

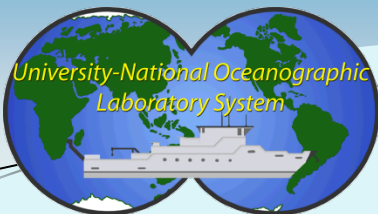


UNOLS  
Fleet Improvement Committee  
Meeting  
October 22, 2012



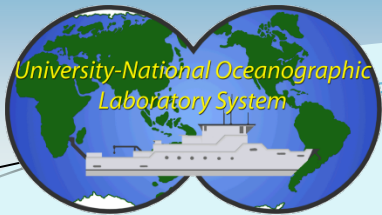
**Table 1. Comparison of the 1995 UNOLS Fleet with the 2008 UNOLS Fleet**

<b>Class of Vessel</b>	<b>1995</b>	<b>2008</b>	<b>2012</b>
Global/Large	5	6	6
Ocean/Intermediate	8	6	5
Regional	3	3	3
Coastal/Local	10	8	6
<b>Ship Totals</b>	<b>26</b>	<b>23</b>	<b>20</b>



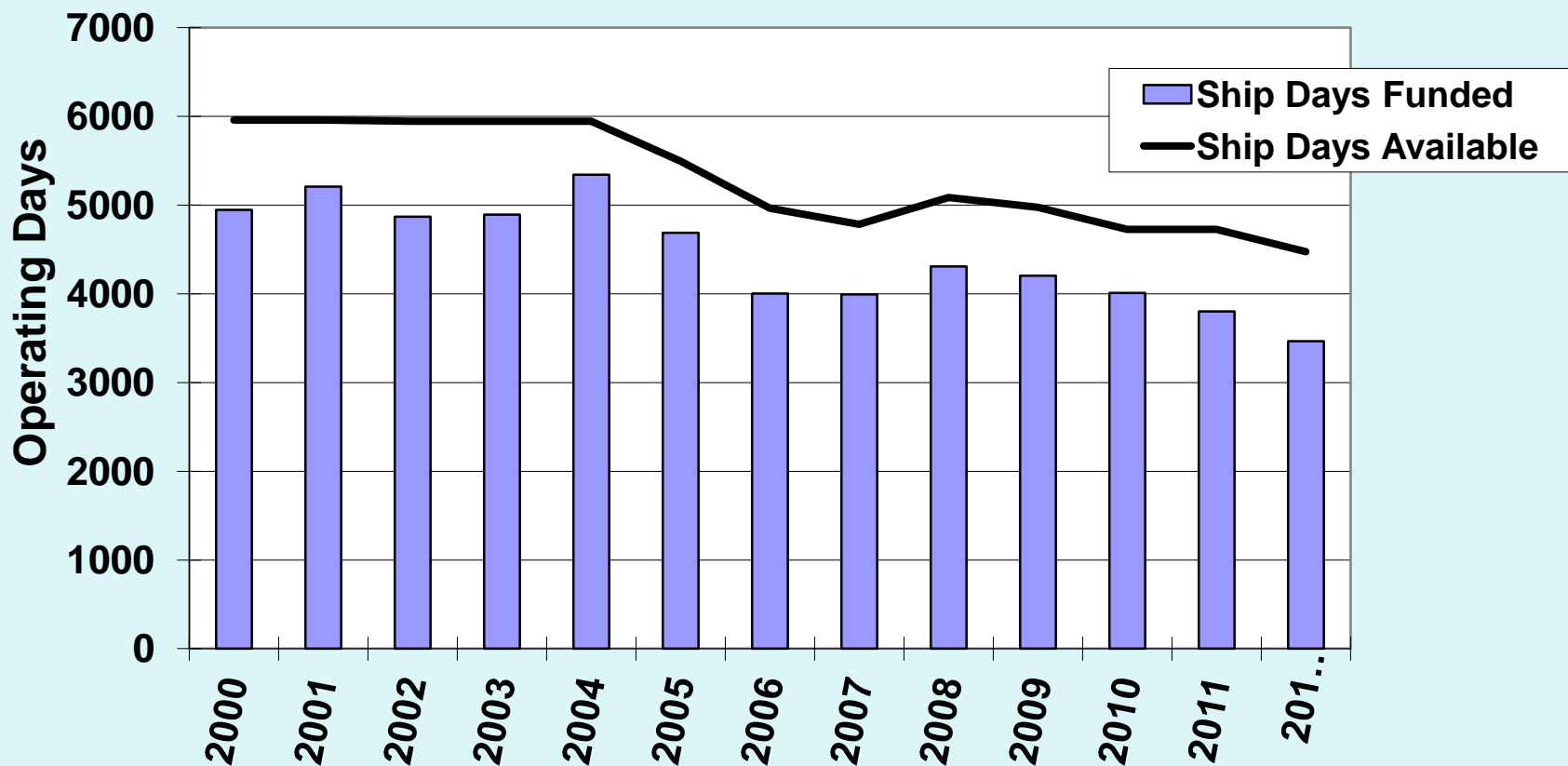
# Table 2 - 2012 UNOLS Fleet

SHIP/CLASS	BUILT	Conv/ Mid Life	Owner	LOA m (ft)	Science Berths
<b>Global Class</b>					
<i>Melville</i>	1969	1991	NAVY	85 (279)	38
<i>Knorr</i>	1970	1989	NAVY	85 (279)	34
<i>Thomas G. Thompson</i>	1991		NAVY	84 (274)	36
<i>Roger Revelle</i>	1996		NAVY	84 (274)	37
<i>Atlantis</i>	1997		NAVY	84 (274)	37
<i>Marcus G. Langseth</i>	1991	2007-2011	NSF	71 (235)	35
<b>Ocean/Intermediate Class</b>					
<i>Kilo Moana</i>	2002		NAVY	57 (186)	29
<i>Endeavor</i>	1976	1993	NSF	56 (184)	18
<i>Oceanus</i>	1976	1994	NSF	56 (184)	19
<i>Atlantic Explorer</i>	1982	2006	BIOS	51 (168)	20
<i>New Horizon</i>	1978	1996	SIO	52 (170)	19
<b>Regional Class</b>					
<i>Point Sur</i>	1981		NSF	41 (135)	12
<i>Cape Hatteras</i>	1981	2004	NSF	41 (135)	14
<i>Hugh R. Sharp</i>	2005		UD	44 (146)	14
<b>Coastal/Local Class</b>					
<i>Robert Gordon Sproul</i>	1981	1985	SIO	38 (125)	12
<i>Pelican</i>	1985	2003	LUMCON	32 (105)	14
<i>Walton Smith</i>	2000		Miami	30 (96)	16
<i>Savannah</i>	2001		SKID/UG	28 (92)	19
<i>Blue Heron</i>	1985	1999	UMINN	26 (86)	6
<i>Clifford Barnes</i>	1966	1984	NSF	20 (66)	6



