



IODP
INTEGRATED OCEAN
DRILLING PROGRAM

INTEGRATED OCEAN DRILLING PROGRAM
United States Implementing Organization

Consortium for Ocean Leadership, Inc.
Lamont-Doherty Earth Observatory of Columbia University
Texas A&M University

FY12 ANNUAL PROGRAM PLAN
to IODP-MI

For Time Period
1 October 2011 to 30 September 2012

Amount Proposed FY12: \$71,147,513 (SOC and POC)
Amount Proposed FY12: \$4,196,305 (SOC)
Amount Proposed FY12: \$66,951,209 (POC)



Integrated Ocean Drilling Program
United States Implementing Organization

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Respectfully Submitted to:
IODP Management International, Inc.



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1. INTRODUCTION

1.1. ANNUAL PROGRAM PLAN OVERVIEW

The USIO FY12 Annual Program Plan to Integrated Ocean Drilling Program Management International, Inc. (IODP-MI) defines the U.S. Implementing Organization (USIO) scope of work for Integrated Ocean Drilling Program (IODP) activities and deliverables for the FY12 fiscal year. It is based on (1) the current mission forecast provided on 29 April 2011 for the USIO by the U.S. National Science Foundation (NSF), (2) the USIO operations schedule that was approved by the Operations Task Force (OTF) and Science Planning Committee in August 2010, and (3) the 18 and 19 June 2011 OTF and 23 June 2011 IODP Council approval for platform operating costs for an additional expedition to be supported through commingled funds from IODP-MI. The USIO recognizes that the complex nature of IODP operations will require Annual Program Plans spanning operational years to establish priorities and to allow the procurement of long-lead time equipment and services.

In FY04, the Consortium for Ocean Leadership, Inc. (Ocean Leadership), then known as Joint Oceanographic Institutions, established subcontracts with the College of Geosciences at Texas A&M University (TAMU) through the Texas A&M Research Foundation (TAMRF) and with the Lamont-Doherty Earth Observatory (LDEO) of Columbia University, formally establishing the USIO.¹ In FY05, Ocean Leadership established a contract with IODP-MI for the science operating costs (SOC) of the USIO, which complemented the contract with NSF for platform operating costs (POC). Under guidance from NSF and IODP-MI, the USIO FY12 Annual Program Plan to IODP-MI was developed in consultation with the USIO subcontractors for inclusion in the IODP FY12 Annual Program Plan.

IODP-MI, with input from IODP funding agencies, provided guidance and instruction to the USIO on preparation of the USIO contribution to the IODP FY12 Annual Program Plan. The USIO FY12 Annual Program Plan to IODP-MI includes a discussion of the goals of the USIO, all responsibilities and deliverables, the operational schedule, definitions of projects, and the USIO organizational structure for all science operations and platform operations activities. Also included are the required budgets that incorporate funding allocations from IODP-MI for science operations and funding allocations from NSF for platform operations. These budget requests relate to the contractual relationships and fiscal reporting structure of the USIO as presented in quarterly reports delivered by the USIO.

In addition to the institutional summary provided in the Executive Summary, USIO tasks and budgets specific to IODP-MI-supported activities are addressed in Sections 5–12 of this Annual Program Plan. Section 2 provides budget summary tables, Section 3 describes the organizational structure of the USIO as it relates to all USIO activities, and Section 4 describes scheduled expedition operations.

On behalf of the USIO and as outlined in this Annual Program Plan, TAMRF has contracted with Overseas Drilling Limited (ODL) for the services of the *RV JOIDES Resolution*. In support of the drilling vessel and with the approval of NSF and IODP-MI, the USIO will provide an array of science, operations, logging, engineering, information technology, technical, and publication services; laboratory facilities; core repositories; and administrative services necessary to support

¹ In this document, references to TAMU include TAMRF.

IODP. In addition, LDEO has contracted with Schlumberger Technology Corporation for provision of downhole logging equipment and engineering support.

1.2. USIO FY12 ACTIVITIES

1.2.1. Summary of FY12 USIO Scope

The scope of activities associated with initial planning and preparation of IODP expeditions is similar to early IODP activities in terms of deliverables, challenges, and risks. In addition, the USIO will also carry out the postexpedition activities related to IODP expeditions and ongoing operational tasks (e.g., completing reports and legacy documentation), completing work for all the implementing organizations (IOs) (e.g., producing scientific publications), conducting long-lead planning work in preparation for expeditions scheduled for future fiscal years, and providing all necessary environmental assessments for IODP expeditions conducted by the USIO.

1.3. USIO BUDGET DEFINITIONS

1.3.1. FY12 USIO Budget Assumptions

The USIO has provided our best-effort estimate of FY12 costs in this plan. If additional funds are identified or cost avoidances gained during the fiscal year, the USIO may use them to purchase data management system equipment, drilling or science supplies, or high-priority capital replacement items in support of USIO deliverables. In addition, assumptions about the operations schedule are outlined in the “Expedition Operations” chapter.

Fuel price volatility is a major risk factor for completion of the scheduled operations. Assumptions were made using the best available data to determine a prudent estimate for FY12 fuel costs; however, market conditions are subject to fluctuations that may result in a need for supplemental funding during the period of operations.

1.3.2. USIO Budget Structure

The USIO budget request is partitioned into two programmatic categories: (1) USIO SOC in a budget submitted to IODP-MI for approval, and (2) USIO Systems Integration Contract (SIC) costs in a budget submitted to NSF for approval. The SIC budget includes all POC and other Program integration costs (OPIC) in support of maintaining U.S. capability for continued scientific ocean drilling in IODP.

The USIO cost breakdown for FY12 is a request to IODP-MI for \$4,196,305 in SOC expenses and a request to NSF for \$66,951,209 in POC expenses for all other USIO operations (submitted in the FY12 Annual Program Plan to NSF).

2. FY12 USIO BUDGET SUMMARY TABLES

2.1. INTRODUCTION

The budget summaries and detailed budgets in this section describe the overall USIO FY12 SOC and POC requests to IODP-MI and NSF. This information is given to provide a framework for interpreting fiscal data in quarterly reports delivered by the USIO.

In Section 2.2. FY12 USIO SOC/POC WBE Budget Summary, the line-item total requested for each work breakdown element (WBE) is defined as the total of both the direct and indirect costs for that element. These costs are then separated out into total direct costs and indirect costs and administrative fees in summary totals that add up to the “grand total” for SOC and POC. Ocean Leadership and LDEO calculate indirect costs on a percentage of the direct costs using formulas described in the “Budget” subsections of each WBE section of this Annual Program Plan. The TAMU budget is structured with a single administrative fee that can be found in the Management and Administration element budget.

Section 2.3. FY12 USIO SOC/POC WBE Budget Detail provides an integrated view of all the budget requests detailed in the WBE sections of the IODP-USIO FY12 Annual Program Plan to IODP-MI. The detailed budget justification for these requests can be found in Sections 5–12 of this Annual Program Plan.

Section 2.4. USIO Budget Three-Year View provides a comparison of FY12 budget requests to FY10 and FY11 costs, showing costs broken down by WBE and expense category.

2.2. FY12 USIO SOC/POC WBE BUDGET SUMMARY

Element	SOC	POC	Total
Management and Administration	657,926	3,961,293	4,619,219
Technical, Engineering, and Science Support	427,435	60,470,125	60,897,560
Engineering Development	57,999	99,750	157,749
Core Curation	391,862	124,288	516,150
Data Management	1,058,768	2,182,956	3,241,724
Publications	1,503,852	112,797	1,616,649
Education	0	0	0
Outreach	98,463	0	98,463
Total FY12 USIO SOC/POC Budget	\$4,196,305	\$66,951,209	\$71,147,513
Total Direct Costs	3,673,263	65,348,970	69,022,233
Indirect Costs and Administrative Fees	523,042	1,602,239	2,125,280
Grant Total FY12 USIO SOC/POC Budget	\$4,196,305	\$66,951,209	\$71,147,513

Notes: Ocean Leadership Indirect Costs are included in the Management and Administration (M&A) and Outreach elements. LDEO Indirect Costs are included in the M&A; Technical, Engineering, and Science Support; and Data Management elements. The TAMU Administrative Fee is included in the M&A element.

2.3. FY12 USIO SOC/POC WBE BUDGET DETAIL

Element/Expense Category	SOC	POC	Total
Management and Administration			
Salaries and Fringes	361,573	2,615,164	2,976,737
Travel	32,410	229,009	261,419
Supplies	6,450	39,100	45,550
Shipping	2,221	8,279	10,500
Communication	10,890	45,990	56,880
Contractual Services	0	30,000	30,000
Equipment	0	0	0
Other Direct Costs	6,885	119,825	126,710
Total Direct Costs	420,429	3,087,367	3,507,796
Modified Total Direct Costs (if applicable)	74,340	483,616	557,956
Indirect Costs or Administrative Fees	237,497	873,926	1,111,423
Total Management and Administration	\$657,926	\$3,961,293	\$4,619,219
Technical, Engineering, and Science Support			
Salaries and Fringes	226,082	6,953,729	7,179,811
Travel	47,603	1,147,361	1,194,964
Supplies	2,000	1,897,450	1,899,450
Shipping	4,397	1,098,887	1,103,284
Communication	1,960	322,450	324,410
Contractual Services	0	3,927,042	3,927,042
Equipment	0	1,717,680	1,717,680
Other Direct Costs	2,350	42,933,655	42,936,005
Day Rate	0	30,185,638	30,185,638
Fuel and Lubricants	0	6,887,250	6,887,250
Per Diem	0	500,510	500,510
Port Calls	0	1,273,000	1,273,000
Insurance	0	1,791,552	1,791,552
Travel—ODL	0	1,050,000	1,050,000
Other	2,350	1,245,705	1,248,055
Total Direct Costs	284,392	59,998,254	60,282,646
Modified Total Direct Costs (if applicable)	269,892	890,323	1,160,215
Indirect Costs or Administrative Fees	143,043	471,871	614,914
Total Technical, Engineering, and Science Support	\$427,435	\$60,470,125	\$60,897,560
Engineering Development			
Salaries and Fringes	21,940	0	21,940
Travel	10,968	44,000	54,968
Supplies	5,000	3,000	8,000
Shipping	0	0	0
Communication	0	3,000	3,000
Contractual Services	0	25,000	25,000
Equipment	0	0	0
Other Direct Costs	0	0	0
Total Direct Costs	37,908	75,000	112,908
Modified Total Direct Costs (if applicable)	37,908	0	37,908
Indirect Costs or Administrative Fees	20,091	24,750	44,841
Total Engineering Development	\$57,999	\$99,750	\$157,749

Note: Other Direct Costs subcategories are shown on the detailed work breakdown element budgets.
(Continued on next two pages.)

FY12 USIO SOC/POC WBE BUDGET DETAIL (CONTINUED)

Element/Expense Category	SOC	POC	Total
Core Curation			
Salaries and Fringes	279,000	86,000	365,000
Travel	48,000	16,000	64,000
Supplies	15,000	5,000	20,000
Shipping	18,750	6,250	25,000
Communication	2,625	875	3,500
Contractual Services	0	0	0
Equipment	0	0	0
Other Direct Costs	28,487	10,163	38,650
Total Direct Costs	391,862	124,288	516,150
Modified Total Direct Costs (if applicable)	0	0	0
Indirect Costs or Administrative Fees	0	0	0
Total Core Curation	\$391,862	\$124,288	\$516,150
Data Management			
Salaries and Fringes	667,404	1,279,830	1,947,234
Travel	42,726	95,980	138,706
Supplies	29,190	56,410	85,600
Shipping	1,165	1,835	3,000
Communication	9,135	22,445	31,580
Contractual Services	0	0	0
Equipment	69,598	189,114	258,712
Other Direct Costs	141,570	305,650	447,220
Total Direct Costs	960,788	1,951,264	2,912,052
Modified Total Direct Costs (if applicable)	184,867	437,155	622,022
Indirect Costs or Administrative Fees	97,980	231,692	329,672
Total Data Management	\$1,058,768	\$2,182,956	\$3,241,724
Publications			
Salaries and Fringes	1,346,202	92,797	1,438,999
Travel	40,000	20,000	60,000
Supplies	36,500	0	36,500
Shipping	27,600	0	27,600
Communication	8,000	0	8,000
Contractual Services	0	0	0
Equipment	0	0	0
Other Direct Costs	45,550	0	45,550
Total Direct Costs	1,503,852	112,797	1,616,649
Modified Total Direct Costs (if applicable)	0	0	0
Indirect Costs or Administrative Fees	0	0	0
Total Publications	\$1,503,852	\$112,797	\$1,616,649

(Continued on next page.)

