	\$11,246	Surface	CND_Tbl_3b
Precipitation sensor	ASIMET/Star Engineering	\$8,200	Surface	CND_Tbl_3b
CTD	Seabird SBE 37SM Temp and Salinity with Paro pressure xducer	\$6,487	Surface	CND_Tbl_3b
Current Meter, ADCP, profiling 600m range	RD Instruments Workhorse Long Ranger	\$57,261	Surface	CND_Tbl_3b
Subtotals		\$109,133		

Benthic Expression

Instrument	Manufacturer, Model	Unit purchase costs	Location	References
CTD	Seabird SBE 37SM Temp and Salinity with Paro pressure xducer	\$6,487	Benthic	CND_Tbl_3b
Oxygen (optrode)	Aanderaa Instruments OXYGEN OPTRODE 0973830	\$4,687	Benthic	CND_Tbl_3b
Fluorometer/Backscatter, Wetlabs ECO triplett	Wetlabs ECO Triplett	\$10,583	Benthic	CND_Tbl_3b
Current meter, point measurement, 3 Axis acoustic	2ACM-7000 Falmouth Scientific Inc.	\$8,171	Benthic	CND_Tbl_3b
Current Meter, ADCP, profiling, 47 meter range	RD Instruments Workhorse Sentinel	\$31,923	Benthic	CND_Tbl_3b
Subtotals		\$61,850		

Vertical Profiler System (type McLane for cost estimating)

Instrument	Manufacturer, Model	Unit purchase costs	Location	References
Profiler CTD (SeaBird/McLane)	SBE-52MP SeaBird/McLane	\$10,275	Profiler	CND_Tbl_3b
Profiler O2 (Aanderaa/McLane)	AND-OPT Aanderaa/McLane	\$6,900	Profiler	CND_Tbl_3b
Fluorometer/Backscatter, Wetlabs ECO triplett	Wetlabs ECO Triplett	\$10,583	Profiler	CND_Tbl_3b
PAR sensor	QSP-2150 Biospherical Instruments Inc.	\$1,125	Profiler	CND_Tbl_3b
Turbidity, Nephelometer, C- Star, 6000m	Wetlabs Inc. C-star transmissometer, wavelength 660nm, pathlength 25cm, 6000m housing	\$4,589	Profiler	CND_Tbl_3b
Profiler current meter (FSI/McLane)	FSI-ACM FSI/McLane	\$10,450	Profiler	CND_Tbl_3b
Subtotals		\$43,922		

Pioneer Array

P4 - EOM

Surface Expression - Type I

Instrument	Manufacturer, Model	Unit purchase costs	Location	References
Wind Speed/ Direction, Sonic	Vaisala Inc., PN 425	\$1,607	Surface	CND_Tbl_3b
Relative Humidity - Air Temp.	ASIMET/Star Engineering	\$7,752	Surface	CND_Tbl_3b
Pressure, Barometric	ASIMET/Star Engineering	\$7,477	Surface	CND_Tbl_3b
Radiometer, Short-wave	ASIMET/Star Engineering	\$9,103	Surface	CND_Tbl_3b
Radiometer, Long-wave	ASIMET/Star Engineering	\$11,246	Surface	CND_Tbl_3b
Precipitation sensor	ASIMET/Star Engineering	\$8,200	Surface	CND_Tbl_3b
CTD	Seabird SBE 37SM Temp and Salinity with Paro pressure xducer	\$6,487	Surface	CND_Tbl_3b
Current Meter, ADCP, profiling 600m range	RD Instruments Workhorse Long Ranger	\$57,261	Surface	CND_Tbl_3b
Subtotals		\$109,133		

Benthic Expression

Instrument	Manufacturer, Model	Unit purchase costs	Location	References
CTD	Seabird SBE 37SM Temp and Salinity with Paro pressure xducer	\$6,487	Benthic	CND_Tbl_3b
Oxygen (optrode)	Aanderaa Instruments OXYGEN OPTRODE 0973830	\$4,687	Benthic	CND_Tbl_3b
Fluorometer/Backscatter, Wetlabs ECO triplett	Wetlabs ECO Triplett	\$10,583	Benthic	CND_Tbl_3b
Current meter, point measurement, 3 Axis acoustic	2ACM-7000 Falmouth Scientific Inc.	\$8,171	Benthic	CND_Tbl_3b
Current Meter, ADCP, profiling, 47 meter range	RD Instruments Workhorse Sentinel	\$31,923	Benthic	CND_Tbl_3b
Subtotals		\$61,850		

Vertical Profiler System (type McLane for cost estimating)

Instrument	Manufacturer, Model	Unit purchase costs	Location	References
Profiler CTD (SeaBird/McLane)	SBE-52MP SeaBird/McLane	\$10,275	Profiler	CND_Tbl_3b
Profiler O2 (Aanderaa/McLane)	AND-OPT Aanderaa/McLane	\$6,900	Profiler	CND_Tbl_3b
Fluorometer/Backscatter, Wetlabs ECO triplett	Wetlabs ECO Triplett	\$10,583	Profiler	CND_Tbl_3b
PAR sensor	QSP-2150 Biospherical Instruments Inc.	\$1,125	Profiler	CND_Tbl_3b
Turbidity, Nephelometer, C- Star, 6000m	Wetlabs Inc. C-star transmissometer, wavelength 660nm, pathlength 25cm, 6000m housing	\$4,589	Profiler	CND_Tbl_3b
Profiler current meter (FSI/McLane)	FSI-ACM FSI/McLane	\$10,450	Profiler	CND_Tbl_3b
Subtotals		\$43,922		