# Figure 29: Ship Days Funded

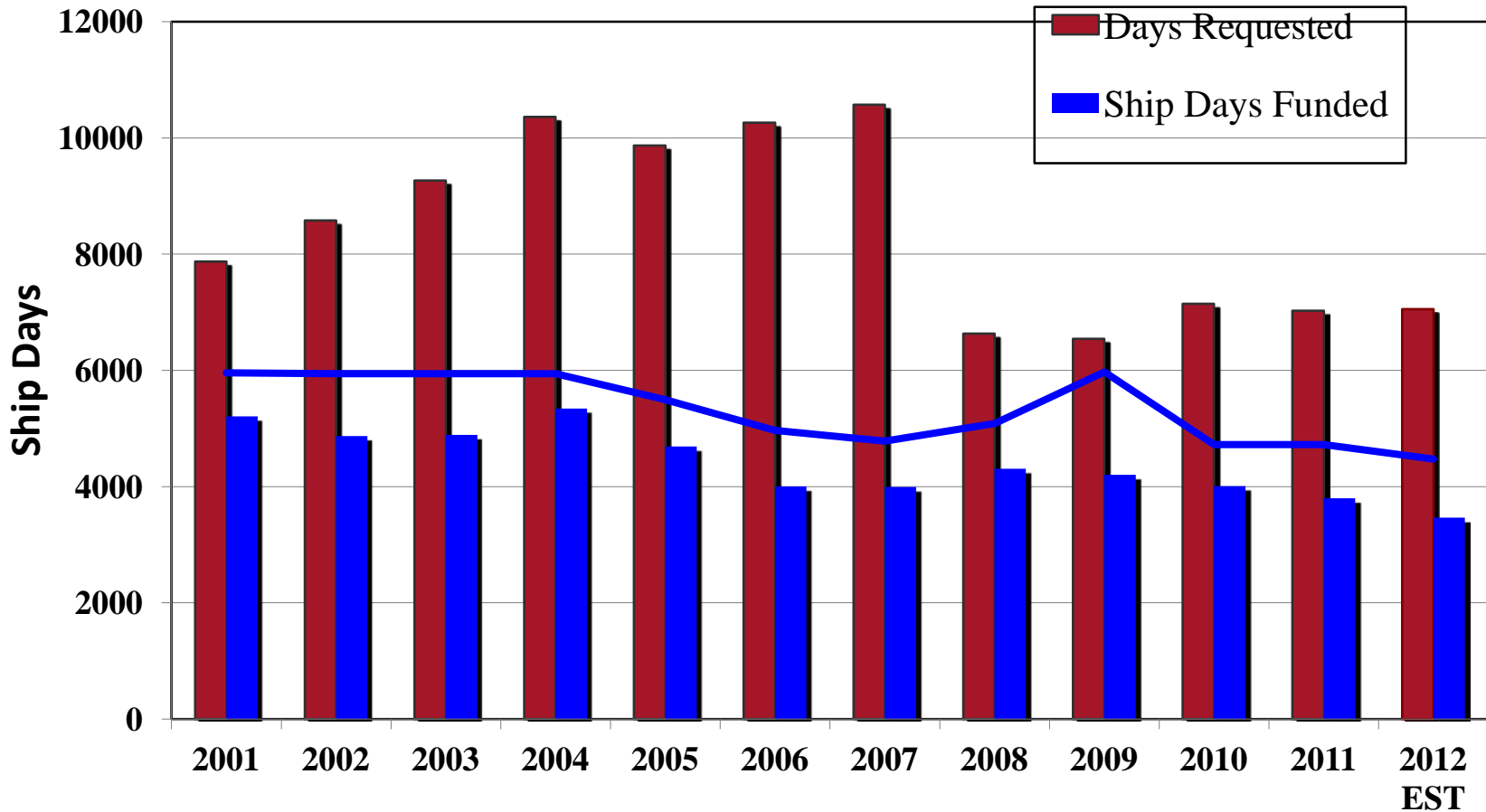
## Ship Days Funded and Ship Days Available

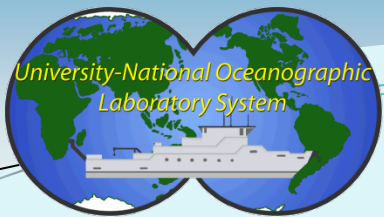




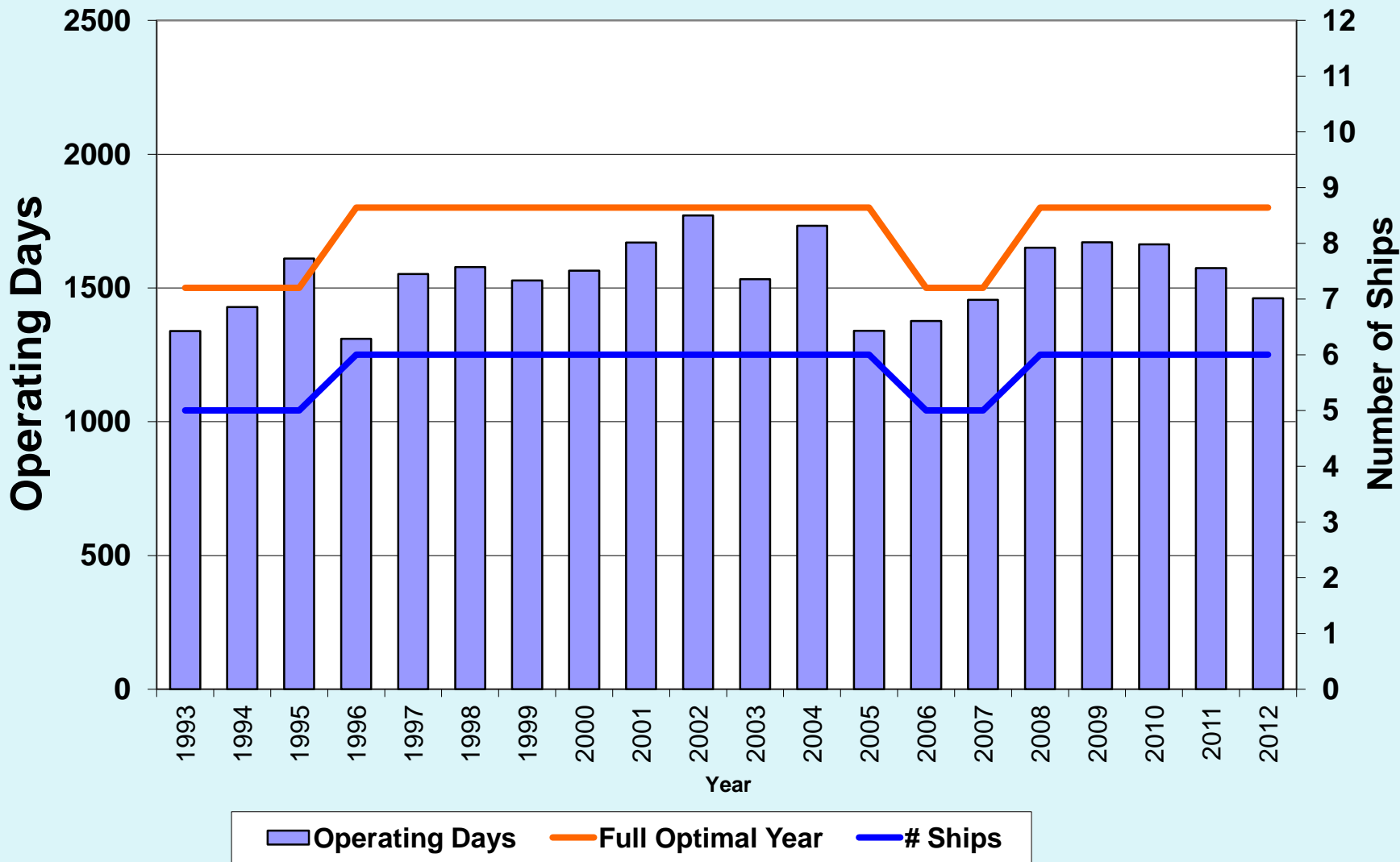
# Figure 30: Ship Time Demand vs. Ship Days Funded