FY12 USIO SOC/POC WBE BUDGET DETAIL (CONTINUED)

Element/Expense Category	SOC	POC	Total
Education			
Salaries and Fringes	0	0	0
Travel	0	0	0
Supplies	0	0	0
Shipping	0	0	0
Communication	0	0	0
Contractual Services	0	0	0
Equipment	0	0	0
Other Direct Costs	0	0	0
Total Direct Costs	0	0	0
Modified Total Direct Costs (if applicable)	0	0	0
Indirect Costs or Administrative Fees	0	0	0
Total Education	\$0	\$0	\$0
Outreach			
Salaries and Fringes	33,132	0	33,132
Travel	12,500	0	12,500
Supplies	3,400	0	3,400
Shipping	2,800	0	2,800
Communication	500	0	500
Contractual Services	21,700	0	21,700
Equipment	0	0	0
Other Direct Costs	0	0	0
Total Direct Costs	74,032	0	74,032
Modified Total Direct Costs (if applicable)	0	0	0
Indirect Costs or Administrative Fees	24,431	0	24,431
Total Outreach	\$98,463	\$0	\$98,463
Grand Total Direct Costs	3,673,263	65,348,970	69,022,233
Grand Total Indirect Costs/Administrative Fee	523,042	1,602,239	2,125,280
TOTAL FY12 SOC/POC BUDGET	\$4,196,305	\$66,951,209	\$71,147,513

2.4. USIO BUDGET THREE-YEAR VIEW

Work Breakdown Element	Expense Category	FY10 Breakdown				FY11 Breakdown				FY12 Breakdown			
		Budget	%	POC	SOC	Budget	%	POC	SOC	Budget	%	POC	SOC
Management and Administration	Salaries and Fringe	2,939,153	83.56%	88.49%	11.51%	2,965,305	83.46%	88.17%	11.83%	2,976,737	84.86%	87.85%	12.15%
	Travel	287,605	8.18%	85.78%	14.22%	294,351	8.28%	88.20%	11.80%	261,419	7.45%	87.60%	12.40%
	Other Direct Costs	290,600	8.26%	89.01%	10.99%	293,324	8.26%	88.91%	11.09%	269,640	7.69%	90.19%	9.81%
	Subtotal	\$3,517,358	100.00%	88.31%	11.69%	\$3,552,980	100.00%	88.24%	11.76%	\$3,507,796	100.00%	88.01%	11.99%
Technical, Engineering, and Science Services	Salaries and Fringe	6,507,292	11.49%	96.87%	3.13%	6,773,208	11.91%	96.59%	3.41%	7,179,811	11.91%	96.85%	3.15%
	Day Rate	29,637,170	52.33%	100.00%	0.00%	29,673,500	52.18%	100.00%	0.00%	30,185,638	50.07%	100.00%	0.00%
	Contractual Services	3,744,292	6.61%	100.00%	0.00%	3,850,292	6.77%	100.00%	0.00%	3,927,042	6.51%	100.00%	0.00%
	Supplies	2,594,675	4.58%	99.81%	0.19%	2,306,202	4.06%	99.91%	0.09%	1,899,450	3.15%	99.89%	0.11%
	Other Direct Costs	14,152,545	24.99%	99.87%	0.13%	14,267,970	25.09%	99.55%	0.45%	17,090,705	28.35%	99.67%	0.33%
	Subtotal	\$56,635,974	100.00%	99.60%	0.40%	\$56,871,172	100.00%	99.48%	0.52%	\$60,282,646	100.00%	95.68%	4.32%
Engineering Development	Salaries and Fringe	0	0.00%	0.00%	0.00%	50,269	79.65%	0.00%	100.00%	21,940	19.43%	0.00%	100.00%
	Other Direct Costs	0	0.00%	0.00%	0.00%	12,847	20.35%	0.00%	100.00%	90,968	80.57%	82.45%	17.55%
	Subtotal	\$0	0.00%	0.00%	0.00%	\$63,116	100.00%	0.00%	100.00%	\$112,908	100.00%	66.43%	33.57%
Core Curation	Salaries and Fringe	393,500	69.67%	27.19%	72.81%	361,500	78.54%	23.62%	76.38%	365,000	70.72%	23.56%	76.44%
	Other Direct Costs	171,327	30.33%	14.79%	85.21%	98,800	21.46%	25.00%	75.00%	151,150	29.28%	25.33%	74.67%
	Subtotal	\$564,827	100.00%	23.43%	76.57%	\$460,300	100.00%	23.91%	76.09%	\$516,150	100.00%	24.08%	75.92%
Data Management	Salaries and Fringe	1,764,394	63.07%	65.97%	34.03%	1,862,420	69.45%	65.51%	34.49%	1,947,234	66.87%	65.73%	34.27%
	Other Direct Costs	1,033,114	36.93%	64.63%	35.37%	819,348	30.55%	69.38%	30.62%	964,818	33.13%	69.59%	30.41%
	Subtotal	\$2,797,508	100.00%	65.48%	34.52%	\$2,681,768	100.00%	66.69%	33.31%	\$2,912,052	100.00%	67.01%	32.99%
Publications	Salaries and Fringe	1,350,500	88.38%	4.81%	95.19%	1,387,000	89.31%	4.61%	95.39%	1,438,999	89.01%	6.45%	93.55%
	Other Direct Costs	177,613	11.62%	10.98%	89.02%	166,000	10.69%	18.07%	81.93%	177,650	10.99%	11.26%	88.74%
	Subtotal	\$1,528,113	100.00%	5.53%	94.47%	\$1,553,000	100.00%	6.05%	93.95%	\$1,616,649	100.00%	6.98%	93.02%
Education	Salaries and Fringe	0	0.00%	0.00%	0.00%	0	0.00%	0.00%	0.00%	0	0.00%	0.00%	0.00%
	Other Direct Costs	0	0.00%	0.00%	0.00%	0	0.00%	0.00%	0.00%	0	0.00%	0.00%	0.00%
	Subtotal	\$0	0.00%	0.00%	0.00%	\$0	0.00%	0.00%	0.00%	\$0	0.00%	0.00%	0.00%
Outreach	Salaries and Fringe	29,774	69.61%	0.00%	100.00%	30,545	42.44%	0.00%	100.00%	33,132	44.75%	0.00%	100.00%
	Other Direct Costs	13,000	30.39%	0.00%	100.00%	41,432	57.56%	0.00%	100.00%	40,900	55.25%	0.00%	100.00%
	Subtotal	\$42,774	100.00%	0.00%	100.00%	\$71,977	100.00%	0.00%	100.00%	\$74,032	100.00%	0.00%	100.00%
Total Direct Costs		\$65,086,554				\$65,254,313				\$69,022,233			

3. ORGANIZATIONAL STRUCTURE

3.1. INTRODUCTION

Ocean Leadership has subcontracts with LDEO and with TAMU (through TAMRF) that formally establish the USIO for IODP. The USIO carries out all of its IODP deliverables through contracts with IODP-MI for science operating costs and with NSF for platform operating costs. On behalf of the USIO, and as outlined in this Annual Program Plan, TAMRF has contracted with ODL for the services of the scientific ocean drilling vessel *JOIDES Resolution* for use as the USIO riserless drilling vessel. In addition, LDEO has contracted with Schlumberger for the provision of downhole logging equipment and engineering support.

The organizational structure employed by the USIO is designed to mirror the WBE accounting structure used by IODP and allows the USIO to effectively and efficiently carry out the mission of the USIO. This structure also aligns the organization to efficiently and economically provide the full array of science, operations, logging, engineering, information technology, technical, and publications services; laboratory facilities; core repositories; and administrative services deliverables.

3.2. USIO FTE ALLOCATION TABLES

The full-time equivalent (FTE) allocation tables present an accounting of the cumulative estimated effort as partitioned between the WBE(s) to which positions are assigned and as partitioned between SOC, POC, and other costs. The FTE allocation tables reflect actual FTEs as of 15 July 2011, plus projected FTEs for FY12. Staffing levels may change annually due to unanticipated changes in the operations schedule and/or scope of work. SOC FTEs shown in **Section 3.2.1. FY12 USIO FTE Allocation Summary** also include effort devoted to providing assistance to the European Consortium for Ocean Research Drilling (ECORD) Science Operator (ESO) and Center for Deep Earth Exploration (CDEX) as noted in the “Technical, Engineering, and Science Support,” “Data Management,” and “Publications” chapters and to IODP-MI as noted in the “Publications” chapter.

3.2.1. FY12 USIO FTE Allocation Summary

SOC- and POC-supported FTEs by Work Breakdown Elements									
USIO Office	M&A	TESS	ED	CC	DM	Pubs	Ed	Otrch	Total
Ocean Leadership	4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.25	4.38
LDEO	5.00	9.72	0.00	0.00	4.71	0.00	0.00	0.00	19.43
TAMU	4.50	63.00	0.00	3.90	18.00	22.00	0.00	0.00	111.40
Totals	13.63	72.72	0.00	3.90	22.71	22.00	0.00	0.25	135.20

Total FTEs by Expense Category				
USIO Office	SOC	NSF	Other	Total
Ocean Leadership	1.38	3.00	3.73	8.10
LDEO	3.81	15.61	0.00	19.43
TAMU	30.23	81.18	0.10	111.50
Totals	35.41	99.79	3.83	139.03

Notes: FTE = full-time equivalent; M&A = Maintenance and Administration; TESS = Technical, Engineering, and Science Support; ED = Engineering Development; CC = Core Curation; DM = Data Management; Pubs = Publications; Ed = Education; Otrch = Outreach; Other = efforts funded by other sources (e.g., other Program integrated costs [OPIC], San Andreas Fault Observatory at Depth [SAFOD], etc.); SOC = science operating costs; POC = platform operating costs. Student workers and TAMRF administrative support staff are not included in the table.

3.2.2. FY12 USIO FTE Allocation Detail

Position		% Work Breakdown Elements (SOC- and POC-supported FTEs)										% Effort Totals			
Name	Position Title	USIO Office	M&A	TESS	ED	CC	DM	Pubs	Ed	Orch	Total	SOC	POC	Other	Total
Bob Gagosian	President and Chief Executive Officer	Ocean Leadership	12.5%	0%	0%	0%	0%	0%	0%	0%	12.5%	0%	12.5%	0%	12.5%
Colin Reed	Executive Assistant	Ocean Leadership	12.5%	0%	0%	0%	0%	0%	0%	0%	12.5%	0%	12.5%	0%	12.5%
David Divins	Director, Ocean Drilling Programs	Ocean Leadership	87.5%	0%	0%	0%	0%	0%	0%	0%	87.5%	25%	62.5%	12.5%	100%
Greg Myers	Senior Technical Expert	Ocean Leadership	100%	0%	0%	0%	0%	0%	0%	0%	100%	18.75%	81.25%	0%	100%
Doug Fils	Technical Expert	Ocean Leadership	100%	0%	0%	0%	0%	0%	0%	0%	100%	50%	50%	0%	100%
Margo Morell	Assistant Director, Ocean Drilling	Ocean Leadership	100%	0%	0%	0%	0%	0%	0%	0%	100%	18.75%	81.25%	0%	100%
Julie Farver	Manager, Travel Services	Ocean Leadership	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	10%
Audrey Divins	Administrative Assistant	Ocean Leadership	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	20%
Sarah Saunders	Director, Science Communications	Ocean Leadership	0%	0%	0%	0%	0%	0%	0%	12.5%	12.5%	12.5%	0%	67.5%	80%
Kristin Ludwig	Manager, Communications	Ocean Leadership	0%	0%	0%	0%	0%	0%	0%	12.5%	12.5%	12.5%	0%	62.5%	75%
Leslie Peart	Director, Education	Ocean Leadership	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	50%
Sharon Cooper	Assistant Director, Education	Ocean Leadership	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%
Jessie Swanseen	Administrative Assistant	Ocean Leadership	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	50%	50%
TOTAL Ocean Leadership FTEs			4.13	0.00	0.00	0.00	0.00	0.00	0.00	0.25	4.38	1.38	3.00	3.73	8.10
Dave Goldberg	Director	LDEO	50%	0%	0%	0%	0%	0%	0%	0%	50.00%	6%	44%	0%	50%
TBN	Administrative Assistant	LDEO	100%	0%	0%	0%	0%	0%	0%	0%	100%	12%	88%	0%	100%
Alberto Malinverno	Principal Scientist	LDEO	0%	50%	0%	0%	0%	0%	0%	0%	50.00%	12.5%	37.5%	0%	50%

Notes: FTE = full-time equivalent; M&A = Maintenance and Administration; TESS = Technical, Engineering, and Science Support; ED = Engineering Development; CC = Core Curation; DM = Data Management; Pubs = Publications; Ed = Education; Orch = Outreach; Other = efforts funded by other sources (e.g., other Program integration costs [OPIC], San Andreas Fault Observatory at Depth [SAFOD], etc.); TBN = to be named. We anticipate filling all TBN positions before or during FY12. Student workers and TAMRF administrative support staff are not included in the table. (Continued on next seven pages.)

FY12 USIO FTE Allocation Detail (continued)

Position			% Work Breakdown Elements (SOC- and POC-supported FTEs)										% Effort Totals			
Name	Position Title	USIO Office	M&A	TESS	ED	CC	DM	Pubs	Ed	Orch	Total	SOC	POC	Other	Total	
Mary Reagan	Deputy Director	LDEO	100%	0%	0%	0%	0%	0%	0%	0%	100%	12%	88%	0%	100%	
Simon Draper	Office Coordinator	LDEO	0%	42%	0%	0%	0%	0%	0%	0%	42%	0%	42%	0%	42%	
Carl Brenner	Technical Services Specialist	LDEO	50%	0%	0%	0%	0%	0%	0%	0%	50%	6%	44%	0%	50%	
David Grames	Project Coordinator	LDEO	100%	0%	0%	0%	0%	0%	0%	0%	100%	12%	88%	0%	100%	
TBN	Project Coordinator	LDEO	100%	0%	0%	0%	0%	0%	0%	0%	100%	12%	88%	0%	100%	
Sarah Davies	Logging Consortium Chief Scientist	LDEO	0%	8%	0%	0%	0%	0%	0%	0%	8%	0%	8%	0%	8%	
Eric Meissner	Manager, Engineering and Technical Services	LDEO	0%	100%	0%	0%	0%	0%	0%	0%	100%	25%	75%	0%	100%	
Walt Masterson	Engineering/Logistics Coordinator	LDEO	0%	100%	0%	0%	0%	0%	0%	0%	100%	25%	75%	0%	100%	
Geetika Kapoor	Electrical Engineer	LDEO	0%	100%	0%	0%	0%	0%	0%	0%	100%	25%	75%	0%	100%	
Stefan Mrozewski	Mechanical Engineer	LDEO	0%	100%	0%	0%	0%	0%	0%	0%	100%	25%	75%	0%	100%	
Gerardo Iturrino	Supervisor, Science Operations	LDEO	0%	100%	0%	0%	0%	0%	0%	0%	100%	25%	75%	0%	100%	
Louise Anderson	Logging Staff Scientist	LDEO	0%	42%	0%	0%	0%	0%	0%	0%	42%	0%	42%	0%	42%	
Helen Evans	Logging Staff Scientist	LDEO	0%	100%	0%	0%	0%	0%	0%	0%	100%	7%	22%	0%	29%	
Annick Fehr	Logging Staff Scientist	LDEO	0%	17%	0%	0%	0%	0%	0%	0%	17%	0%	17%	0%	17%	
Gilles Guerin	Logging Staff Scientist	LDEO	0%	74.75%	0%	0%	0%	0%	0%	0%	74.75%	18.75%	56%	0%	74.75%	
Jenny Inwood	Logging Staff Scientist	LDEO	0%	17%	0%	0%	0%	0%	0%	0%	17%	0%	17%	0%	17%	
Johanna Lofi	Logging Staff Scientist	LDEO	0%	42%	0%	0%	0%	0%	0%	0%	42%	0%	42%	0%	42%	
Angela Slagle	Logging Staff Scientist	LDEO	0%	74.75%	0%	0%	0%	0%	0%	0%	74.75%	18.75%	56%	0%	74.75%	
Trevor Williams	Logging Staff Scientist	LDEO	0%	75%	0%	0%	0%	0%	0%	0%	75%	19%	56%	0%	75%	
Dan Quidbach	Manager, Information Services	LDEO	0%	0%	0%	0%	100%	0%	0%	0%	100%	40%	60%	0%	100%	
Ted Baker	Systems Analyst/Database Administrator	LDEO	0%	0%	0%	0%	100%	0%	0%	0%	100%	40%	60%	0%	100%	
Golam Sarkar	Technical Analyst	LDEO	0%	0%	0%	0%	100%	0%	0%	0%	100%	40%	60%	0%	100%	
Cristina Broglia	Supervisor, Data Services	LDEO	0%	0%	0%	0%	50%	0%	0%	0%	50%	0%	50%	0%	50%	

(Continued on next six pages.)

