

<b>SHIPBOARD SCIENTIFIC SUPPORT EQUIPMENT (SSSE)</b>
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**I. Deck Equipment**

A. Winch monitoring System Up-grades for R/V EXPEDITION System no longer meets current standards.	\$25,500
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**II. Navigation Equipment & Communications Equipment**

A. Replacement DP system for R/V <i>WAVERUNNER</i> Existing system is obsolete and requires repair parts that are no longer manufactured.	\$232,600
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B. Back-up RADAR for R/V <i>MARINER</i> Present unit is unreliable and beyond economical repair.	\$18,000
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**III. Safety Equipment**

A. <i>[NONE]</i>	\$0
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**IV. Other Equipment & Support**

A. A-frame capacity engineering study for R/V <i>WAVERUNNER</i> NSF Inspection Recommendation for RVSS compliance	\$29,500
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**TOTAL REQUEST \$305,600**

<b>SHIPBOARD SCIENTIFIC SUPPORT EQUIPMENT (SSSE)</b>
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**I. Deck Equipment**A. Winch monitoring System Up-grades for R/V *EXPEDITION*

Monitoring system and displays	\$19,500
Cabling and supplies	\$2,500
Installation (Equipment Vendor)	\$3,500
<b>Sub-Total</b>	<b>\$25,500</b>

**II. Navigation Equipment & Communications Equipment**A. Replacement DP system for R/V *WAVERUNNER*

Rite-On-Station Model 4200 DP system	\$200,000
Console Modifications	\$2,000
Propulsion interface components	\$7,600
Installation and Commissioning Support	\$23,000
<b>Sub-Total</b>	<b>\$232,600</b>

B. Back-up RADAR for R/V *MARINER*

New RADAR unit (make/model TBD) and antenna	\$18,000
Installation (by institutional staff)	\$0
<b>Sub-Total</b>	<b>\$18,000</b>

**III. Safety Equipment**A. *[NONE]*

	\$0
<b>Sub-Total</b>	<b>\$0</b>

**IV. Other Equipment & Support**A. A-frame capacity engineering study for R/V *WAVERUNNER*

Engineering services (including FEA)	\$25,000
Indirect Cost (16%)	\$4,500
<b>Sub-Total</b>	<b>\$29,500</b>

**TOTAL \$305,600**

**EQUIPMENT POOL BUDGET TABLES**

**TABLE 1: CY 20XX Actual Expenses**

**Pool Manager (Name)**

Salary (XX%)	\$20,000	<i>Indicate % effort spent on Pool</i>
Fringes	\$8,000	
<b>Sub-Total</b>	<b>\$28,000</b>	

**Other Personnel**

Salaries	\$8,000	<i>Support personnel not otherwise included in equipment daily rates</i>
Fringes	\$4,000	<i>Provide separate detailed tables in proposal or list here as appropriate</i>
<b>Sub-Total</b>	<b>\$12,000</b>	

**Travel**

Domestic	\$2,000
Foreign	\$0
<b>Sub-Total</b>	<b>\$2,000</b>

**MMRA**

**\$41,440** *Actual usage revenue from Table 1A. Grant should be charge the daily rates for transfer to the MMR Account.*

**Specialized Services**

*Items not included in daily rate calculations (Varies based on pool requirements)*

Kit #1 Testing & Evaluation	\$2,895
Engineering Design Support	10,000
<b>Sub-Total</b>	<b>\$12,895</b>

**Logistics**

Shipping	\$20,349	<i>From Institution accounting. Should match "actuals" on next sheet</i>
Crane	\$2,500	
Other	\$0	
<b>Sub-Total</b>	<b>\$22,849</b>	

**Major Upgrades and Repairs**

Site Improvements	\$25,000
Kit #3 Sensor Up-grades	\$30,000
<b>Sub-Total</b>	<b>\$55,000</b>