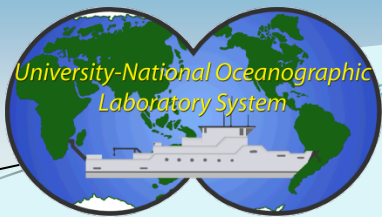
## Ship Time Demand vs Ship Days Funded



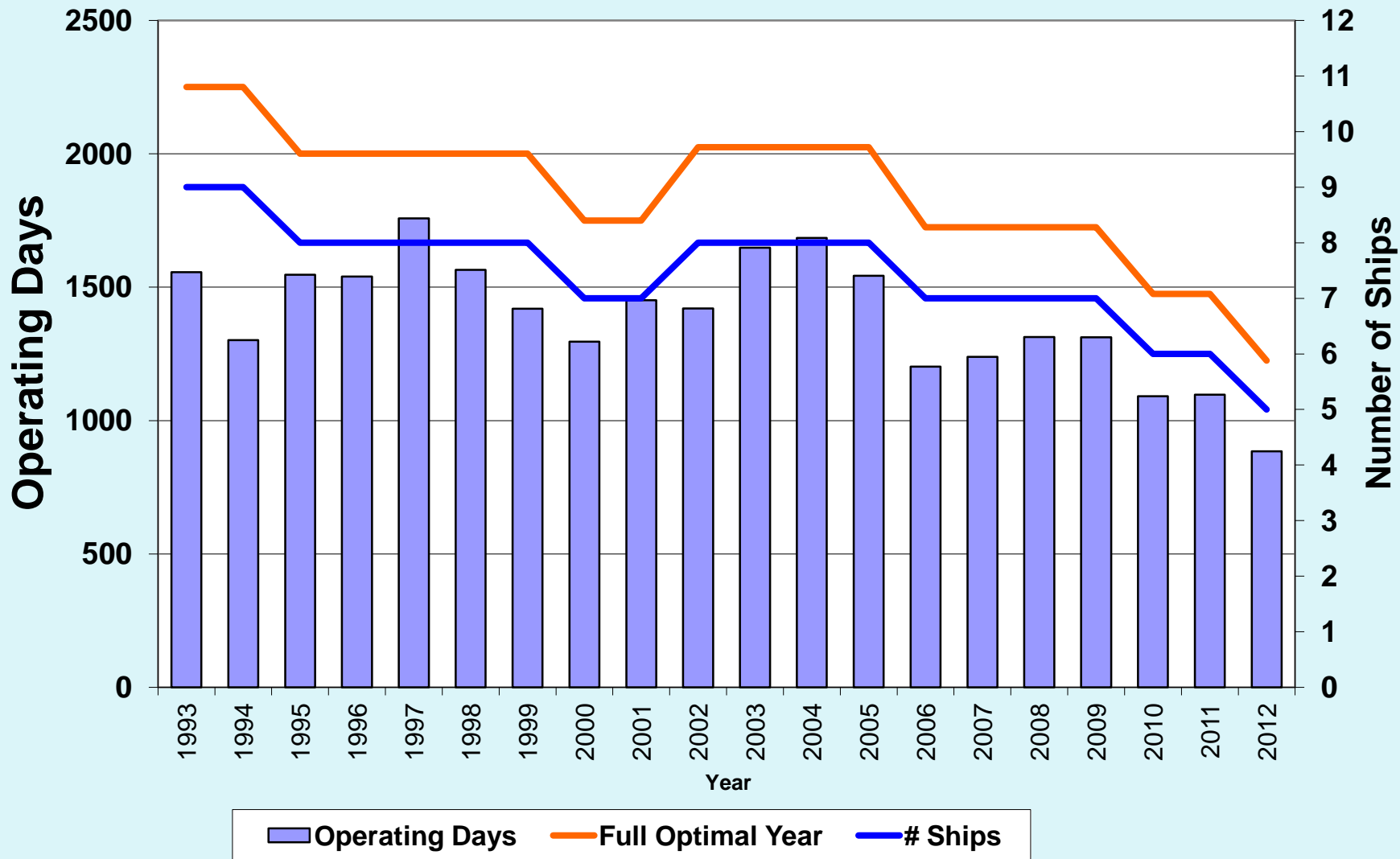


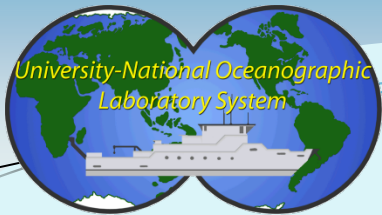
# UNOLS Global Ship Utilization



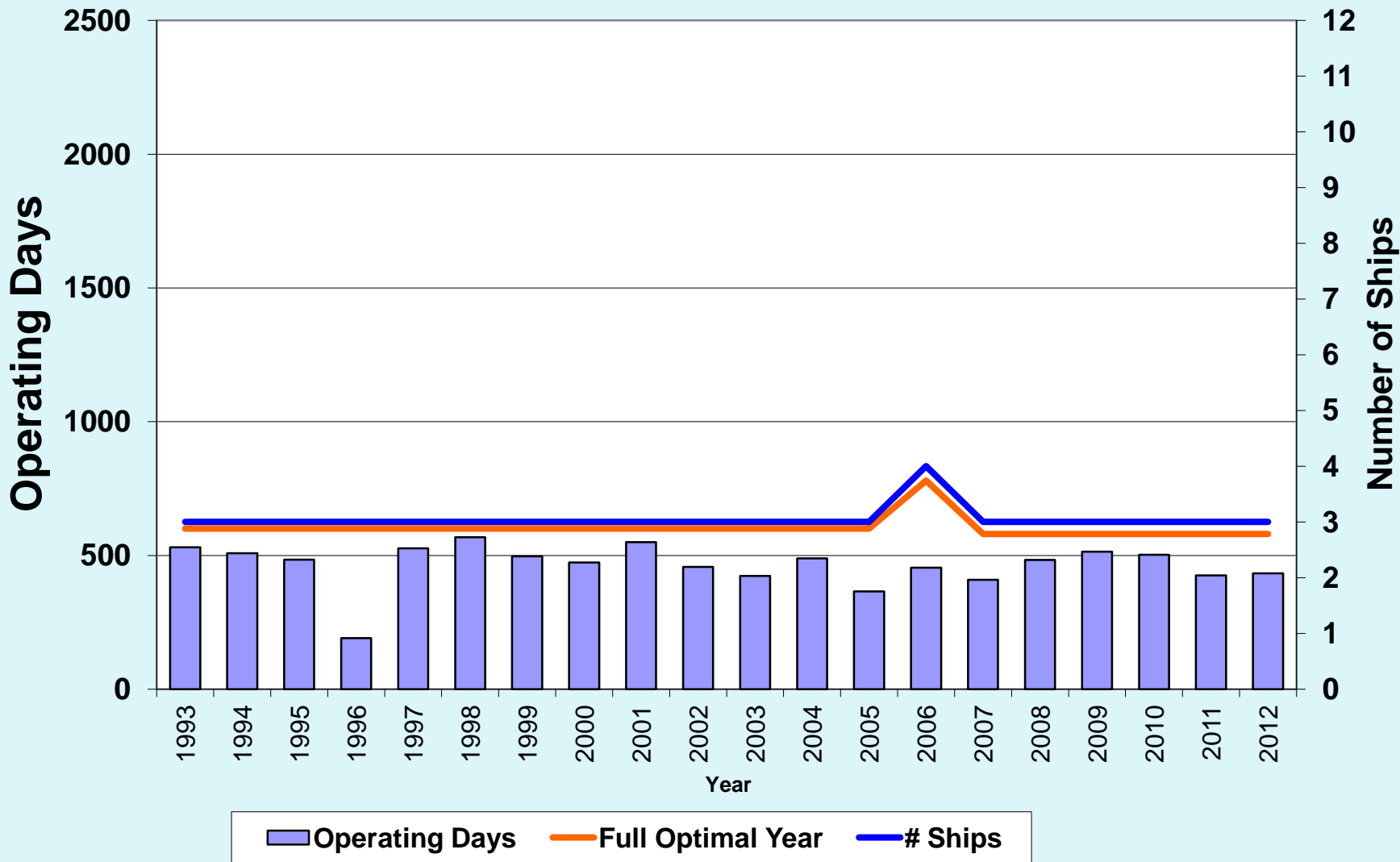