FY12 USIO FTE Allocation Detail (continued)

Position		% Work Breakdown Elements (SOC- and POC-supported FTEs)										% Effort Totals			
Name	Position Title	USIO Office	M&A	TESS	ED	CC	DM	Pubs	Ed	Orch	Total	SOC	POC	Other	Total
Tanzhuo Liu	Senior Log Analyst	LDEO	0%	0%	0%	0%	100%	0%	0%	0%	100%	0%	100%	0%	100%
Bob Arko	Database Developer	LDEO	0%	0%	0%	0%	21%	0%	0%	0%	21%	0%	21%	0%	21%
	TOTAL LDEO FTEs		5.00	9.72	0.00	0.00	4.71	0.00	0.00	0.00	19.43	3.81	15.61	0.00	19.43
Brad Clement	Director	TAMU	50%	0%	0%	0%	0%	0%	0%	0%	50%	2.5%	47.5%	0%	50%
Barbara McCannon	Administrative Assistant	TAMU	100%	0%	0%	0%	0%	0%	0%	0%	100%	5%	95%	0%	100%
Bill Wasson	Manager, IODP Business Services	TAMU	100%	0%	0%	0%	0%	0%	0%	0%	100%	5%	95%	0%	100%
TBN	Supervisor, IODP Human Resources	TAMU	100%	0%	0%	0%	0%	0%	0%	0%	100%	5%	95%	0%	100%
Ollie Berka	Human Resources Representative	TAMU	100%	0%	0%	0%	0%	0%	0%	0%	100%	5%	95%	0%	100%
John Firth	Curator	TAMU	0%	0%	0%	95%	0%	0%	0%	0%	95%	70%	25%	5%	100%
Phil Rumford	Superintendent, GCR	TAMU	0%	0%	0%	95%	0%	0%	0%	0%	95%	70%	25%	5%	100%
Chad Broyles	Curatorial Specialist II	TAMU	0%	0%	0%	100%	0%	0%	0%	0%	100%	75%	25%	0%	100%
TBN	Curatorial Specialist II	TAMU	0%	0%	0%	100%	0%	0%	0%	0%	100%	75%	25%	0%	100%
Mitch Malone	Assistant Director/Manager, Science Operations	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Janice Muston	Administrative Assistant	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
William Rinehart	Supervisor, Engineering Services	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Kevin Grigar	Senior Staff Engineer	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Bob Aduddell	Staff Engineer	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Liping Chen	Senior Design Engineer	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Dean Ferrell	Senior Designer	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Mike Meiring	Senior Designer	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Eric Schulte	Senior Designer	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Karen Graber	Staff Researcher	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Mike Storms	Supervisor, Operations Support	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%

(Continued on next five pages.)

FY12 USIO FTE Allocation Detail (continued)

Position		% Work Breakdown Elements (SOC- and POC-supported FTEs)										% Effort Totals			
Name	Position Title	USIO Office	M&A	TESS	ED	CC	DM	Pubs	Ed	Orch	Total	SOC	POC	Other	Total
Ron Grout	Operations Superintendent	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Steve Midgley	Operations Superintendent	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Dave Lehnert	Materials Specialist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Robert Mitchell	Marine Logistics Coordinator	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Tyrone Brashear	Materials Technician	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Sandy Dillard	Shipping and Receiving Coordinator	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Adam Klaus	Supervisor, Science Support	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Carlos Alvarez-Zarikian	Staff Scientist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Peter Blum	Staff Scientist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Katerina Petronotis	Staff Scientist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Nicole Stronck	Staff Scientist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
TBN	Staff Scientist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
TBN	Staff Scientist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Jay Miller	Manager, Technical and Analytical Services	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
John Miller	Business Coordinator II	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
David Houpt	Supervisor, Analytical Systems	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Chris Bennight	Research Specialist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Lisa Brandt	Research Specialist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Trevor Cobine	Research Specialist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Thomas Gorgas	Research Specialist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Maggie Hastedt	Research Specialist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Sandra Herrmann	Research Specialist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Zenon Mateo	Research Specialist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Maxim Vasilyev	Research Specialist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Yulia Vasilyeva	Research Specialist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Michael Bertoli	Research Assistant	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%

(Continued on next four pages.)

FY12 USIO FTE Allocation Detail (continued)

Position		% Work Breakdown Elements (SOC- and POC-supported FTEs)										% Effort Totals			
Name	Position Title	USIO Office	M&A	TESS	ED	CC	DM	Pubs	Ed	Orch	Total	SOC	POC	Other	Total
John Beck	Senior Imaging Specialist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Bill Crawford	Senior Imaging Specialist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Brad Julson	Supervisor, Technical Support	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Roy Davis	Laboratory Officer	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Bill Mills	Laboratory Officer	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Tim Bronk	Assistant Laboratory Officer	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Lisa Crowder	Assistant Laboratory Officer	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Chieh Peng	Assistant Laboratory Officer	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Steve Prinz	Assistant Laboratory Officer	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Heather Barnes	Marine Laboratory Specialist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Ted Gustafson	Marine Laboratory Specialist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Kristin Hillis	Marine Laboratory Specialist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Erik Moortgat	Marine Laboratory Specialist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
TBN	Marine Laboratory Specialist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
TBN	Marine Laboratory Specialist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Etienne Claassen	Senior Marine Instrumentation Specialist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Randy Gjesvold	Senior Marine Instrumentation Specialist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%

(Continued on next three pages.)

FY12 USIO FTE Allocation Detail (continued)

Position		% Work Breakdown Elements (SOC- and POC-supported FTEs)										% Effort Totals			
Name	Position Title	USIO Office	M&A	TESS	ED	CC	DM	Pubs	Ed	Orch	Total	SOC	POC	Other	Total
Jurie Kotze	Senior Marine Instrumentation Specialist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Garrick Van Rensburg	Senior Marine Instrumentation Specialist	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Jim Rosser	Manager, Development, IT, and Databases	TAMU	0%	0%	0%	0%	100%	0%	0%	0%	100%	25%	75%	0%	100%
Denise Ponzio	Information Services Assistant	TAMU	0%	0%	0%	0%	100%	0%	0%	0%	100%	25%	75%	0%	100%
Phil Gates	Supervisor, Information Technology Support	TAMU	0%	0%	0%	0%	100%	0%	0%	0%	100%	25%	75%	0%	100%
Cesar Flores	Senior Systems Administrator	TAMU	0%	0%	0%	0%	100%	0%	0%	0%	100%	25%	75%	0%	100%
Jennifer Hutchinson	Systems Administrator	TAMU	0%	0%	0%	0%	100%	0%	0%	0%	100%	25%	75%	0%	100%
Matt Mefferd	Systems Administrator	TAMU	0%	0%	0%	0%	100%	0%	0%	0%	100%	25%	75%	0%	100%
Mike Petersen	Senior Systems Support Specialist	TAMU	0%	0%	0%	0%	100%	0%	0%	0%	100%	25%	75%	0%	100%
Tiffany Bloxom	Systems Support Specialist	TAMU	0%	0%	0%	0%	100%	0%	0%	0%	100%	25%	75%	0%	100%
James Cordray	Systems Support Specialist	TAMU	0%	0%	0%	0%	100%	0%	0%	0%	100%	25%	75%	0%	100%
Chuck Haddick	Systems Support Specialist	TAMU	0%	0%	0%	0%	100%	0%	0%	0%	100%	25%	75%	0%	100%
Mike Hodge	Associate Marine Computer Specialist	TAMU	0%	0%	0%	0%	100%	0%	0%	0%	100%	25%	75%	0%	100%
Grant Banta	Marine Computer Specialist	TAMU	0%	0%	0%	0%	100%	0%	0%	0%	100%	25%	75%	0%	100%
Michael Cannon	Marine Computer Specialist	TAMU	0%	0%	0%	0%	100%	0%	0%	0%	100%	25%	75%	0%	100%

(Continued on next two pages.)

FY12 USIO FTE Allocation Detail (continued)

Position		% Work Breakdown Elements (SOC- and POC-supported FTEs)										% Effort Totals			
Name	Position Title	USIO Office	M&A	TESS	ED	CC	DM	Pubs	Ed	Orch	Total	SOC	POC	Other	Total
Andrew Trefethen	Marine Computer Specialist	TAMU	0%	0%	0%	0%	100%	0%	0%	0%	100%	25%	75%	0%	100%
Paul Foster	Supervisor, Applications Development	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
David Fackler	Applications Developer IV	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Dwight Hornbacher	Applications Developer IV	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Timothy Blaisdell	Applications Developer III	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Algie Morgan	Applications Developer III	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Long Nguyen	Applications Developer III	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
James Zhao	Applications Developer III	TAMU	0%	100%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	100%
Rakesh Mithal	Supervisor, Databases/Archives	TAMU	0%	0%	0%	0%	100%	0%	0%	0%	100%	75%	25%	0%	100%
Saranavan Nagarajan	Senior Software Applications Developer	TAMU	0%	0%	0%	0%	100%	0%	0%	0%	100%	75%	25%	0%	100%
Don Sims	Data Analyst	TAMU	0%	0%	0%	0%	100%	0%	0%	0%	100%	75%	25%	0%	100%
TBN	Systems Analyst II	TAMU	0%	0%	0%	0%	100%	0%	0%	0%	100%	75%	25%	0%	100%
Angie Miller	Manager, Publication Services	TAMU	0%	0%	0%	0%	0%	100%	0%	0%	100%	100%	0%	0%	100%
Lorri Peters	Supervisor, Editing	TAMU	0%	0%	0%	0%	0%	100%	0%	0%	100%	100%	0%	0%	100%
Ginny Lowe	Editor IV	TAMU	0%	0%	0%	0%	0%	100%	0%	0%	100%	100%	0%	0%	100%
Jenni Hesse	Editor III	TAMU	0%	0%	0%	0%	0%	100%	0%	0%	100%	100%	0%	0%	100%
Shana Lewis	Editor III	TAMU	0%	0%	0%	0%	0%	100%	0%	0%	100%	100%	0%	0%	100%
Amy McWilliams	Editor III	TAMU	0%	0%	0%	0%	0%	100%	0%	0%	100%	100%	0%	0%	100%
Erin O'Roke	Editor II	TAMU	0%	0%	0%	0%	0%	100%	0%	0%	100%	100%	0%	0%	100%
TBN	Editor I	TAMU	0%	0%	0%	0%	0%	100%	0%	0%	100%	100%	0%	0%	100%
Jaime Gracia	Supervisor, Production	TAMU	0%	0%	0%	0%	0%	100%	0%	0%	100%	100%	0%	0%	100%

(Continued on next page.)

FY12 USIO FTE Allocation Detail (continued)

Position		% Work Breakdown Elements (SOC- and POC-supported FTEs)										% Effort Totals			
Name	Position Title	USIO Office	M&A	TSES	ED	CC	DM	Pubs	Ed	Orch	Total	SOC	POC	Other	Total
Patrick Edwards	Production Specialist III	TAMU	0%	0%	0%	0%	0%	100%	0%	0%	100%	100%	0%	0%	100%
Kenneth Sherar	Production Specialist II	TAMU	0%	0%	0%	0%	0%	100%	0%	0%	100%	100%	0%	0%	100%
Crystal Wolfe	Production Specialist II	TAMU	0%	0%	0%	0%	0%	100%	0%	0%	100%	100%	0%	0%	100%
TBN	Production Specialist I	TAMU	0%	0%	0%	0%	0%	100%	0%	0%	100%	100%	0%	0%	100%
Ann Yeager	Distribution Specialist I	TAMU	0%	0%	0%	0%	0%	100%	0%	0%	100%	100%	0%	0%	100%
Debbie Partain	Supervisor, Graphics	TAMU	0%	0%	0%	0%	0%	100%	0%	0%	100%	80%	20%	0%	100%
Tim Fulton	Graphics Specialist II	TAMU	0%	0%	0%	0%	0%	100%	0%	0%	100%	80%	20%	0%	100%
Rhonda Kappler	Graphics Specialist II	TAMU	0%	0%	0%	0%	0%	100%	0%	0%	100%	80%	20%	0%	100%
Paul Pleasant	Graphics Specialist II	TAMU	0%	0%	0%	0%	0%	100%	0%	0%	100%	80%	20%	0%	100%
Alyssa Stephens	Graphics Specialist II	TAMU	0%	0%	0%	0%	0%	100%	0%	0%	100%	80%	20%	0%	100%
TBN	Graphics Specialist II	TAMU	0%	0%	0%	0%	0%	100%	0%	0%	100%	80%	20%	0%	100%
TBN	Graphics Specialist II	TAMU	0%	0%	0%	0%	0%	100%	0%	0%	100%	80%	20%	0%	100%
Gigi Delgado	Senior Publications Coordinator	TAMU	0%	0%	0%	0%	0%	100%	0%	0%	100%	100%	0%	0%	100%
TOTAL TAMU FTEs			4.50	63.00	0.00	3.90	18.00	22.00	0.00	0.00	111.40	30.23	81.18	0.10	111.50

4. EXPEDITION OPERATIONS

4.1. INTRODUCTION

This Annual Program Plan is based on the operations schedule published 7 July 2011, including two maintenance periods that assume a Caribbean tie-up location.