**Capital Equipment Purchases**

	\$0
<b>Sub-Total</b>	<b>\$0</b>

<b>Total Direct</b>	<b>\$174,184</b>
<b>Total Indirect</b>	<b>\$10,400</b>
<b>Total Direct and Indirect</b>	<b>\$184,584</b>

*Based on Institutional policy. Describe in proposal text*

CY 20XX NSF Award	\$164,000
CY 20XX - 1 NSF CF	\$15,786
Total CY 20XX NSF Revenue	\$179,786
Other Revenue	\$9,595
<b>Total Revenue</b>	<b>\$189,381</b>

*This can be either positive or negative depending on actuals for previous year*

*Other users billed at actual cost as shown on next sheet*

<b>Total Revenue</b>	<b>\$189,381</b>
CY (XX) Residual Funds	\$4,797

*Revenue less Expenses. If positive, use residual funds to reduce next year's request, or use to make needed up-grades/improvements in the current year with approval from the NSF Program Officer.*

**TABLE 1A: CY 20XX Details****NSF Requests**

	Equipment	Days	Rate (\$/day)	Rental Cost	Shipping	Crane	Other	Total
PI/Ship	Kit #1	60	\$112	\$6,720	\$765	\$750	\$0	\$8,235
PI/Ship	Kit #2	120	\$168	\$20,160	\$2,775	\$790	\$0	\$23,725
Polar Programs/HEALY	Kit #3	60	\$168	\$10,080	\$12,654	\$0	\$0	\$22,734
	<b>Totals</b>	240		\$36,960	\$16,194	\$1,540	\$0	<b>\$54,694</b>

**Other Agency Requests**

	Equipment	Days	Rate (\$/day)	Rental Cost	Shipping	Crane	Other	Total
NOAA/Ship	Kit #1	25	\$112	\$2,800	\$2,790	\$0	\$0	\$5,590
ONR/Ship	Kit #3	10	\$168	\$1,680	\$1,365	\$960	\$0	\$4,005
	<b>Totals</b>	35		\$4,480	\$4,155	\$960	\$0	<b>\$9,595</b>

Total Usage Revenue	\$41,440
Total Estimated MOSA Costs	\$56,000
Total Actual MOSA Costs	\$61,192

**TABLE 2: CY 20XX +1 Estimate****Pool Manager (Name)**

Salary (XX%)	\$22,000
Fringes	\$8,500
<b>Sub-Total</b>	<b>\$30,500</b>

**Other Personnel**

Salaries	\$10,000
Fringes	\$5,000
<b>Sub-Total</b>	<b>\$15,000</b>

**Travel**

Domestic	\$2,700
Foreign	\$0
<b>Sub-Total</b>	<b>\$2,700</b>

**MMRA****\$34,496** *From estimated usage Table 2A***Specialized Services**

Kit #3 Sea Trials Support (Vessel Charter)	\$5,500
Engineering Design Support	\$15,000
<b>Sub-Total</b>	<b>\$20,500</b>

**Logistics**

Shipping	\$22,700
Crane	\$2,500
Other	\$800
<b>Sub-Total</b>	<b>\$26,000</b>

*Must equal sum of figures on Table 2A***Major Upgrades and Repairs**

New widget on Kit #1	\$4,500
Repairs to Kit #2 (Shipping Damage)	\$6,000
Site electric service up-grades	\$15,000
<b>Sub-Total</b>	<b>\$25,500</b>

**Capital Equipment Purchases**

New Kit #4	\$100,000
<b>Sub-Total</b>	<b>\$100,000</b>

<b>Total Direct</b>	<b>\$254,696</b>
<b>Total Indirect</b>	<b>\$11,830</b>
<b>Total Direct and Indirect</b>	<b>\$266,526</b>

*Based on Institutional policy*

Other Revenue	\$25,256	<i>Other users billed at actual cost as shown on Table 2A</i>
CY XX Residual Funds	\$4,797	<i>See CY 20XX Actuals (Table 1)</i>