# UNOLS Ocean/Intermediate Ship Utilization

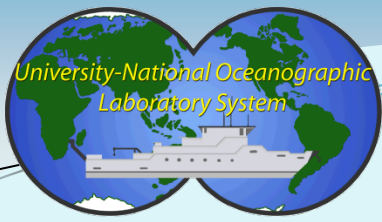




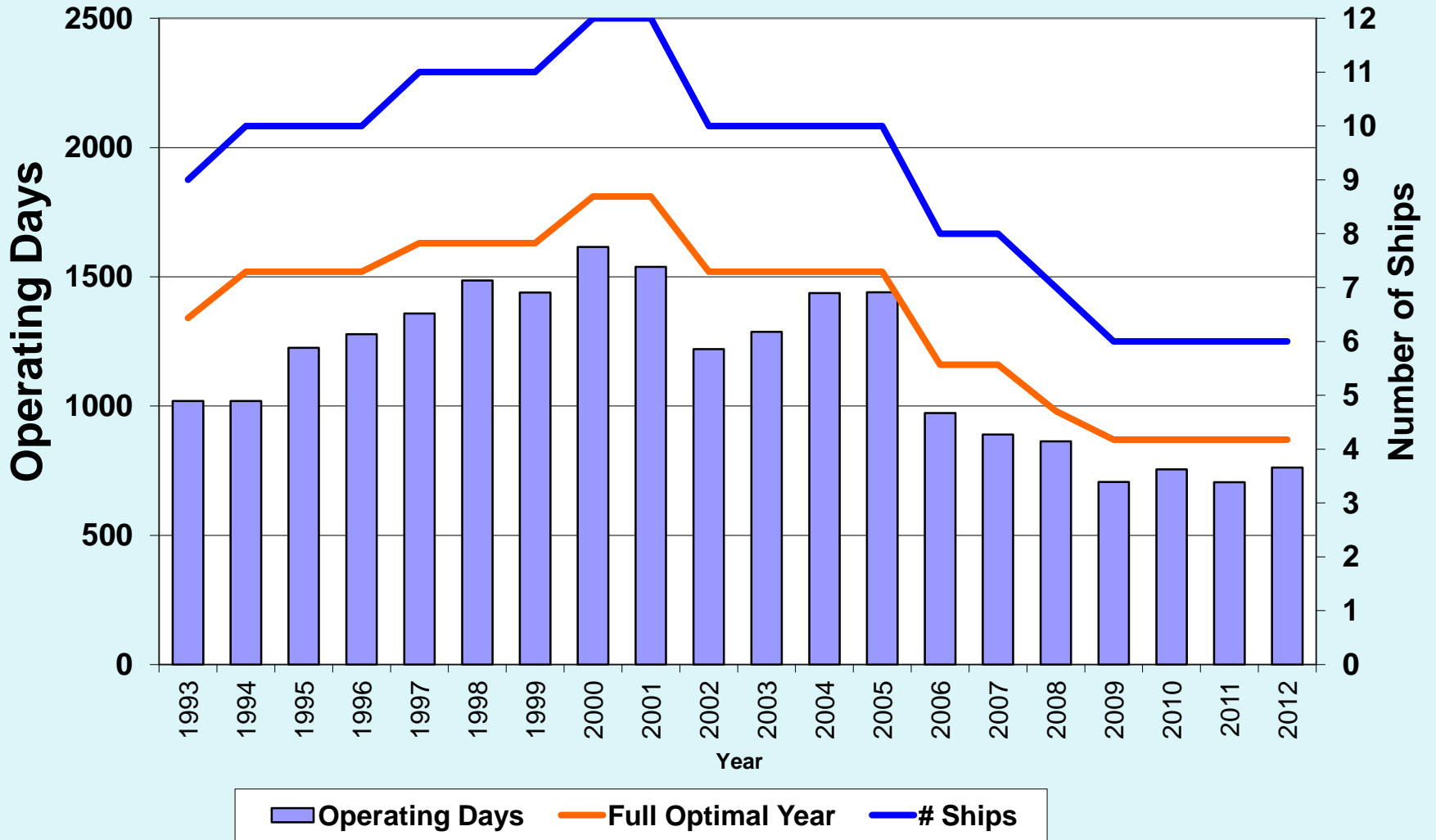
# UNOLS Regional Ship Utilization

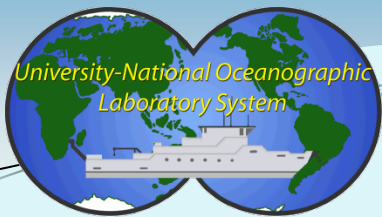