16 September–17 November 2011	Mid-Atlantic Ridge Microbiology Expedition
17 November 2011–17 January 2012	Mediterranean Outflow Expedition
17 January–6 February 2012	Atlantis Massif Oceanic Core Complex Expedition
6 February–18 March 2012	Lesser Antilles Volcanism and Landslides Expedition
18 March–18 June 2012	Maintenance Period
18 June–17 August 2012	Newfoundland Sediment Drifts Expedition
17 August–17 October 2012	Maintenance Period

4.2. OPERATIONS

4.2.1. Expedition 336: Mid-Atlantic Ridge Microbiology

Proposed Operations

Expedition 336: Mid-Atlantic Ridge Microbiology will install multilevel seafloor borehole observatories (circulation obviation retrofit kits) at three sites (395A, NP-1, and NP-2) for long-term coupled microbiological, biogeochemical, and hydrological experiments. The basaltic crust will also be characterized by coring parts of the crust, collecting downhole in situ petrophysical data by wireline logging, and conducting hydrologic (packer) experiments. Coring at four sites will characterize the overlying sediment section.

Logistics

Operations for the Expedition 336 require an estimated 62 days (2 in port, 10 in transit to and from the first/last sites, and 50 in operations).

4.2.2. Expedition 339: Mediterranean Outflow

Proposed Operations

Expedition 339: Mediterranean Outflow will core and log at six sites to obtain a Pliocene–Quaternary sedimentary record to understand the paleoceanography and global climate significance of Mediterranean Outflow Water, the influence of the Gibraltar Gateway, sea level changes and sediment architecture of the Cadiz contourite depositional system (CDS) and Iberian margin, and the synsedimentary neotectonic control on architecture and evolution of the CDS. In addition, to address Ancillary Project Letter (APL) 763, one site will be cored to obtain a high-fidelity record of millennial-scale climate variability for the Pleistocene to serve as a marine reference section of Pleistocene climate variability.

Logistics

Operations for the Expedition 339 are budgeted based on an estimated 61 days (5 in port, 5 in transit, and 51 in operations).

4.2.3. Expedition 340T: Atlantis Massif Oceanic Core Complex

Proposed Operations

Expedition 340T: Atlantis Massif Oceanic Core Complex will re-enter Hole U1309D for a check shot survey and wireline logging to provide velocity, porosity, and impedance contrasts to determine the relationship between measured seismic reflectivity and downhole geologic characteristics in the domal core of Atlantis Massif.

Logistics

Operations for the Expedition 340T are budgeted based on an estimated 20 days (5 days in port, 12 days in transit, and 3 in operations).

4.2.4. Expedition 340: Lesser Antilles Volcanism and Landslides

Proposed Operations

Expedition 340: Lesser Antilles will core and log at a suite of sites to obtain a complete record of eruptive activity and volcanoclastic sedimentation of the most active volcanic complexes of the Lesser Antilles arc (Martinique, Dominica, Montserrat) over the last 1 to 5 m.y., focusing on edifice collapse and debris-avalanche emplacement, a dominant process in Caribbean volcanism. The results will have implications for hazard assessment and significantly improve our understanding of the history and long-term magmatic evolution of the arc.

Logistics

Operations for Expedition 340 are budgeted based on an estimated 41 days (1 in port, 2 in transit, and 38 in operations).

4.2.5. Expedition 342: Newfoundland Sediment Drifts

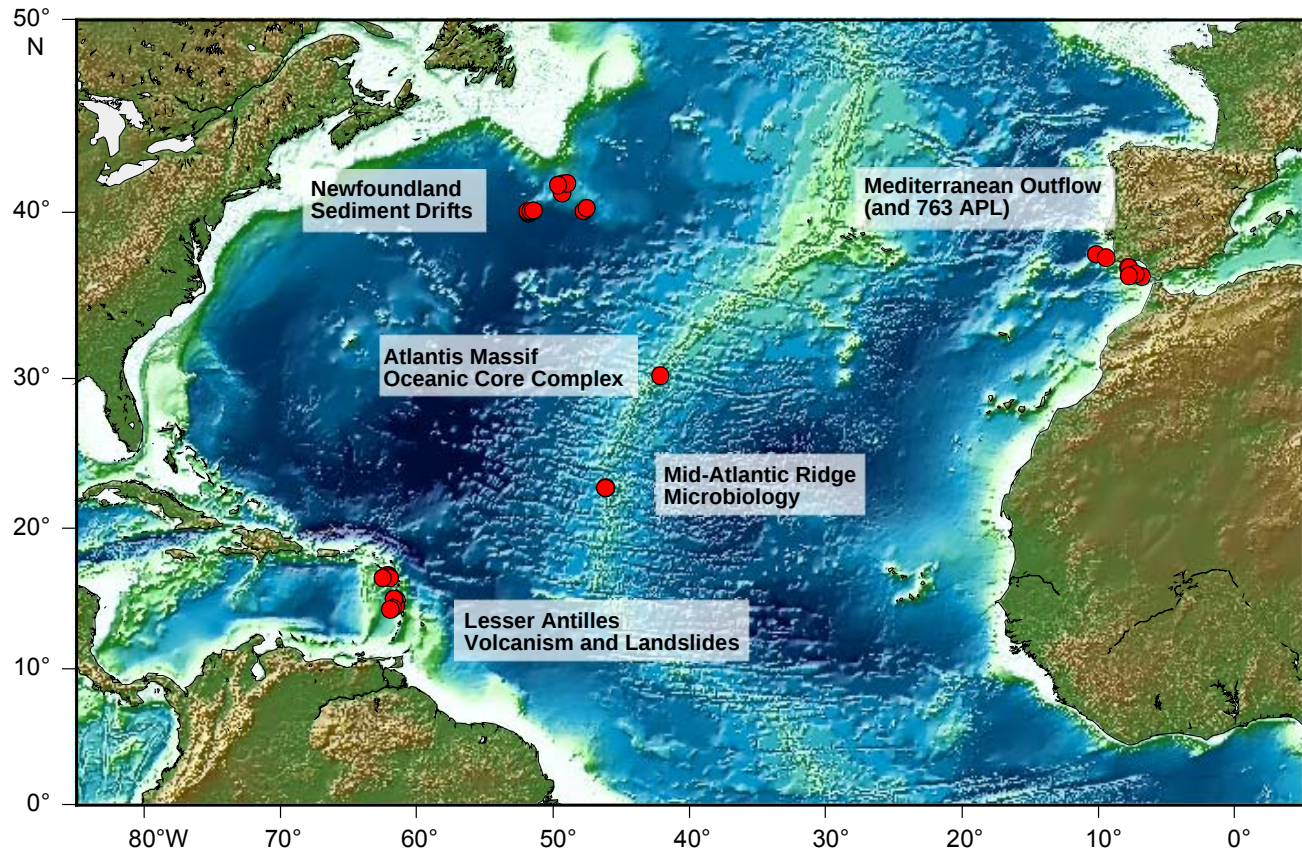
Proposed Operations

Expedition 342: Newfoundland Sediment Drifts will core and log a depth transect between 2400 m and 5000 m water depth into a sequence of sediment drifts of late Cretaceous-Oligocene age on the J Anomaly and SE Newfoundland Ridges. The drilling area contains an extensive record of early Late Cretaceous and Paleogene “extreme climate” events and the possible onset of Northern Hemisphere glaciation in the Eocene. In addition, engineering tests will be conducted on the Motion Decoupled Hydraulic Delivery System, which, if successful, will provide more isolation from drill string movement during deployment of wireline temperature and pressure probes than the collated delivery system.

Logistics

Operations for Expedition 342 are budgeted based on an estimated 60 days (4 in port, 11 in transit, and 45 in operations).

4.3. IODP-USIO FY12 SITE MAP



4.4. EXPEDITION OPERATIONS BUDGET

Expense Category	Expedition 336: Mid-Atlantic Microbiology	Expedition 339: Mediterranean Outflow	Expedition 340T: Atlantis Massif	Expedition 340: Lesser Antilles	Maintenance Period	Expedition 342: Newfoundland Sediment Drifts ¹	Maintenance Period	Total
	47 days ²	61 days	20 days	41 days	92 days ³	60 days	45 days	366 days ⁴
Ship Operations								
Day Rate	3,916,839	5,073,172	1,656,355	3,414,740	7,475,920	4,991,912	3,656,700	30,185,638
Communications ⁵	37,271	48,373	15,860	32,513	72,956	47,592	35,685	290,250
Fuel and Lubricants ⁶	0	1,385,325	787,250	937,650	918,850	1,597,660	1,260,515	6,887,250
Per Diem ⁷	84,600	110,550	16,800	74,050	75,360	109,000	30,150	500,510
Port Calls ^{8,9}	0	268,000	50,000	243,000	201,000	278,000	233,000	1,273,000
Insurance ⁹	268,511	348,493	114,260	234,233	324,576	342,780	158,699	1,791,552
Travel—ODL ^{6,10}	0	150,000	0	150,000	300,000	150,000	300,000	1,050,000
Other Expenses—ODL ^{6,11}	0	19,000	0	19,000	5,000	19,000	3,000	65,000
Contractual Services								
Schlumberger	504,310	654,530	214,600	439,930	987,160	643,800	482,712	3,927,042
Total	\$4,811,531	\$8,057,443	\$2,855,125	\$5,545,116	\$10,360,822	\$8,179,744	\$6,160,461	\$45,970,242

¹ Expedition 342 will be partially supported through commingled funds from IODP-MI.

² Only the FY12 portion is included in this budget.

³ The first maintenance period in Curaçao will begin 18 March 2012 and end 18 June 2012.

⁴ The FY12 schedule totals 366 days because 2012 is a leap year.

⁵ Communications expenses include Marisat costs that will be incurred when very small aperture terminal (VSAT) service is unavailable because of the vessel's location. With the exception of the non-IODP period, amounts reflect the possibility of some days at a higher global bandwidth rate while the vessel is under way.

⁶ Fuel and lubricants, port calls, travel—ODL, and other expenses—ODL that are required for the remainder of Expedition 336 were budgeted in late FY11. Fuel and lubricant costs for Expedition 342 reflect the requirement to return to minimal safety levels before redeployment.

⁷ During the first maintenance period, 21 personnel are expected for the first 60 days, and 10 personnel are expected thereafter. For the second maintenance period, 10 personnel are expected for the duration of the maintenance period.

⁸ The port call beginning the second maintenance period is expected to be in Curaçao.

⁹ Insurance estimates are based on projected rates for FY12 received from the provider (ANCO), with premiums for Sections 1 and 2 of the Hull and Machinery policy discounted during the maintenance periods.

¹⁰ Cost estimates, number, and location of crew changes have been confirmed with the ODL logistics representative. Three crew changes are expected during the maintenance periods.

¹¹ Other expenses—ODL includes expenses for possible medical evacuations and supplies and maintenance costs incurred by ODL that are not included in the day rate.

Expedition costs included in this budget cover SOC and POC activities in support of the USIO FY12 expeditions, as follows:

Salaries and Fringes—Salaries, fringes, and sea pay, including an anticipated cost-of-living allowance and estimated fringe benefits rate.

Expedition-based salaries, fringes, and sea pay.

Travel—Transportation, per diem, lodging, and other associated costs.

Travel expenses for all USIO staff who will work at port calls, sail on FY12 expeditions and initial FY13 expeditions, and transit and/or work on the ship during the maintenance period.

Supplies—Office and operational supplies.

Safety equipment and operational, laboratory, logistic, and shipping supplies for the FY12 expeditions and long-lead supplies for FY13 expeditions.

Shipping—Postage, express mail, and freight.

Costs for shipments to and from FY12 expeditions.

Communication—Satellite, telephone, and fax charges.

Cost for very small aperture terminal (VSAT) communication and Marisat communication to and from the *JOIDES Resolution*.

Contractual Services—Consultant and contract services.

Subcontract to members of the Logging Consortium (University of Montpellier, France; University of Leicester, United Kingdom; University of Aachen, Germany) to provide shipboard participation of Logging Staff Scientists, liaisons to selected panels as needed, and scientific support for Program planning and logging-related projects are included in the SOC budget. Subcontract to Schlumberger for provision of a standard suite of tools, engineer services, software support, and mobilization services; specialty tools for use on individual cruises as needed; a dedicated engineer on the ship for each cruise and support from the base of operations; and the services of a district engineer, staff engineer, electronics technician, and special services engineer on an as-needed basis (part-time to nearly full-time support). Costs (including shipping charges) related to the leasing of equipment needed for wireline fishing, back-off and severing services, and the day rate and travel expenses for the Schlumberger engineer are included in the POC budget. Tool insurance for the deployment of downhole logging tools is now included in the Schlumberger subcontract and is provided on a day rate basis. Other contracts provide test and calibration services for analytical equipment and downhole measurement tools. In addition, costs are budgeted for contractual services from LGL Limited associated with environmental evaluation for marine mammal permitting associated with seismic operations.