<b>CY XX +1 Request</b>	<b>\$236,473</b>	<b>Total Direct and Indirect - (Other Revenue) - (Residual Funds)</b>
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**TABLE 2A: CY 20XX +1 Details****NSF Requests**

	Equipment	Days	Rate (\$/day)	Cost	Shipping	Crane	Other	Total
PI/Ship	Kit #1	15	\$112	\$1,680	\$800	\$0	\$0	\$2,480
PI/Ship	Kit #2	35	\$168	\$5,880	\$2,500	\$500	\$800	\$9,680
Polar Programs/HEALY	Kit #3	60	\$168	\$10,080	\$12,000	\$1,000	\$0	\$23,080
	<b>Totals</b>	110		\$17,640	\$15,300	\$1,500	\$800	<b>\$35,240</b>

**Other Agency Requests**

	Equipment	Days	Rate (\$/day)	Cost	Shipping	Crane	Other	Total
NOAA/Ship	Kit #2	95	\$168	\$15,960	\$2,400	\$1,000	\$0	\$19,360
ONR/Ship	Kit #5	12	\$75	\$896	\$5,000	\$0	\$0	\$5,896
	<b>Totals</b>	107		\$16,856	\$7,400	\$1,000	\$0	<b>\$25,256</b>

**Equipment Pool Maintenance and Minor Repair Account (MMRA)**

	Year 1		Year 2		Year 3		Year 4		Year 5	
	Estimate	Actual	Estimate	Actual	Estimate	Actual	Estimate	Actual	Estimate	Actual
Kit #1	\$5,000	\$3,467	\$5,000		\$5,000		\$5,000		\$25,000	
Kit #2	\$10,000	\$8,970	\$10,000		\$100,000		\$10,000		\$10,000	
Kit #3	\$2,500	\$2,768	\$2,500		\$2,500		\$2,500		\$2,500	
Kit #4	\$2,500	\$0	\$2,500		\$2,500		\$2,500		\$2,500	
Kit #5	\$50,000	\$45,987	\$5,000		\$5,000		\$5,000		\$5,000	
Total	\$70,000	\$61,192	\$25,000		\$115,000		\$25,000		\$45,000	
<b>Ave Estimated Cost per Year</b>	<b>\$56,000</b>	<i>Note: This average is only used to calculate the daily rates below for the 5-year cycle</i>								
Actual MMRA Revenue (From Table 1A)		\$41,440								
Cumulative Balance		-\$19,752								

Total Annual Estimate (Above)		<b>\$56,000</b>		
Equipment Description	%	Yearly Estimated Cost	Ave. Use (days)	Daily Rate
Kit #1	20	\$11,200	100	\$112
Kit #2	30	\$16,800	100	\$168
Kit #3	15	\$8,400	50	\$168
Kit #4	15	\$8,400	50	\$168
Kit #5	20	\$11,200	150	\$75
	100	\$56,000		

*Note 1: The intent of this account is to allow the rates for smaller, pooled equipment to be smoothed over time since some equipment may see minimal usage in one year and extensive use in another depending on science demands. Without it, rates would fluctuate so widely that it would be impossible for users to plan budgets. It also allows pooling of maintenance funds to be used on the total suite of equipment as needed. Use of rates is considered essential to spread maintenance costs between all users.*

*Note 2: At the end of each 5-year cycle, the account is zeroed out by performing any remaining needed maintenance (if positive) or through a supplemental request (if negative). Rates for the next 5-year cycle are then adjusted/refined based on historic figures from the past 5-year cycle.*

*Note 3: Initial yearly maintenance amounts are estimated by Pool Manager at Year 1 submittal (based on history and/or experience). Amounts change from estimates to actuals as Yrs 2 - 5 proceed. % is allocated by the Pool Manager based on equipment size & complexity and then used to calculate the daily rates.*