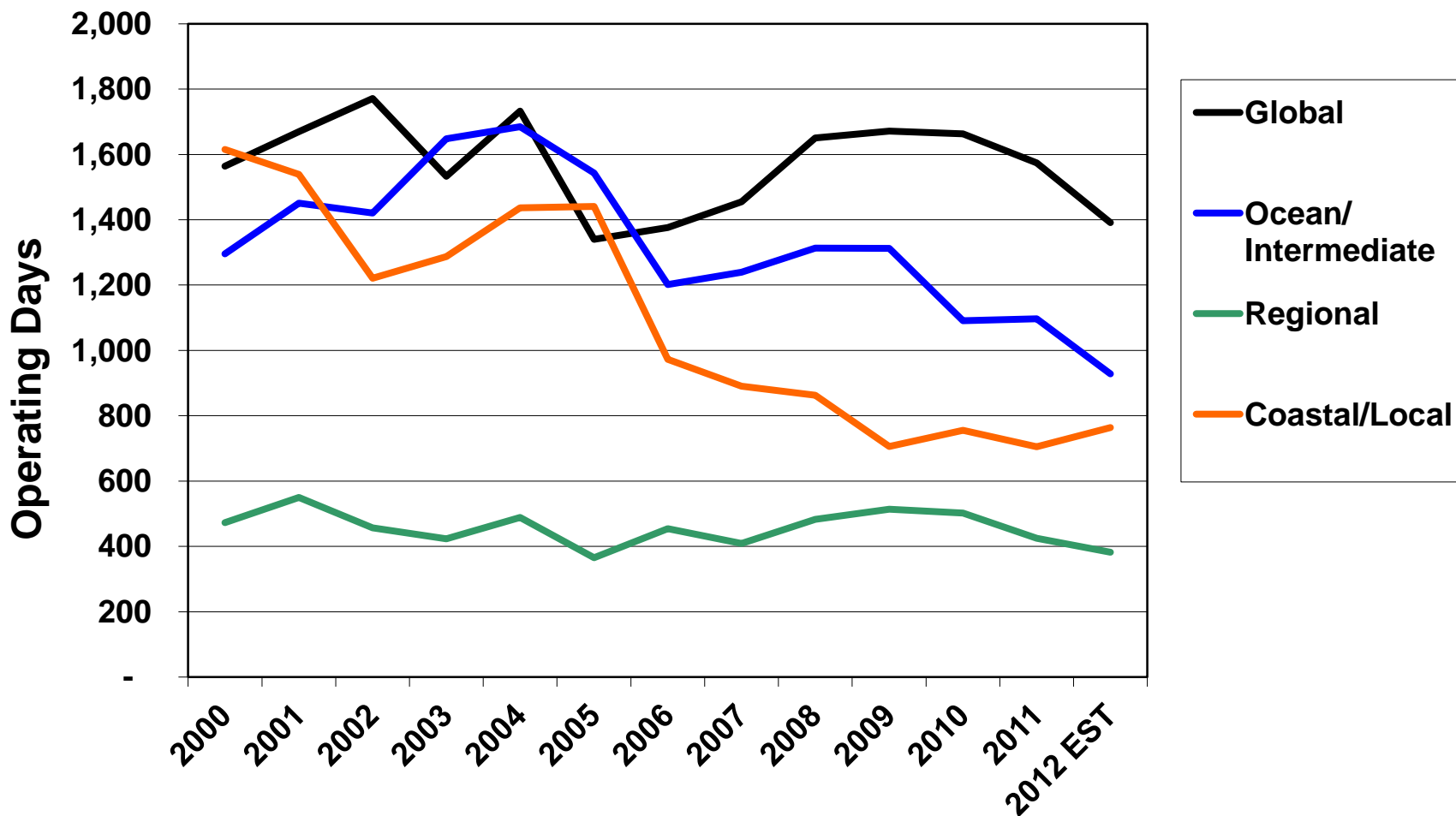
# UNOLS Coastal/Local Ship Utilization





# Figure 40: Utilization by Class

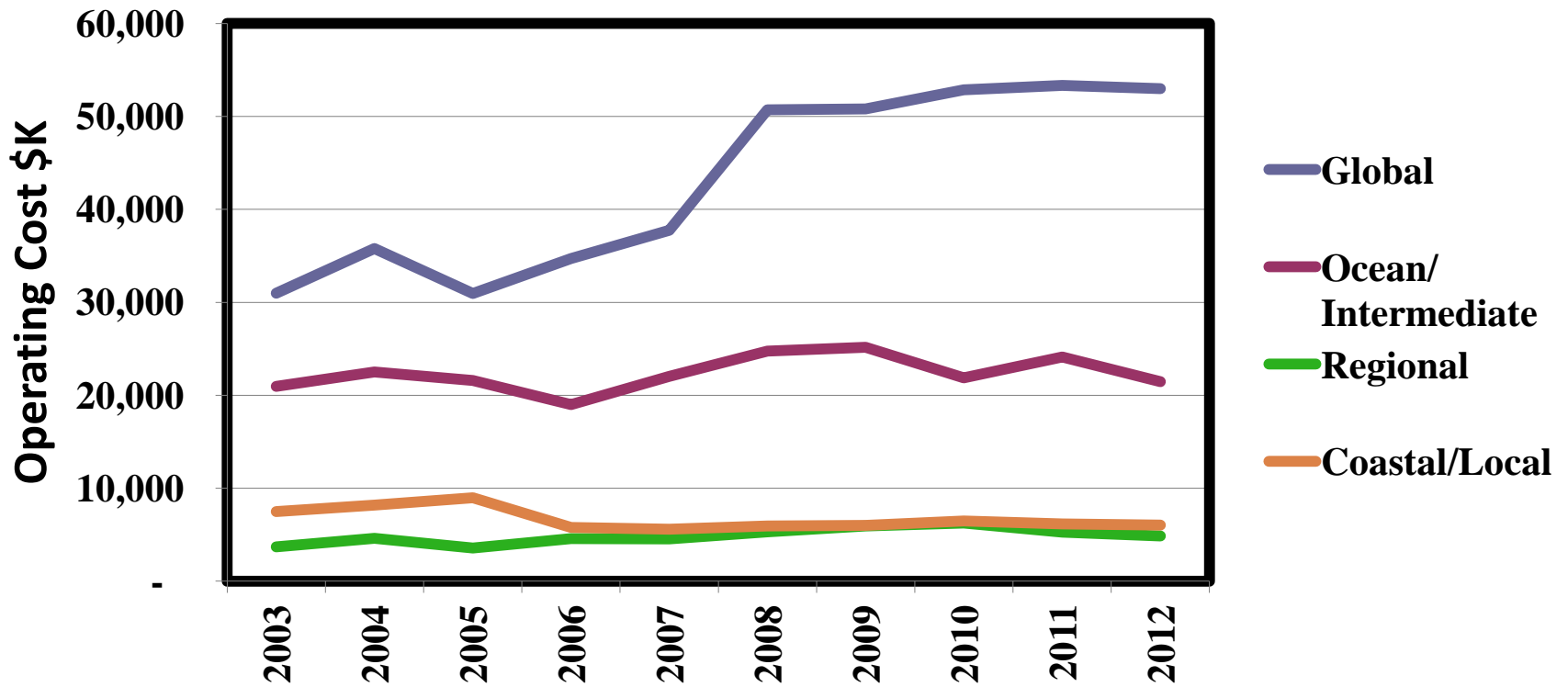
## Ship Utilization by Class: 2000 - 2012