Equipment—Procurement, upgrading, or fabrication of equipment with an acquisition cost of more than \$5,000, plus those items as defined by Columbia University and TAMRF policy.

Costs associated directly with equipment (computer, scientific, and drilling) intended solely for use on the ship over a period of time greater than one expedition, equipment purchased for a specific expedition, and pro-rata cost of shore-based equipment used partially to support expedition activities.

Other Direct Costs—Costs not covered in other categories.

Day Rate—Vessel staffing for the subcontractor’s sailing crew and drilling personnel.

Cost of staffing the ship, including the sailing crew and drilling personnel, but not including the cost of the USIO personnel or scientists aboard the ship. The day rate varies according to the mode of the ship, which is operating (drilling or cruising) or standing by (in port). Although it is a fixed rate per day, the day rate is adjusted for changes in the Consumer Price Index-Urban (CPI-U) and Employment Cost Index (ECI). The amount is based on a 366-day schedule that includes two maintenance periods. The first maintenance period (18 March –18 June 2012) is 92 days in duration and the second maintenance period (17 August–17 October 2012) is 61 days in duration, the FY12 portion of which is 45 days. For budgeting purposes, Curaçao has been tentatively designated as the location for both maintenance periods. The weighted average operating and standby day rates for the period are \$83,337 and \$81,260, respectively. The budget allows for two CPI-U base adjustments and two ECI base adjustments, all at 2.2%, effective 1 October 2011 and 1 July 2012.

Fuel and Lubricants—Fuel for the riserless vessel.

FY12 ship operations fuel purchases are estimated at a total of 5,625 metric tons: 1,200 metric tons in Ponta Delgada, Azores (Portugal); 1,500 metric tons in Lisbon, Portugal; and 2,925 metric tons in Curaçao (2,000 when redeploying after the first maintenance period and 925 after the second). While the second redeployment will occur in early FY13, funds are budgeted in FY12 because of the contractual requirement to advance pay the ship subcontractor for fuel purchases. Refuelings are budgeted at \$1,175 to \$1,270 per metric ton, depending on location. Price per metric ton is based on prices quoted by Bunkerworld on 5 July 2011 for the locations specified, plus a 20% inflation factor.

Per Diem—Shipboard catering.

Costs associated with meals and berthing on the vessel and cleaning of the laboratory stack. The estimate is based on a shipboard party of 60 participants at \$30/day/person for all nontransit and nonmaintenance periods. For periods at sea when no Science Party is on board, which may occur during transit periods, estimates are based on a shipboard party of 20 at \$42 day/person (per the catering contract, the cost per person increases when the shipboard party decreases during transits and the maintenance periods). The cost during the first maintenance period is based on 21 on board during the first 60 days at a daily rate of \$42/person and 10 on board during the remaining days of the maintenance period at a daily rate of \$67/person. The second maintenance period assumes 10 on board for its duration. Also included is \$3,000 for meals served during port calls (including the maintenance period) to all nonseagoing personnel. This category does not include per diem for the ship subcontractor’s sailing crew and drilling personnel, as they are accounted for in the day rate unless charged as a reimbursable (see “Day Rate” above).

Port Calls—Vessel agent’s expenses and subcontractor freight.

Locations have a definite effect on the port call cost, which covers agents’ expenses and freight associated with resupplying the ship. During the deployment and first expedition port calls, materials and equipment are off-loaded and supplies and equipment are loaded for the upcoming period’s activities. ODL is reimbursed for port agent charges and shipment of food and related supplies. Shipment of cores, drilling equipment, and laboratory supplies is arranged by TAMU and paid for by TAMRF. Similarly, TAMRF purchases all drilling equipment and laboratory supplies necessary for meeting the objectives of the expedition. Port calls by expedition are based on the estimated costs for the port from which the expedition begins and any interim port calls occurring prior to its conclusion, as identified in the current ship schedule. Note that this

category also includes the lodging and per diem costs for ODL crew changes, based on the total number of rooms required and a breakfast and dinner for each crew person occupying a room, all according to federal rates.

Port calls are scheduled for Ponta Delgada, Azores (Portugal) (5 days); Lisbon, Portugal (5 days); St. Johns, Antigua (1 day); Curaçao (two maintenance periods of 92 days and 45 days, and 5 days to prepare for redeployment at the conclusion of the first maintenance period); and St. Johns, Canada (3 days).

Insurance—Annual insurance premiums for subcontractor and TAMRF.

Subcontractor's premium costs for All Risks Marine Hull and Machinery (H&M) and Removal of Wreck (ROW) insurance and TAMRF premium costs for General and Automobile Liability, Workers Compensation, Cargo, Third Party Property (Equipment), Excess Liability, Control of Well and Seepage and Pollution Liability, Charterers Legal Liability, and Contractor's Pollution Liability—Gradual coverage for the vessel. All premium amounts are based on 366 days of coverage, and the premiums for Sections 1 and 2 of the H&M coverage are discounted 50% during the maintenance periods.

Travel—ODL—Subcontractor transportation.

Airfare for ship subcontractor's crews to/from seven scheduled crew changes—Ponta Delgada, Azores (Portugal); Lisbon, Portugal; and Curaçao (two during the first maintenance period and one just prior to redeployment in mid-October 2012). The cost of the crew change in mid-October must be budgeted in FY12 because of advance booking requirements. The estimate is based on a crew of 60 personnel with various domestic and international origin fly points arriving and departing each port call. Expedition costs are based on round trip airfares for the ship subcontractor's sailing crew and drilling personnel to travel to the port call where the expedition begins and return from the port call where the expedition ends.

Relocation—Relocation costs for new TAMU seagoing employees.

Business Conferences—Incidental expenses associated with meetings hosted by the USIO.

Expenses for pre-expedition, postexpedition, and planning meetings.

Services—Expert assistance.

Cost to cover miscellaneous charges payable to the ship's subcontractor, drill pipe maintenance, wireline severing charges, transfer fees, weather reports, and annual physical examinations for seagoing personnel.

Other Expenses—ODL—ODL costs not covered in other categories.

Costs for possible medical evacuations (\$25,000) and miscellaneous reimbursable supplies and maintenance costs (\$20,000) payable to the ship subcontractor.

Recruiting—Employee recruitment.

Local advertisements, advertisements in science and trade journals, and other costs related to filling seagoing positions.

Maintenance and Repair—Maintenance agreements and equipment repairs.

Maintenance and repair of drilling, coring, logging, operations, and laboratory and safety equipment.

Indirect Costs—Administrative and financial costs associated with operating the Program.

For LDEO, indirect costs at 53% are assessed on all charges except permanent equipment. In addition, subcontracts are charged indirect costs on the first \$25,000 of each contract. The indirect costs for subcontracts established prior to FY12 have already been paid, so these subcontracts are not subject to indirect cost during FY12. Modified total direct costs (MTDCs) are the total direct costs minus these exceptions.

5. MANAGEMENT AND ADMINISTRATION

5.1. GOALS

The USIO provides integrated management that is led by the contractor (Ocean Leadership) in coordination with the other two USIO members (LDEO and TAMU).

Goals of the USIO management staff include planning, coordinating (with other IODP-related entities), overseeing, reviewing, and reporting on IODP activities.

5.2. DELIVERABLES IN FY12

- Annual Program Plan: Develop and assure implementation.
- Quarterly and Annual Reports: Develop quarterly and annual reports, including financial reports.
- Reporting and Liaison Activities: Report to and liaise with funding agencies and with IODP-related agencies (e.g., the Science Advisory Structure [SAS]), Program Member Offices, and other national organizations. Participate in SAS panels, IODP-MI task forces, working groups, and so on.
- Contract Services: Provide contract services for IODP-related activities.
- Legacy Documentation: Routinely archive electronic copies of documents and reports produced by the USIO on behalf of IODP.

5.3. BUDGET

Management and Administration			
Element/Expense Category	SOC	POC	Total
Salaries and Fringes	361,573	2,615,164	2,976,737
Travel	32,410	229,009	261,419
Supplies	6,450	39,100	45,550
Shipping	2,221	8,279	10,500
Communication	10,890	45,990	56,880
Contractual Services	0	30,000	30,000
Equipment	0	0	0
Other Direct Costs	6,885	119,825	126,710
Training	1,425	27,075	28,500
Business Conferences	175	3,325	3,500
Insurance	300	5,700	6,000
Services	3,320	52,090	55,410
TAMU Computing Services	1,000	19,000	20,000
Equipment Rental	50	950	1,000
Furniture	150	2,850	3,000
Recruiting	25	475	500
Maintenance and Repair	350	6,650	7,000
Library	90	1,710	1,800
Total Direct Costs	420,429	3,087,367	3,507,796
Modified Total Direct Costs (if applicable)	74,340	483,616	557,956
Indirect Costs or Administrative Fees	237,497	873,926	1,111,423
Total Management and Administration	\$657,926	\$3,961,293	\$4,619,219

Funds for this WBE are budgeted as follows:

Salaries and Fringes—Salaries, fringes, and sea pay, including an anticipated cost-of-living allowance and estimated fringe benefits rate.

SOC/POC—Salaries and fringes for staff supporting the USIO (see Section 3.2. USIO FTE Allocation Tables). Also includes salaries and fringes for 14.12 TAMRF FTEs who provide administrative support.

Travel—Transportation, per diem, lodging, and other associated costs.

SOC/POC—USIO travel to SAS panel meetings, task force meetings, IO meetings, USIO meetings, workshops, and national and international meetings; Ocean Leadership and TAMU travel to port calls; LDEO travel to subcontractor site visits and professional training courses and meetings; and TAMU travel to insurance meetings.

Supplies—General office supplies and expendables and operational supplies.

SOC/POC—General office supplies, printer and copier supplies, and electronic media and other computer supplies with an acquisition cost of less than \$1,000 (TAMU and Ocean Leadership).

Shipping—Postage, express mail, courier services, and freight.

SOC/POC—General postage and express mail/courier services for regular correspondence.

Communication—Telephone and fax charges.

SOC/POC—Standard telephone line charges, long distance charges, and fax charges.

Contractual Services—Consultant and contract services.

SOC—None budgeted.

POC—Printing and copying of materials. Consultant services in support of network and video conferencing equipment (Ocean Leadership).

Equipment—None budgeted.

Other Direct Costs—Costs not covered in other categories.

Training—Registration, transportation, per diem, and lodging expenses related to professional training.

SOC/POC—Registration and travel costs for professional training courses and meetings (TAMU).

Business Conferences—Incidental expenses associated with meetings hosted by the USIO.

SOC/POC—Expenses for refreshments provided for various business meetings and catering services occasionally required for on-site training and professional consultant services.

Insurance—Annual insurance premiums.

SOC/POC—Program's portion of Director's and Officer's corporate insurance based on the number of officers at TAMRF, when compared to the TAMRF corporate total.

Services—Expert assistance.

SOC/POC—Lease on off-premises records storage facility, partial cost of other support services, visitor parking permits, printing services, TAMU Physical Plant services, and temporary labor.

TAMU Computing Services—Use of TAMU’s financial and management information system (FAMIS).

SOC/POC—Program’s share of costs based on lines of entry for use of FAMIS in conducting the fiscal activities of TAMU.

Equipment Rental—Rental of equipment when it is more economical to rent than purchase.

SOC/POC—Rental of equipment for conferences.

Furniture—Office furniture.

SOC/POC—Office furniture and storage cabinets for use in office and at external storage facilities.

Recruiting—Employee recruitment.

SOC/POC—Cost of newspaper and internet advertisements of vacant positions.

Maintenance and Repair—Maintenance agreements and equipment repairs.

SOC/POC—Equipment service agreements on copiers; replacement parts and service for fax machines, shredders, and so on.

Library—Books, journals, and other resources.

SOC/POC—Books, journals, resources, and subscriptions to professional materials.

Indirect Costs—Administrative and financial costs associated with operating the Program. The specific equations used to calculate these costs vary by institution, as explained below.

SOC/POC—

Ocean Leadership: The approved provisional rate of 33% was used to calculate Ocean Leadership general and administrative (G&A) costs. Each year, G&A costs are charged on all Ocean Leadership direct costs and on the first \$100,000 of all subcontracts Ocean Leadership administers under a particular contract (e.g., total annual G&A on LDEO and TAMRF subcontracts = \$66,000). The G&A costs for the two subcontracts (LDEO and TAMRF) are divided evenly between SOC G&A and POC G&A (\$33,000 each = \$16,500 SOC + \$16,500 NSF).

LDEO: For LDEO, indirect costs at 53% are assessed on all charges except permanent equipment. In addition, subcontracts are charged indirect costs on the first \$25,000 of each contract. The indirect costs for subcontracts established prior to FY12 have already been paid, so these subcontracts are not subject to indirect cost during FY12. MTDCs are the total direct costs minus these exceptions.

TAMU: A negotiated administrative fee is paid to TAMRF in lieu of indirect costs for corporate administration of the Program, as established by the Ocean Leadership/TAMRF contract. This fee reimburses TAMRF for corporate activities in support of TAMU performed by staff members who are not direct charged to the Program (i.e., TAMRF staff members who work at the TAMRF corporate office). Examples of these services include but are not limited to vendor activities (i.e., payment for goods and services, check processing, verification, and distribution); 1099 preparation and distribution, audit liaison, document scanning and storage; postage; management activities; and university/vendor liaison and payroll preparation and distribution. Use of corporate resources eliminates redundancy and reduces costs to IODP.

6. TECHNICAL, ENGINEERING, AND SCIENCE SUPPORT

6.1. GOALS

The USIO is responsible for providing scientific and operational planning and implementation for the USIO riserless drilling expeditions in response to the IODP science planning structure and interfacing with IODP-MI. The USIO will also provide formation temperature measurement services to CDEX and technical advice and logistical assistance ESO and CDEX for Schlumberger and other logging services for their expeditions in FY12.