Pioneer Array

PM1 - Profiler

Vertical Profiler System (type McLane for cost estimating)

Instrument	Manufacturer, Model	Unit purchase costs	Location	References
Profiler CTD (SeaBird/McLane)	SBE-52MP SeaBird/McLane	\$10,275	Profiler	CND_Tbl_3b
Profiler O2 (Aanderaa/McLane)	AND-OPT Aanderaa/McLane	\$6,900	Profiler	CND_Tbl_3b
Fluorometer/Backscatter, Wetlabs ECO triplett	Wetlabs ECO Triplett	\$10,583	Profiler	CND_Tbl_3b
PAR sensor	QSP-2150 Biospherical Instruments Inc.	\$1,125	Profiler	CND_Tbl_3b
Turbidity, Nephelometer, C-Star, 6000m	Wetlabs Inc. C-star transmissometer, wavelength 660nm, pathlength 25cm, 6000m housing	\$4,589	Profiler	CND_Tbl_3b
Profiler current meter (FSI/McLane)	FSI-ACM FSI/McLane	\$10,450	Profiler	CND_Tbl_3b
Subtotals		\$43,922		

Pioneer Array

PM2 - Profiler

Vertical Profiler System (type McLane for cost estimating)

Instrument	Manufacturer, Model	Unit purchase costs	Location	References
Profiler CTD (SeaBird/McLane)	SBE-52MP SeaBird/McLane	\$10,275	Profiler	CND_Tbl_3b
Profiler O2 (Aanderaa/McLane)	AND-OPT Aanderaa/McLane	\$6,900	Profiler	CND_Tbl_3b
Fluorometer/Backscatter, Wetlabs ECO triplett	Wetlabs ECO Triplett	\$10,583	Profiler	CND_Tbl_3b
PAR sensor	QSP-2150 Biospherical Instruments Inc.	\$1,125	Profiler	CND_Tbl_3b
Turbidity, Nephelometer, C-Star, 6000m	Wetlabs Inc. C-star transmissometer, wavelength 660nm, pathlength 25cm, 6000m housing	\$4,589	Profiler	CND_Tbl_3b
Profiler current meter (FSI/McLane)	FSI-ACM FSI/McLane	\$10,450	Profiler	CND_Tbl_3b
Subtotals		\$43,922		

Pioneer Array Instrument Spares

Surface Expression - Type I

Instrument	Manufacturer, Model	Unit purchase costs	Location	References
Wind Speed/ Direction, Sonic	Vaisala Inc., PN 425	\$1,607	Surface	CND_Tbl_3b
Relative Humidity - Air Temp.	ASIMET/Star Engineering	\$7,752	Surface	CND_Tbl_3b
Pressure, Barometric	ASIMET/Star Engineering	\$7,477	Surface	CND_Tbl_3b
Radiometer, Short-wave	ASIMET/Star Engineering	\$9,103	Surface	CND_Tbl_3b
Radiometer, Long-wave	ASIMET/Star Engineering	\$11,246	Surface	CND_Tbl_3b
Precipitation sensor	ASIMET/Star Engineering	\$8,200	Surface	CND_Tbl_3b
CTD	Seabird SBE 37SM Temp and Salinity with Paro pressure xducer	\$6,487	Surface	CND_Tbl_3b
Current Meter, ADCP, profiling 600m range	RD Instruments Workhorse Long Ranger	\$57,261	Surface	CND_Tbl_3b
Subtotals		\$109,133		

Benthic Expression

Instrument	Manufacturer, Model	Unit purchase costs	Location	References
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Fluorometer/Backscatter, Wetlabs ECO triplett	Wetlabs ECO Triplett	\$10,583	Benthic	CND_Tbl_3b
Current meter, point measurement, 3 Axis acoustic	2ACM-7000 Falmouth Scientific Inc.	\$8,171	Benthic	CND_Tbl_3b
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Profiler O2 (Aanderaa/McLane)	AND-OPT Aanderaa/McLane	\$6,900	Profiler	CND_Tbl_3b
Fluorometer/Backscatter, Wetlabs ECO triplett	Wetlabs ECO Triplett	\$10,583	Profiler	CND_Tbl_3b
PAR sensor	QSP-2150 Biospherical Instruments Inc.	\$1,125	Profiler	CND_Tbl_3b
Turbidity, Nephelometer, C- Star, 6000m	Wetlabs Inc. C-star transmissometer, wavelength 660nm, pathlength 25cm, 6000m housing	\$4,589	Profiler	CND_Tbl_3b
Profiler current meter (FSI/McLane)	FSI-ACM FSI/McLane	\$10,450	Profiler	CND_Tbl_3b
Subtotals		\$43,922		