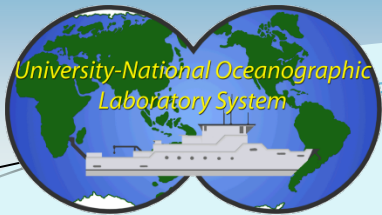




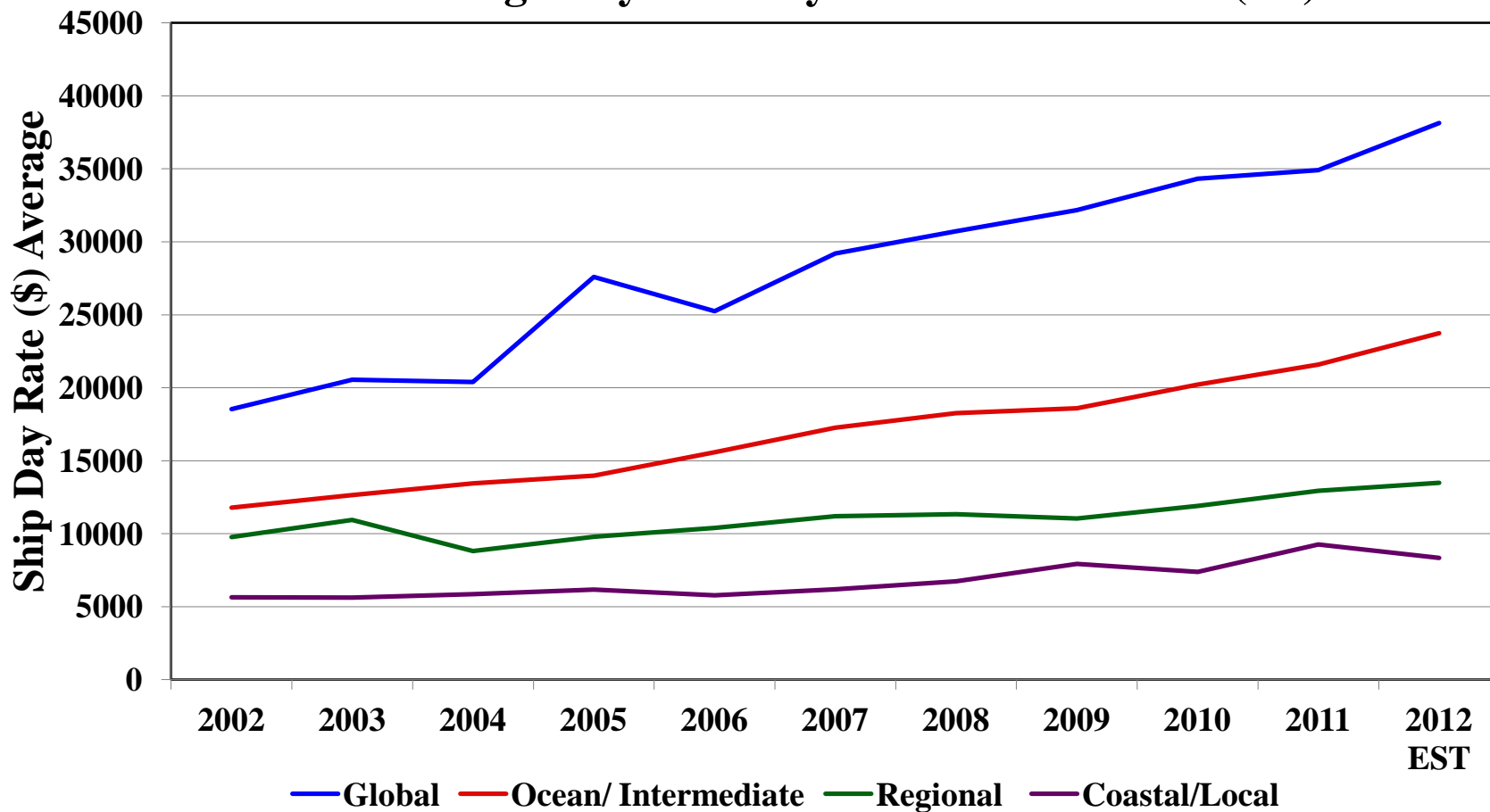
# Operating Cost by Class

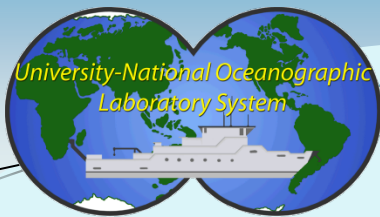
## Operating Cost by Ship Class



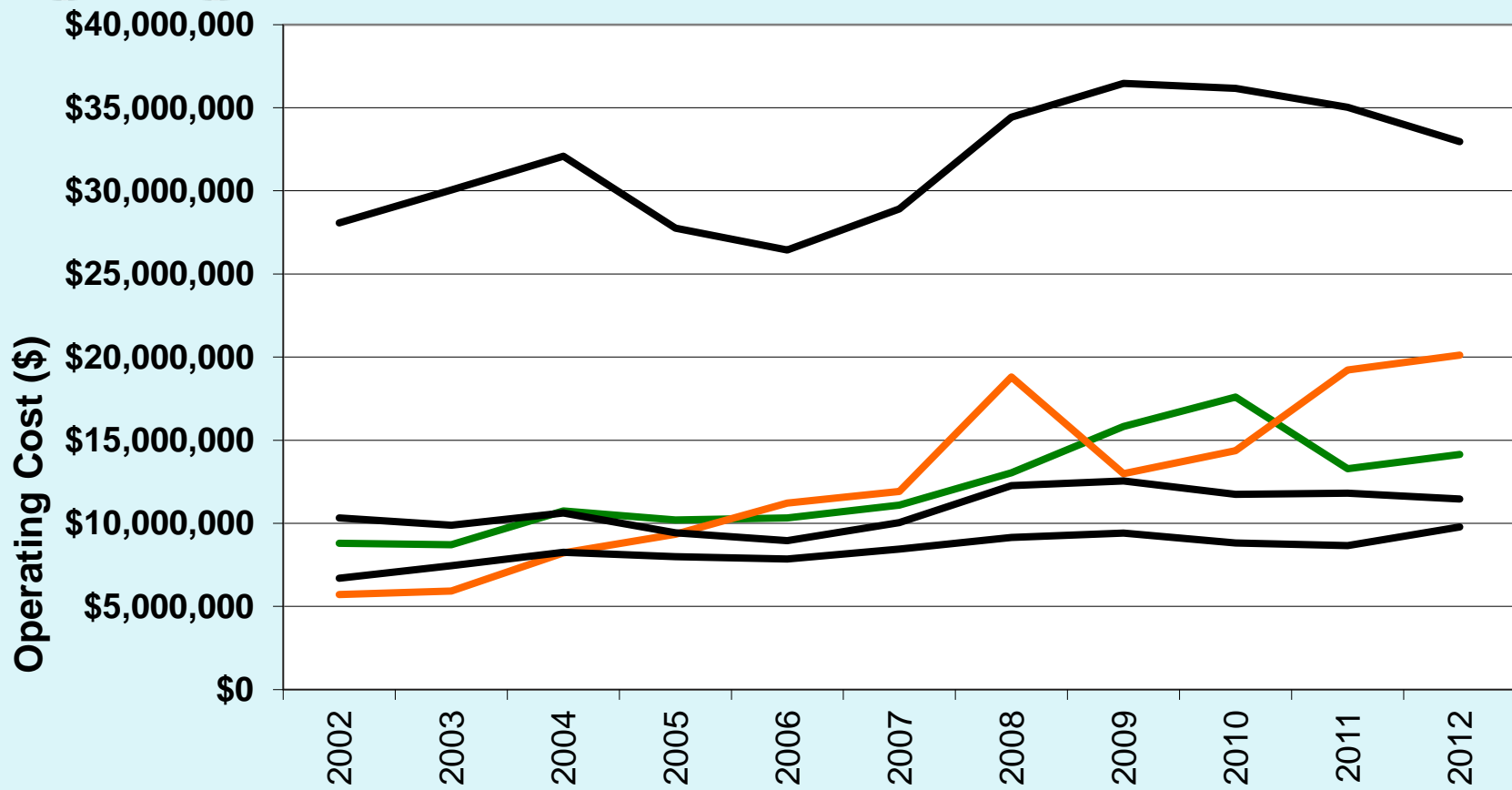


## Average Day Rates by Class: 2002 - 2012 (est)

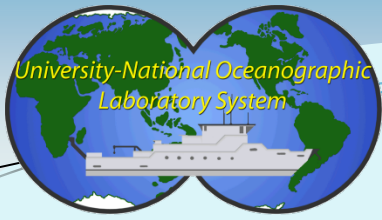




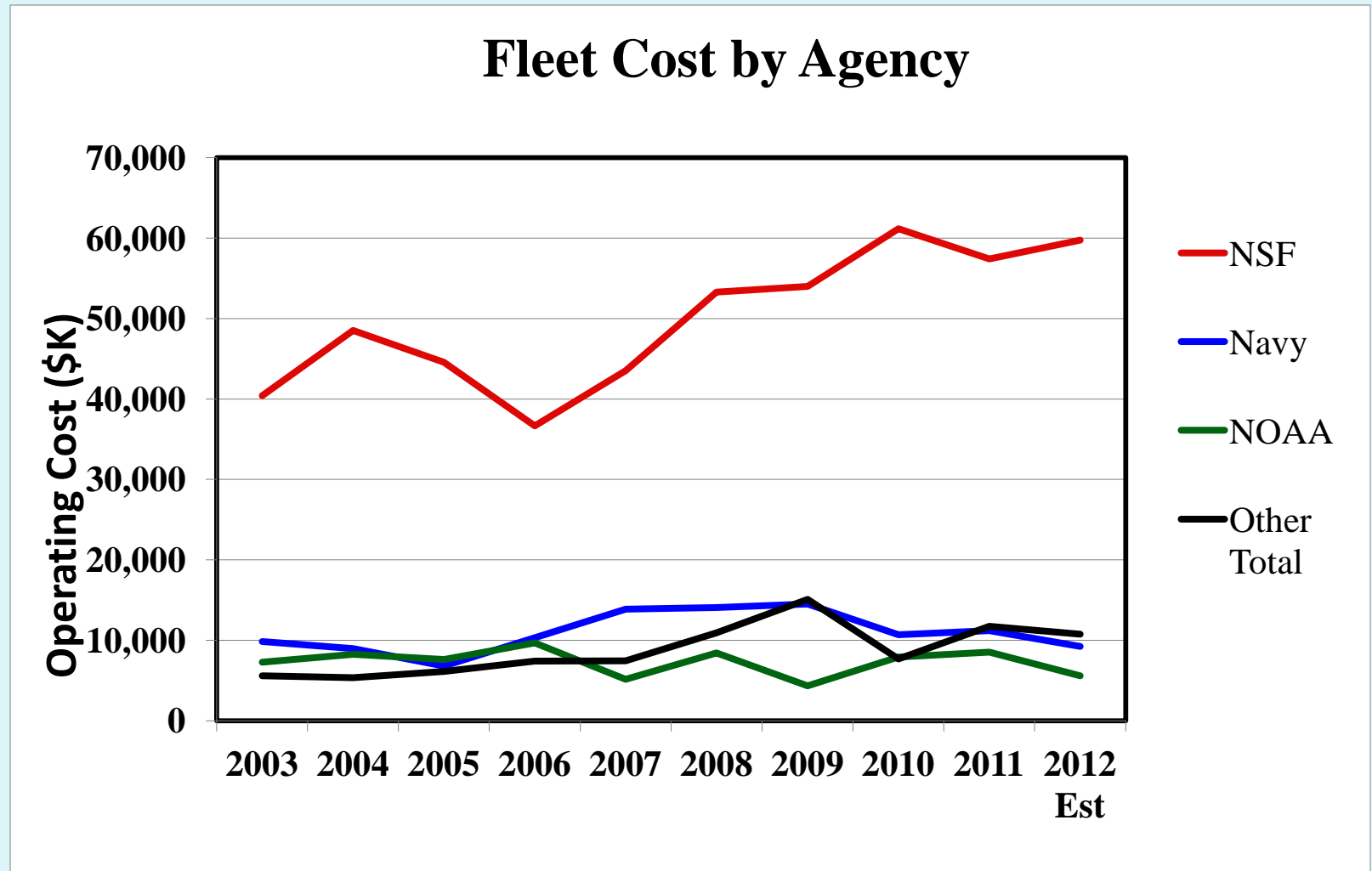
# Fleet Operations Cost by Category

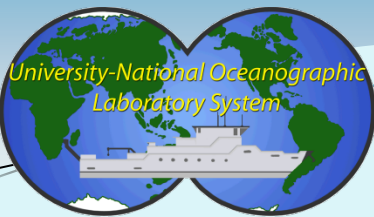


- Salary and Benefits (Crew and Shore)
- Fuel and Lube Oil
- Indirect Costs
- Maintenance and Overhaul
- TOTAL\_Other



# Figure 44: Fleet Operating Cost by Funding Source





# Figure 18: Service Life End Dates

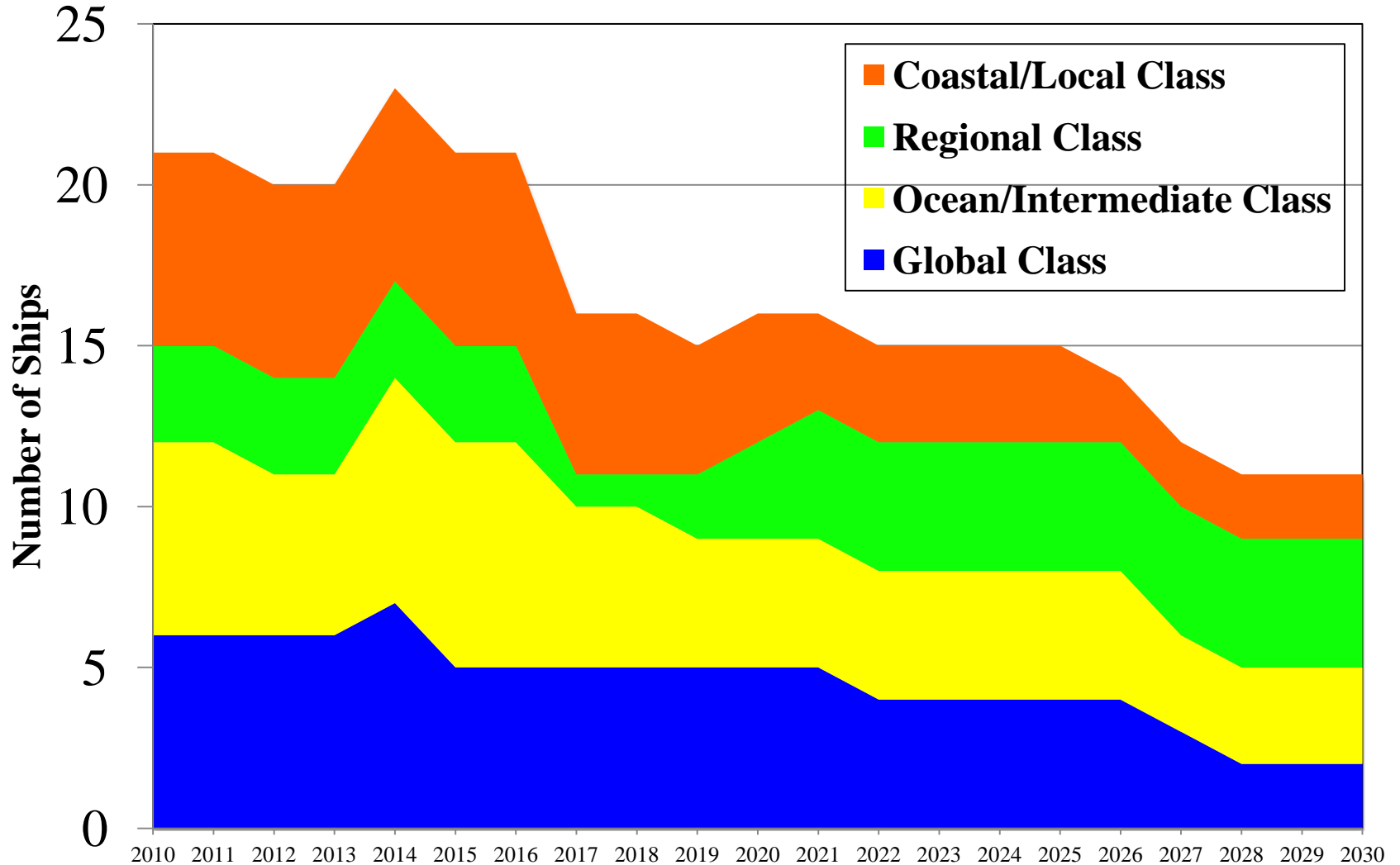
PRELIMINARY - Updated: August 27, 2012						2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	
SHIP/CLASS	BUILT	Conv/ Mid Life	Owner	LOA m (ft)	Science Berths																						
<b>Global Class</b>																											
Melville	1969	1991	NAVY	85 (279)	38	---	---	---	---	-X																	
Knorr	1970	1989	NAVY	85 (279)	34	---	---	---	---	-X																	
Thomas G. Thompson	1991		NAVY	84 (274)	36	---	---	---	---	---	---	---	---	---	---	---	-X										
Roger Revelle	1996		NAVY	84 (274)	37	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Atlantis	1997		NAVY	84 (274)	37	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Marcus G. Langseth	1991	2007-2011	NSF	71 (235)	35	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Sikuliaq	2013		NSF	80 (261)	26					>---																	
<b>Ocean/Intermediate Class</b>																											