Goals of the USIO for this WBE include planning, managing, coordinating, and performing the activities and providing the services, materials, platforms, and ship- and shore-based laboratories necessary to support all IODP USIO FY12 expeditions; conducting long-range operational planning for out-year USIO expeditions; and providing technical advice and assistance for ESO and CDEX expeditions.

6.2. DELIVERABLES IN FY12

- Expedition Planning and Implementation: Provide scientific, technical, and operational planning and execution for each scheduled expedition, including provision of a drilling platform. Conduct long-range operational and science planning for out-year expeditions.
- Reporting: Provide expedition-related reports and content for expedition publications (e.g., *Scientific Prospectus*, *Preliminary Report*, etc.). Act as a liaison to SAS and other panels, task forces, and workshops as appropriate.
- Expedition Staffing: Provide selection and support for scientific staffing and Co-Chief Scientist selection for each scheduled USIO expedition. Provide support for shipboard and shore-based technical personnel and activities.
- Logistics Support: Provide for expedition and shore-based activities including procurement, shipping, and inventory of equipment and supplies.
- Analytical Systems: Support and maintain shipboard and shore-based analytical facilities, tools, instruments, and associated quality assurance/quality control (QA/QC) protocols. Ensure effective capture and transfer of expedition data to database systems.
- Logging: Provide for the delivery of logging services, including wireline fishing and back-off/severing services for each scheduled USIO expedition. Provide technical advice to ESO and CDEX for Schlumberger and other logging operations, and arrange for Schlumberger and other logging services for ESO and CDEX, where appropriate.
- Environmental Assessment: Provide for environmental assessment services for marine mammal permitting associated with seismic operations.
- Engineering Support: Provide engineering support for maintaining and developing shipboard and shore-based drilling, coring, logging, and downhole systems, including third-party developments and long-lead time borehole installation projects, for each scheduled USIO expedition. Provide formation temperature measurement services to CDEX for their FY12 expeditions, as necessary.
- Engineering Development: Drilling Sensor Sub—continued development of the drilling sensor sub (DSS) tool to (1) measure drilling and coring parameters near the bit during operations, (2)

save the data in onboard memory, and (3) wirelessly transmit the data to the retrievable memory module, which is recovered with the core and downloaded on the surface. Deliverables for FY12 include deployment for shipboard testing, pending successful bench and shore testing of the DSS tool in FY11.

- Legacy Documentation: Routinely archive electronic copies of documents and reports produced by the USIO on behalf of IODP, including daily, weekly, site summary, operations, and engineering reports.

6.3. BUDGET

Technical, Engineering, and Science Support			
Element/Expense Category	SOC	POC	Total
Salaries and Fringes	226,082	6,953,729	7,179,811
Travel	47,603	1,147,361	1,194,964
Supplies	2,000	1,897,450	1,899,450
Shipping	4,397	1,098,887	1,103,284
Communication	1,960	322,450	324,410
Contractual Services	0	3,927,042	3,927,042
Equipment	0	1,717,680	1,717,680
Other Direct Costs	2,350	42,933,655	42,936,005
Day Rate	0	30,185,638	30,185,638
Fuel and Lubricants	0	6,887,250	6,887,250
Per Diem	0	500,510	500,510
Port Calls	0	1,273,000	1,273,000
Insurance	0	1,791,552	1,791,552
Travel—ODL	0	1,050,000	1,050,000
Other	2,350	1,245,705	1,248,055
Relocation	0	45,000	45,000
Training	0	205,150	205,150
Business Conferences	0	17,500	17,500
Insurance	0	8,000	8,000
Services	2,350	687,255	689,605
Other Expense—ODL	0	65,000	65,000
Furniture	0	2,000	2,000
Recruiting	0	35,000	35,000
Maintenance and Repair	0	173,000	173,000
Library	0	7,800	7,800
Total Direct Costs	284,392	59,998,254	60,282,646
Modified Total Direct Costs (if applicable)	269,892	890,323	1,160,215
Indirect Costs or Administrative Fees	143,043	471,871	614,914
Total Technical, Engineering, and Science Support	\$427,435	\$60,470,125	\$60,897,560

Funds for this WBE are budgeted as follows:

Salaries and Fringes—Salaries, fringes, and sea pay, including an anticipated cost-of-living allowance and estimated fringe benefits rate.

SOC—Salaries and fringes for staff providing technical support during CDEX expeditions.

POC—Salaries and fringes for staff supporting the USIO (see Section 3.2. USIO FTE Allocation Tables).

Travel—Transportation, per diem, lodging, and other associated costs.

SOC—Travel for USIO staff who will sail on the *Chikyu* during CDEX expeditions.

POC—Travel to IODP meetings and workshops, pre-expedition and postexpedition meetings, and FY13 planning meetings; meetings with drilling equipment supply vendors; conferences; subcontract site visits; and travel costs for USIO staff who will work at port calls, sail on FY12 and initial FY13 expeditions and transit, and/or work on the ship during the maintenance period. Also includes LDEO travel to professional training courses and meetings.

Supplies—Office and operational supplies.

SOC—General office supplies; electronic media and other computer supplies with an acquisition cost of less than \$1,000 (for TAMU); and printer and copier supplies. Other drilling or science supplies may be purchased in support of USIO deliverables using cost avoidances gained during the fiscal year.

POC—General office supplies; operational, laboratory, logistic, and shipping supplies for shipboard and shore-based analytical and engineering laboratory and test facilities, FY12 expeditions, and long-lead supplies for FY13 expeditions. Other drilling or science supplies may be purchased in support of USIO deliverables using cost avoidances gained during the fiscal year.

and shipboard and shore-based analytical and engineering laboratory and test facilities.

Shipping—Postage, express mail, and freight.

SOC—Shipping of tools to the *Chikyu* for use during CDEX expeditions.

POC—Postage for regular correspondence and small packages and shipping to and from FY12 expeditions.

Communication—Satellite, telephone, and fax charges.

SOC—Standard telephone line, long distance, and fax charges.

POC—Standard telephone line, long distance, and fax charges. Cost for VSAT communication and Marisat communication to and from the *JOIDES Resolution*.

Contractual Services—Consultant and contract services.

SOC—None budgeted.

POC—Subcontract to members of the Logging Consortium (University of Montpellier, France; University of Leicester, United Kingdom; University of Aachen, Germany) to provide shipboard participation of Logging Staff Scientists, liaisons to selected panels as needed, and scientific support for Program planning and logging-related projects. Subcontract to Schlumberger for provision of a standard suite of tools, engineer services, software support, and mobilization services; specialty tools for use on individual cruises as needed; a dedicated engineer on the ship for each cruise and support from the base of operations; the services of a district engineer, staff engineer, electronics technician, and special services engineer on an as-needed basis (part-time to nearly full-time support); costs (including shipping charges) related to leasing equipment needed for wireline fishing, wireline fishing, back-off and severing services, the day rate and travel expenses for the Schlumberger engineer, and the day rate for tool insurance for the deployment of downhole logging tools. Other contracts provide test and calibration services for analytical equipment and downhole measurement tools. In addition, costs are budgeted for contractual services from LGL Limited associated with environmental evaluation for marine mammal permitting associated with seismic operations.

Equipment—Procurement, upgrading, or fabrication of equipment with an acquisition cost of more than \$5,000, plus those items as defined by Ocean Leadership, Columbia University, or TAMRF policy.

SOC—None budgeted.

POC—Tools and equipment in support of logging operations and downhole measurement tool testing at the LDEO Environmental Stress Screening Facility and other facilities. Operational equipment replacement (e.g., advanced hydraulic piston corer, extended core barrel, and rotary core barrel standard and nonmagnetic wireline coring components, subs, crossovers, fishing tools, drill collars, coring line, and outer core barrel components), replacement of electronic systems in the Vibration Isolated Television system, upgrade of software and related equipment in the Rig Instrumentation system, and acquisition of parts and spare units for temperature and other downhole measurement tools. Acquisition of new analytical systems (e.g., Picarro detector for carbon analysis) and capital replacement of failed or obsolete laboratory equipment, including but not limited to stereoscopes for higher magnification imagery, microscopes, image capture systems for microscopy, Cahn electrobalances, Carver presses, global positioning system antennas and control systems, ashing furnace, parallel saw, and analytical bead maker.

Other Direct Costs—Costs not covered in other categories.

Day Rate—Vessel staffing for the subcontractor's sailing crew and drilling personnel.

SOC—None budgeted.

POC—Cost of staffing the ship, including the sailing crew and drilling personnel, but not including the cost of the USIO personnel or scientists aboard the ship. The day rate varies according to the mode of the ship, which is operating (drilling or cruising) or standing by (in port). Although it is a fixed rate per day, the day rate is adjusted for changes in the Consumer Price Index-Urban (CPI-U) and Employment Cost Index (ECI). The amount is based on a 366-day schedule that includes two maintenance periods. The first maintenance period (18 March – 18 June 2012) is 92 days in duration and the second maintenance period (17 August–17 October 2012) is 61 days in duration, the FY12 portion of which is 45 days. For budgeting purposes, Curaçao has been tentatively designated as the location for both maintenance periods. The weighted average operating and standby day rates for the period are \$83,337 and \$81,260, respectively. The budget allows for two CPI-U base adjustments and two ECI base adjustments, all at 2.2%, effective 1 October 2011 and 1 July 2012.

Fuel and Lubricants—Fuel for the riserless vessel.

SOC—None budgeted.

POC—FY12 ship operations fuel purchases are estimated at a total of 5,625 metric tons: 1,200 metric tons in Ponta Delgada, Azores (Portugal); 1,500 metric tons in Lisbon, Portugal; and 2,925 metric tons in Curaçao (2,000 when redeploying after the first maintenance period and 925 after the second). While the second redeployment will occur in early FY13, funds are budgeted in FY12 because of the contractual requirement to advance pay the ship subcontractor for fuel purchases. Refuelings are budgeted at \$1,175 to \$1,270 per metric ton, depending on location. Price per metric ton is based on prices quoted by Bunkerworld on 5 July 2011 for the locations specified, plus a 20% inflation factor.

Per Diem—Shipboard catering.

SOC—None budgeted.

POC— Costs associated with meals and berthing on the vessel and cleaning of the laboratory stack. The estimate is based on a shipboard party of 60 participants at \$30/day/person for all nontransit and nonmaintenance periods. For periods at sea when no Science Party is on board, which may occur during transit periods, estimates are based on a shipboard party of 20 at \$42 day/person (per the catering contract, the cost per person increases when the shipboard party decreases during transits and the maintenance periods). The cost during the first maintenance period is based on 21 on board during the first 60 days at a daily rate of \$42/person and 10 on board during the remaining days of the maintenance period at a daily rate of \$67/person. The second maintenance period assumes 10 on board for its duration. Also included is \$3,000 for meals served during port calls (including the maintenance period) to all nonseagoing personnel. This category does not include per diem for the ship subcontractor's sailing crew and drilling personnel, as they are accounted for in the day rate unless charged as a reimbursable (see "Day Rate" above).

Port Calls—Vessel agent's expenses and subcontractor freight.

SOC—None budgeted.

POC— Port calls are scheduled for Ponta Delgada, Azores (Portugal) (5 days); Lisbon, Portugal (5 days); St. Johns, Antigua (1 day); Curaçao (two maintenance periods of 92 days and 45 days, and 5 days to prepare for redeployment at the conclusion of the first maintenance period); and St. Johns, Canada (3 days).

Insurance—Annual insurance premiums for Subcontractor and TAMRF.

SOC—None budgeted.

POC— Subcontractor's premium costs for All Risks Marine H&M and ROW insurance and TAMRF premium costs for General and Automobile Liability, Workers Compensation, Cargo, Third Party Property (Equipment), Excess Liability, Control of Well and Seepage and Pollution Liability, Charterers Legal Liability, and Contractor's Pollution Liability—Gradual coverage for the vessel. All premium amounts are based on 366 days of coverage, and the premiums for Sections 1 and 2 of the H&M coverage are discounted 50% during the maintenance periods.

Travel—ODL—Subcontractor transportation.

SOC—None budgeted.

POC— Airfare for ship subcontractor's crews to/from seven scheduled crew changes—Ponta Delgada, Azores (Portugal); Lisbon, Portugal; and Curaçao (two during the first maintenance period and one just prior to redeployment in mid-October 2012). The cost of the crew change in mid-October must be budgeted in FY12 because of advance booking requirements. The estimate is based on a crew of 60 personnel with various domestic and international origin fly points arriving and departing each port call. Expedition costs are based on round trip airfares for the ship subcontractor's sailing crew and drilling personnel to travel to the port call where the expedition begins and return from the port call where the expedition ends.

Relocation—Relocation costs for new employees.

SOC—None budgeted.

POC—Relocation costs for new employees (TAMU).

Training—Registration, transportation, per diem, and lodging expenses related to professional training and attendance at professional meetings.

SOC—None budgeted.

POC—Registration and travel costs for safety and other training courses and meetings (TAMU).

Business Conferences—Incidental expenses associated with meetings hosted by the USIO.

SOC—None budgeted.

POC—Expenses for pre-expedition, postexpedition, and planning meetings; refreshments provided for various business meetings; and catering services occasionally required for on-site training and professional consultant services.

Insurance—Annual insurance premiums.

SOC—None budgeted.

POC—Annual insurance premiums for USIO vehicles.

Services—Expert assistance.

SOC—Annual physical examinations for seagoing personnel, copier services, external copying and printing services, vehicle and warehouse equipment repair, testing and calibration of laboratory instruments, and machine shop services.

POC—Annual physical examinations for seagoing personnel, copier services, vehicle and warehouse equipment repair, drill pipe maintenance, equipment testing and calibration (including DSS), machine shop services, costs to cover miscellaneous charges payable to the ship's subcontractor, wireline severing charges, transfer fees, and weather reports.