Kilo Moana	2002		NAVY	57 (186)	29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Wecoma	1976	1994	NSF	56 (185)	18	---	-X																				
Endeavor	1976	1993	NSF	56 (184)	18	---	---	---	---	-X	---	-X															
Oceanus	1976	1994	NSF	56 (184)	19	---	---	---	---	-X	---	-X															
Atlantic Explorer	1982	2006	BIOS	51 (168)	20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
New Horizon	1978	1996	SIO	52 (170)	19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
AGOR 27	2014		NAVY							>---																	
AGOR 28	2014		NAVY							>---																	
<b>Regional Class</b>																											
Point Sur	1981		NSF	41 (135)	12	---	---	---	---	-X	---	-X															
Cape Hatteras	1981	2004	NSF	41 (135)	14	---	---	---	---	-X	---	-X															
Hugh R. Sharp	2005		UD	44 (146)	14	---	---	---	---	---	---	---	---	---	---	---	M-										
RCRV1	2018		NSF																								
RCRV2	2019		NSF																								
RCRV3	2020		NSF																								
<b>Coastal/Local Class</b>																											
Robert Gordon Sproul	1981	1985	SIO	38 (125)	12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Pelican	1985	2003	LUMCON	32 (105)	14	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Walton Smith	2000		Miami	30 (96)	13	---	---	---	---	---	---	M-															
Savannah	2001		SKID/UG	28 (92)	19	---	---	---	---	---	---	M-															
Blue Heron	1985	1999	UMINN	26 (86)	6	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Clifford Barnes	1966	1984	NSF	20 (66)	6	---	---	---	---	---	---	---	-X														
<b>Total Number of Vessels in Fleet</b>						21	21	20	21	22	19	19	16	17	16	17	16	15	15	15	15	15	14	12	11	11	11