Other Expenses—ODL—ODL costs not covered in other categories.

SOC—None budgeted.

POC—Costs for possible medical evacuations (\$25,000) and miscellaneous reimbursable costs for supplies and maintenance costs (\$20,000) payable to the ship subcontractor.

Furniture—Office furniture.

SOC—None budgeted.

POC—Replacing broken or aging office furniture and storage cabinets for use in office and at external storage facilities.

Recruiting—Employee recruitment.

SOC—None budgeted.

POC—Local advertisements, advertisements in science and trade journals, and other costs related to filling/replacing positions and recruiting professional staff.

Maintenance and Repair—Maintenance agreements and equipment repairs.

SOC—None budgeted.

POC—Maintenance and repair of office equipment; postage meter; vehicle fleet; equipment in warehouse; overhead cranes and other loading dock equipment; and drilling, coring, logging operations, laboratory, and safety equipment.

Library—Books, journals, and other resources.

SOC—None budgeted.

POC—Technical books, journals, resources, and subscriptions to professional materials.

Indirect Costs—Administrative and financial costs associated with operating the Program.

SOC/POC—For LDEO, indirect costs at 53% are assessed on all charges except permanent equipment. In addition, subcontracts are charged indirect costs on the first \$25,000 of each contract. The indirect costs for subcontracts established prior to FY12 have already been paid, so these subcontracts are not subject to indirect cost during FY12. MTDCs are the total direct costs minus these exceptions.

7. ENGINEERING DEVELOPMENT

7.1. GOALS

The USIO is responsible for utilizing IODP resources to oversee and/or provide engineering development projects in accordance with the long-term engineering needs of IODP as prioritized by the SAS.

7.2. DELIVERABLE IN FY12

- **Multisensor Magnetometer Module:** Continue development of the multisensory magnetometer module (MMM), a new magnetometer tool under development at LDEO (FY12 will be the third year of the project). The MMM will produce continuous records of the magnetic field in the borehole, from which magnetization and polarity of the rocks surrounding the borehole can be calculated. This downhole magnetic information will complement core sample magnetic measurements and significantly enhance IODP's ability to magnetostratigraphically date sediment sequences. Deliverables for this project include tool delivery, modifications to extend LDEO and Schlumberger telemetry systems and surface panel software, and completion of third-party tool certification requirements in FY12, followed by bench and field tests at the LDEO test well and sea deployment.
- **USIO Technical Panel:** Create and operate the new USIO Technical Panel (UTP), through which external members from industry and academia will participate in bi-annual meetings to review engineering and operations issues within the USIO with the purpose of providing third-party advice to aid the USIO. The UTP will be administered and operated by Ocean Leadership with assistance from the USIO partners.
- **Legacy Documentation:** Routinely archive electronic copies of documents and reports produced by the USIO on behalf of IODP.

7.3. BUDGET

Engineering Development			
Element/Expense Category	SOC	POC	Total
Salaries and Fringes	21,940	0	21,940
Travel	10,968	44,000	54,968
Supplies	5,000	3,000	8,000
Shipping	0	0	0
Communication	0	3,000	3,000
Contractual Services	0	25,000	25,000
Equipment	0	0	0
Other Direct Costs	0	0	0
Total Direct Costs	37,908	75,000	112,908
Modified Total Direct Costs (if applicable)	37,908	0	37,908
Indirect Costs or Administrative Fees	20,091	24,750	44,841
Total Engineering Development	\$57,999	\$99,750	\$157,749

Funds for this WBE are budgeted as follows:

Salaries and Fringes—Salaries, fringes, and sea pay, including an anticipated cost-of-living allowance and estimated fringe benefits rate.

SOC—Salaries and fringes for staff supporting the USIO (see Section 3.2. USIO FTE Allocation Tables).

POC—None budgeted.

Travel—Transportation, per diem, lodging, and other associated costs.

SOC—Travel for meetings with contractors and calibration tests of the MMM tool in the Schlumberger calibration facility for magnetic tools.

POC—Costs to support invited members to attend UTP meetings at USIO locations.

Supplies—Office and operational supplies.

SOC—Operational, logistic, and shipping supplies.

POC—General office supplies, printer supplies, and general computer supplies to support UTP functions.

Shipping—None budgeted.

Communication—Satellite, telephone, and fax charges.

SOC—None budgeted.

POC—Telephone, web conference, and video conferencing as needed to support the UTP.

Contractual Services—Consultant and contract services.

SOC—None budgeted.

POC—Engineering evaluation services beyond the scope of UTP volunteers as needed to complete panel objectives.

Equipment—None budgeted.

Other Direct Costs—None budgeted.

Indirect Costs—Administrative and financial costs associated with operating the Program.

SOC—For LDEO, indirect costs at 53% are assessed on all charges except permanent equipment. In addition, subcontracts are charged indirect costs on the first \$25,000 of each contract. The indirect costs for subcontracts established prior to FY12 have already been paid, so these subcontracts are not subject to indirect cost during FY12. MTDCs are the total direct costs minus these exceptions.

POC—The approved provisional rate of 33% was used to calculate Ocean Leadership G&A costs. Each year, G&A costs are charged on all Ocean Leadership direct costs and on the first \$100,000 of all subcontracts Ocean Leadership administers under a particular contract (e.g., total annual G&A on LDEO and TAMRF subcontracts = \$66,000). The G&A costs for the two subcontracts (LDEO and TAMRF) are divided evenly between SOC G&A and POC G&A (\$33,000 each = \$16,500 SOC + \$16,500 NSF).

8. CORE CURATION

8.1. GOALS

USIO Core Curation goals include providing services in support of IODP core sampling and curation of the core collection archived at the Gulf Coast Repository (GCR).

8.2. DELIVERABLES IN FY12

- **Policy and Procedures:** Work with other IOs, the SAS, and IODP-MI to review and revise the IODP Sample, Data, and Obligations Policy, as needed, and implement a policy for IODP core curation. Work closely with staff to coordinate, standardize, and document curatorial procedures for IODP cores and samples.
- **Sample and Curation Strategies:** Plan sample and curation strategies for upcoming USIO expeditions and review all shipboard and moratorium-related requests in coordination with the other members of the Sample Allocation Committee for each expedition.
- **Sample Materials Curation System (SMCS):** Work with IODP-MI and the other IOs to complete testing and begin use of the successor database to the SMCS system for future expeditions and postmoratorium materials.
- **Sample Requests:** Fulfill postmoratorium sample requests from the scientific community.
- **Core Sampling:** Provide curator specialist on board the drillship to supervise core sampling during ship operations.
- **Core Curation:** Conduct all responsibilities associated with curation of core collections at the GCR and provide services in support of core sampling, analysis, and education.
- **Use of Core Collection:** Promote outreach use of the core collection in collaboration with IODP-MI and IO education/outreach personnel by providing materials for display at meetings or museums, as well as conducting tours and supporting other USIO outreach activities.
- **Meetings:** Participate in annual IODP curatorial staff meeting. Act as IO liaison to meetings with the other IOs, IODP-MI, and the SAS, as appropriate.
- **Legacy Documentation:** Routinely archive electronic copies of documents and reports produced by the USIO on behalf of IODP.

8.3. BUDGET

Core Curation			
Element/Expense Category	SOC	POC	Total
Salaries and Fringes	279,000	86,000	365,000
Travel	48,000	16,000	64,000
Supplies	15,000	5,000	20,000
Shipping	18,750	6,250	25,000
Communication	2,625	875	3,500
Contractual Services	0	0	0
Equipment	0	0	0
Other Direct Costs	28,487	10,163	38,650
Relocation	7,500	2,500	10,000
Training	5,625	1,875	7,500
Business Conferences	750	250	1,000
Services	6,862	2,288	9,150
Recruiting	3,250	1,750	5,000
Maintenance and Repair	4,500	1,500	6,000
Total Core Curation Direct Costs	391,862	124,288	516,150
Modified Total Direct Costs (if applicable)	0	0	0
Indirect Costs or Administrative Fees	0	0	0
Total Core Curation	\$391,862	\$124,288	\$516,150

Funds for this WBE are budgeted as follows:

Salaries and Fringes—Salaries, fringes, and sea pay, including an anticipated cost-of-living allowance and estimated fringe benefits rate.

SOC/POC—Salaries, fringes, and sea pay for staff supporting the USIO (see Section 3.2. USIO FTE Allocation Tables).

Travel—Transportation, per diem, lodging, and other associated costs.

SOC/POC—Travel to IODP meetings and workshops, IO meetings, and USIO meetings (including an annual IODP Curators meeting); professional conferences; and travel costs for USIO staff who will sail on FY12 expeditions.

Supplies—Office and operational supplies.

SOC/POC—General office supplies, printer supplies, general laboratory supplies, specialized supplies for sampling and curatorial tasks, and supplies for packing extra-large shipments, packing deep-frozen microbiological shipments, and hosting sampling parties.

Shipping—Postage, express mail, and freight.

SOC/POC—Postage for regular correspondence, regular-sized sample shipments to scientists, and as many as 10 special sample shipments for FY12 (for deep-frozen microbiological samples, U-channels, or whole core sections for X-ray fluorescence scanning) at an average cost of \$1,000 each.

Communication—Telephone and fax charges.

SOC/POC—Standard telephone line, long distance, cellular phone, and fax charges.

Contractual Services—None budgeted.

Equipment—None budgeted.

Other Direct Costs—Costs not covered in other categories.

Relocation—Relocation costs for new employees.

SOC/POC—Relocation costs for new employees.

Training—Registration, transportation, per diem, and lodging expenses related to professional training.

SOC/POC—Registration and travel costs for professional training courses and meetings (TAMU).

Business Conferences—Incidental expenses associated with meetings hosted by the USIO.

SOC/POC—Expenses for groups of scientists, educators, or others visiting GCR.

Services—Expert assistance.

SOC/POC—Annual physical examinations for seagoing personnel.

Recruiting—Employee recruitment.

SOC/POC—Cost of newspaper and internet advertisements of vacant positions.

Maintenance and Repair—Maintenance agreements and equipment repairs.

SOC/POC—Repairs and maintenance for storage buildings; refrigeration units; deep freezers; laboratory, repository, and office equipment; forklift; and shrink-wrap machine.

9. DATA MANAGEMENT

9.1. GOALS

USIO Data Management goals include management of data supporting IODP activities, management of expedition and postexpedition data, provision of long-term archival access to data, supporting information technology (IT) services, and providing database services for postmortality ESO and CDEX log data.

9.2. DELIVERABLES IN FY12

- Expedition Data: Maintain and manage databases supporting expedition planning and data collected during expeditions. Operate and maintain data management and harvesting systems (including QA/QC for storage and archival of expedition and postexpedition data, including core and sample tracking). Respond to data requests from the scientific community. Process downhole log data. Provide database services for postmortality ESO and CDEX log data.
- Program-wide Data Query Services: Provide USIO customers with access to expedition databases and data using web-based services.
- Operation and Maintenance: Operate and maintain computer and network systems both on ship and shore.
- Security: Monitor and protect USIO network and server resources to ensure safe, reliable operation and security for IODP data and IT resources.
- Software Development: Provide software development services as needed (excluding analytical systems), maintain software, and provide training support for shipboard scientists as necessary.
- Legacy Documentation: Routinely archive electronic copies of documents and reports produced by the USIO on behalf of IODP, including documentation of all information technology architecture and corresponding services configurations.

9.3. BUDGET

Data Management			
Element/Expense Category	SOC	POC	Total
Salaries and Fringes	667,404	1,279,830	1,947,234
Travel	42,726	95,980	138,706
Supplies	29,190	56,410	85,600
Shipping	1,165	1,835	3,000
Communication	9,135	22,445	31,580
Contractual Services	0	0	0
Equipment	69,598	189,114	258,712
Other Direct Costs	141,570	305,650	447,220
Training	21,750	32,250	54,000
Business Conferences	175	525	700
Software	15,000	45,000	60,000
Services	36,020	24,400	60,420
Maintenance and Repair	67,475	202,425	269,900
Library	1,150	1,050	2,200
Total Direct Costs	960,788	1,951,264	2,912,052
Modified Total Direct Costs (if applicable)	184,867	437,155	622,022
Indirect Costs or Administrative Fees	97,980	231,692	329,672
Total Data Management	\$1,058,768	\$2,182,956	\$3,241,724

Funds for this WBE are budgeted as follows:

Salaries and Fringes—Salaries, fringes, and sea pay, including an anticipated cost-of-living allowance and estimated fringe benefits rate.

SOC/POC—Salaries and fringes for staff supporting the USIO (see Section 3.2. USIO FTE Allocation Tables).

Travel—Transportation, per diem, lodging, and other associated costs.

SOC—Travel to IODP meetings and travel costs for USIO staff who will work at port calls and sail on FY12 expeditions and transit. Also includes LDEO travel to professional training courses and meetings.

POC—Travel costs for USIO staff who will work at port calls and sail on FY12 expeditions and transit. Also includes LDEO travel to professional training courses and meetings.

Supplies—Office and operational supplies.

SOC—General office supplies; electronic media and other computer supplies with an acquisition cost of less than \$1,000 (for TAMU) and \$5,000 (for LDEO), including printers, laptops, tablet computers, and monitors (LDEO); printer and copier supplies; paper; expendables and small hardware necessary for continued operation and maintenance of IT resources; digital photographic supplies (e.g., drum scanner supplies, CDs, DVDs, and tapes) for processing images on shore; and software for all shore-based elements at LDEO.

POC—General office supplies and electronic media and other computer supplies with an acquisition cost of less than \$1,000 (for TAMU) and \$5,000 (for LDEO), including printers, laptops, tablet computers, and monitors (LDEO). Other data management supplies may be purchased in support of USIO deliverables using cost avoidances gained during the fiscal year.

Shipping—Postage, express mail, and freight.

SOC—Postage for regular correspondence and small packages, data and photo requests, and other shipping needs.

POC—Postage for regular correspondence and small packages.

Communication—Telephone and fax charges.

SOC/POC—Standard telephone line, long distance, cellular phone, and fax charges.

Contractual Services—None budgeted.

Equipment—Procurement, upgrading, or fabrication of equipment with an acquisition cost of more than \$5,000, plus those items as defined by Ocean Leadership, Columbia University, or TAMRF policy.

SOC/POC—Computer and network equipment to replace aged network models, workstations, and plotters, and new workstations for new staff.

Other Direct Costs—Costs not covered in other categories.

Training—Registration, transportation, per diem, and lodging expenses related to professional training.

SOC/POC—Registration and associated travel costs for professional training courses and meetings (TAMU). Registration for professional training courses and meetings (LDEO).

Business Conferences—Incidental expenses associated with meetings hosted by the USIO.

SOC/POC—Expenses for refreshments provided for various business meetings and catering services occasionally required for on-site training and professional consultant services.

Software—Software purchases and upgrades.

SOC/POC—Software subscriptions, volume licensing agreements, and concurrent usage software agreements used in support of continuing activities and systems maintenance for the entire enterprise (TAMU).

Services—Expert assistance.

SOC—Rental for storage of paper prime data, annual physical examinations for seagoing personnel, TAMU Physical Plant services, IT expert assistance services, copier services, external copying and printing services, safe deposit box rentals, and back-up services.

POC—Annual physical examinations for seagoing personnel, TAMU Physical Plant services, IT expert assistance services, safe deposit boxes, and copier services.

Maintenance and Repair—Maintenance agreements and equipment repairs.

SOC/POC—Departmental copier maintenance agreements, various maintenance contracts and repairs for IT computer hardware and software, and noncontracted maintenance on imaging equipment such as cameras.

Library—Books, journals, and other resources.

SOC/POC—Books, professional publications, and documentation materials required for reference.

Indirect Costs—Administrative and financial costs associated with operating the Program.

SOC/POC— For LDEO, indirect costs at 53% are assessed on all charges except permanent equipment. In addition, subcontracts are charged indirect costs on the first \$25,000 of each contract. The indirect costs for subcontracts established prior to FY12 have already been paid, so these subcontracts are not subject to indirect cost during FY12. MTDCs are the total direct costs minus these exceptions.

10. PUBLICATIONS

10.1. GOALS

USIO Publications goals include providing publications support services for IODP riserless and riser drilling expeditions; editing, production, and graphics services for all required reports and scientific publications as defined in the USIO contract with IODP-MI; and warehousing and distribution of IODP, Ocean Drilling Program (ODP), and Deep Sea Drilling Project (DSDP) publications.

IODP publications include Quarterly and Annual Reports for the USIO; a *Scientific Prospectus* and *Preliminary Report* for each USIO, CDEX, and ESO expedition; and *Proceedings of the Integrated Ocean Drilling Program* volumes for USIO, CDEX, and ESO expeditions. CDEX and ESO reports and publications are produced according to prescribed schedules that commence upon receipt of content by the USIO.

10.2. DELIVERABLES IN FY12

- IODP Publications: Advise IODP-MI on scientific publication efforts. The following publications will be published or in production:
 - ~10 scientific reports (*Scientific Prospectuses* and *Preliminary Reports*);
 - Expedition reports from 14 IODP expeditions (8 USIO expeditions and 6 CDEX expeditions); and
 - Postexpedition data reports and synthesis papers from 21 IODP expeditions (11 USIO expeditions, 8 CDEX expeditions, and 2 ESO expeditions).
- IODP Reports: The following reports will be edited and produced:
 - Four IODP-USIO quarterly reports;
 - IODP-USIO Annual Program Plans to IODP-MI (SOC/POC) and NSF (POC/OPIC with SOC Appendix), including original versions and all revisions required by funding agencies; and
 - One IODP-USIO FY12 Annual Report (or other year-end document).
- Report of Program-related citation statistics.
- Management:
 - Manage postexpedition publication citations,
 - Manage peer review process for IODP *Proceedings* volumes (~50 data reports or synthesis papers),
 - Provide distribution and warehousing for IODP *Proceedings* volumes (and ODP and DSDP publications and reports), and
 - Provide centralized record keeping of IODP postexpedition research submissions.
- Publications Support: Provide a Publications Specialist for publications support and report coordination during four USIO and two CDEX expeditions and editorial, graphics, and production support during six postexpedition meetings.
- Legacy and Technical Documentation: Routinely archive electronic copies of all documents, reports, technical documentation, and scientific publications produced by the USIO on behalf of IODP.

10.3. BUDGET

Publications			
Element/Expense Category	SOC	POC	Total
Salaries and Fringes	1,346,202	92,797	1,438,999
Travel	40,000	20,000	60,000
Supplies	36,500	0	36,500
Shipping	27,600	0	27,600
Communication	8,000	0	8,000
Contractual Services	0	0	0
Equipment	0	0	0
Other Direct Costs	45,550	0	45,550
Relocation	10,000	0	
Training	2,000	0	2,000
Business Conferences	3,300	0	3,300
Services	21,650	0	21,650
Equipment Rental	300	0	300
Recruiting	5,000	0	
Maintenance and Repair	1,300	0	1,300
Library	2,000	0	2,000
Total Direct Costs	1,503,852	112,797	1,616,649
Modified Total Direct Costs (if applicable)	0	0	0
Indirect Costs or Administrative Fees	0	0	0
Total Publications	\$1,503,852	\$112,797	\$1,616,649

Funds for this WBE are budgeted as follows:

Salaries and Fringes—Salaries, fringes, and sea pay, including an anticipated cost-of-living allowance and estimated fringe benefits rate.

SOC—Salaries and fringes for staff supporting the USIO (see Section 3.2. USIO FTE Allocation Tables) and for USIO staff providing Publications Assistant support for CDEX expeditions.

POC—Salaries and fringes for staff supporting the USIO (see Section 3.2. USIO FTE Allocation Tables).

Travel—Transportation, per diem, lodging, and other associated costs.

SOC—Travel costs for IO and USIO meetings, and professional conferences, for USIO staff to provide Publications Assistant support for CDEX IODP expeditions, for nonsailing USIO staff to work at port calls, and to bring off-site USIO staff to participate in on-site meetings.

POC—Travel costs for USIO staff who will sail on FY12 and initial FY13 expeditions and transit and/or work on the ship during the maintenance period.

Supplies—Office and operational supplies.

SOC—General office supplies.

POC—None budgeted.

Shipping—Postage, express mail, and freight.

SOC—Postage and shipping for regular correspondence, IODP scientific reports, and *Proceedings of the Integrated Ocean Drilling Program* volume DVDs with Expedition Reports content, and freight charges for bulk shipments to and from the publications warehouse.

POC—None budgeted.

Communication—Telephone and fax charges.

SOC—Standard telephone line, long distance, and fax charges.

POC—None budgeted.

Contractual Services—None budgeted.

Equipment—None budgeted.

Other Direct Costs—Costs not covered in other categories.

Relocation—Relocation costs for new employees.

SOC—Relocation costs for new employees (TAMU).

POC—None budgeted.

Training—Registration, transportation, per diem, lodging expenses, and membership dues related to professional training.

SOC—Registration and travel costs for professional training courses.

POC—None budgeted.

Business Conferences—Incidental expenses associated with meetings hosted by the USIO.

SOC—Meal expenses related to hosting meetings.

POC—None budgeted.

Services—Expert assistance.

SOC— Payments to IODP Editorial Review Board members, duplication of *Proceedings of the Integrated Ocean Drilling Program* volume DVDs with Expedition Reports content, annual physical examinations for seagoing personnel, and printing of annual report.

POC—None budgeted.

Equipment Rental—Rental of equipment when it is more economical to rent than purchase.

SOC—Water cooler rental.

POC—None budgeted.

Recruiting—Employee recruitment.

SOC—Cost of newspaper and internet advertisements of vacant positions.

POC—None budgeted.

Maintenance and Repair—Maintenance agreements and equipment repairs.

SOC—Copier repairs and copier and forklift maintenance agreement.

POC—None budgeted.

Library—Books, journals, and other resources.

SOC—Reference books and subscriptions.

POC—None budgeted.

11. EDUCATION

11.1. GOALS

USIO Education responsibilities include developing and disseminating expedition-specific and thematic education activities and materials for elementary through post-secondary and free-choice learning audiences, and promoting diversity programs and partnerships to provide learning opportunities, mentoring, fellowships, and other horizon-building experiences for minority students to explore careers in the Earth System sciences. Expedition-specific activities will include current expeditions and supporting legacy resources.

The USIO facilitates education activities through Deep Earth Academy (funded jointly by the USIO and the United States Science Support Program) in cooperation with other U.S. education and outreach groups, conducting teacher education activities; developing, testing, and disseminating educational curriculum that highlights IODP science programs; and implementing live and near-real-time programs that highlight and use the *JOIDES Resolution* as a platform for education. These activities require direct and indirect interfacing with students and educators through a variety of activities targeting U.S. middle-school, high-school, undergraduate, family, and museum audiences. The USIO also conducts diversity outreach initiatives to allow minority students to pursue studies in earth systems sciences or to explore careers in scientific ocean drilling and large-scale science program management.

11.2. DELIVERABLES IN FY12

No SOC/POC deliverables are scheduled for FY12.

11.3. BUDGET

With no deliverables scheduled in FY12, there are no funds budgeted for this WBE.

12. OUTREACH

12.1. GOALS

USIO Outreach responsibilities include establishing measures to effectively communicate both shore- and ship-based components of IODP activities to the public in collaboration with IODP-MI and the other IOs, and encouraging awareness of and interest in the scientific results of the Program.

The USIO raises the visibility of IODP an innovative international earth science research program to new and existing audiences by targeting informational outreach to the general public, science and general-interest media, scientists and engineers from both within the IODP community and beyond, and decision makers at large national concerns. USIO Outreach uses expeditions and Program achievements to promote scientific ocean drilling and the scientific data and analysis that emerge from it, and makes the connection between this emerging scientific knowledge and its positive contribution to society worldwide. USIO communications activities and tools build a foundation of knowledge about scientific ocean drilling (e.g., its achievements, merits, spectrum of national contributions, and high value to future scientific achievement) that is easily accessible to the public and other targeted communities online, in forums and meetings, and in the media.

12.2. DELIVERABLES IN FY12

SOC-related activities include portions of support for the following deliverables:

- **Media Outreach and Public Outreach:** Conduct media and general public outreach related to ongoing *JOIDES Resolution* operations, as well as at major science meetings both in the United States and abroad (as appropriate), and in support of Program scientists' publications in high-profile science journals. Leverage online and other tools to proactively tell the IODP "story" in as many compelling ways, for as many diverse audiences, across as many communications platforms as possible, to raise the overall visibility and positive image of IODP.
- **Community Outreach Activities:** Develop new and improve existing materials and programs designed to inform the IODP community and colleagues of Program news and developments (e.g., community newsletter, advertisements for Program opportunities, and so on).
- **Media Training:** Provide media training for Co-Chief Scientists and select Science Party members of all *JOIDES Resolution* expeditions; provide similar training as appropriate for other members of the IODP community.
- **Global Outreach Activities:** Coordinate outreach activities with other IODP entities, including IODP-MI, ECORD, and CDEX.
- **Legacy Documentation:** Routinely format and archive electronic copies of relevant products and publications (e.g., press releases, media clips, brochures, newsletters, and so on) produced by the USIO on behalf of IODP.

12.3. BUDGET

Outreach			
Element/Expense Category	SOC	POC	Total
Salaries and Fringes	33,132	0	33,132
Travel	12,500	0	12,500
Supplies	3,400	0	3,400
Shipping	2,800	0	2,800
Communication	500	0	500
Contractual Services	21,700	0	21,700
Equipment	0	0	0
Other Direct Costs	0	0	0
Total Direct Costs	74,032	0	74,032
Modified Total Direct Costs (if applicable)	0	0	0
Indirect Costs or Administrative Fees	24,431	0	24,431
Total Outreach	\$98,463	\$0	\$98,463

Funds for this WBE are budgeted as follows:

Salaries and Fringes—Salaries and fringes, including an anticipated cost-of-living allowance and estimated fringe benefits rate.

SOC—Salaries and fringes for staff supporting the USIO (see Section 3.2. USIO FTE Allocation Tables).

POC—None budgeted.

Travel—Transportation, per diem, lodging, and other associated costs.

SOC—A portion of the cost of participating in outreach to stakeholders, press events, media training, and staffing of booths at national and international meetings.

POC—None budgeted.

Supplies—Office and operational supplies.

SOC—General office supplies, printer and copier supplies, and electronic media and other computer supplies with an acquisition cost of less than \$1,000.

POC—None budgeted.

Shipping—Postage, express mail, and freight.

SOC—General postage and express mail/courier services for regular correspondence.

POC—None budgeted.

Communication—Telephone and fax charges.

SOC—Standard telephone line charges, long distance charges, and fax charges.

POC—None budgeted.

Contractual Services—Consultant and contract services.

SOC—Platform enrichment activities, including preparation of public relations materials, posters, and multimedia products; media training; and booth rentals and associated costs at national meetings.

POC—None budgeted.

Equipment—None budgeted.

Other Direct Costs—None budgeted.

Indirect Costs—Administrative and financial costs associated with operating the Program.

SOC—The approved provisional rate of 33% was used to calculate Ocean Leadership G&A costs. Each year, G&A costs are charged on all Ocean Leadership direct costs and on the first \$100,000 of all subcontracts Ocean Leadership administers under a particular contract (e.g., total annual G&A on LDEO and TAMRF subcontracts = \$66,000). The G&A costs for the two subcontracts (LDEO and TAMRF) are divided evenly between SOC G&A and POC G&A (\$33,000 each = \$16,500 SOC + \$16,500 NSF).

POC—None budgeted.