X= Current projected Service Life End Date

M= Mid-life Refit

The service life end dates shown in blue and red text need to be vetted by FIC and Agency Reps.

### Figure 48: Evolution of the UNOLS Fleet







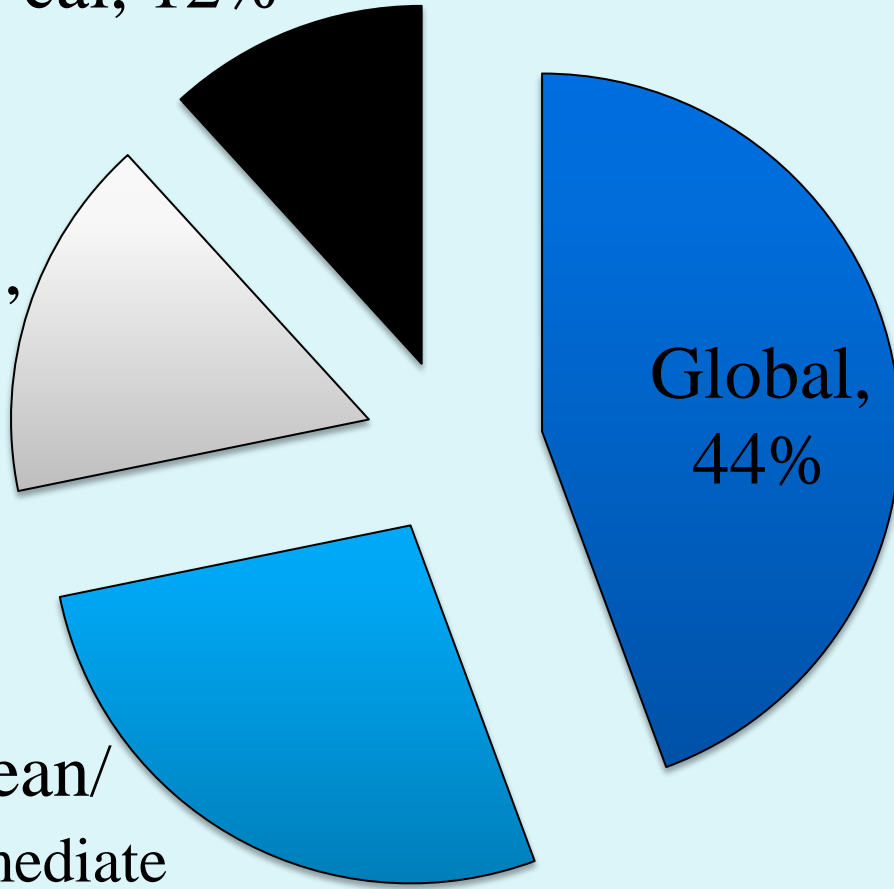
Coastal/Local, 12%

2011

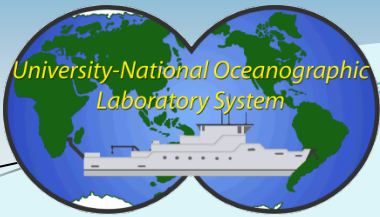
Regional, 16%

Global, 44%

Ocean/Intermediate, 28%







# 2009 FIP Outline

## **Acronym and Abbreviations**

## **Executive Summary**

### **I Introduction**

### **II Future Science**

### **III UNOLS, 2008 Facility Composition and Utilization Trends**

### **IV Future Fleet Utilization and Capacity Projections**

A Fleet Renewal Plans and Future Capacity

B The Impact of Future Research Facility Requirements on Ship Operations

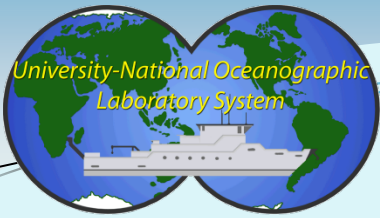
C Constraints and Challenges

D Options and Considerations for Meeting Ship Time Demand

### **V Findings and Recommendations**

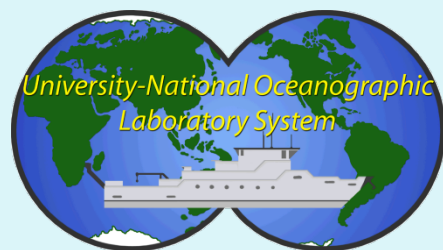
## **References**

## **Appendices**

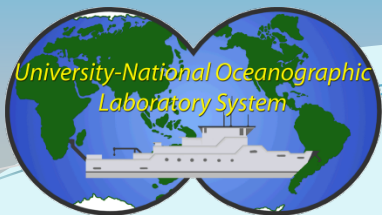


# Fleet Improvement Plan (FIP)

- Updating the 2009 FIP:
  - Incorporating the new Four Class System
  - Revised Service – Life End Dates
  - Revised projections
  - New Full Optimal Year Definitions



*Thank You!*



# FIC Membership

<b>Clare Reimers</b>	<b>OSU (Chair) [At-large]</b>	<b>10/09-10/12</b>	<b>Chem O</b>
<b>Fernando Martinez</b>	<b>UH – At-large</b>	<b>2/11-2/14</b>	<b>MG&amp;G</b>
<b>David Checkley</b>	<b>SIO, Operator</b>	<b>9/07 - 9/13</b>	<b>Bio</b>
<b>Allan Devol</b>	<b>UW – Operator</b>	<b>2/09-2/15</b>	<b>Chem O</b>
<b>Maureen Conte</b>	<b>BIOS – Op</b>	<b>9/06 – 9/12</b>	<b>BioGeoChem</b>
<b>Al Hine</b>	<b>USF – Non-Op</b>	<b>9/06 – 9/12</b>	<b>Geology</b>
<b>David Bradley</b>	<b>PSU – Non Op</b>	<b>1/10 - 1/13</b>	<b>Acoustics</b>
<b>Miles Sundermeyer</b>	<b>UMassD – Non Op</b>	<b>1/10 - 1/13</b>	<b>Phys O</b>
<b>Marc Willis</b>	<b>RVTEC</b>		<b>Ex-Officio</b>
<b>Al Suchy</b>	<b>RVOC</b>		<b>Ex-Officio</b>

