

# UNOLS Report to the DEep Submergence Science Committee

**Summary of the Council / Fleet Improvement Committee  
Meeting Held on March 9-11, 2004**



**17 May 2004**

# **FIC/Council Meeting - Discussion Areas**




- **Fleet Renewal** – major focus area (details on next slide)
- **Ocean Commission report**
- **Budget Shortfalls and implications on Ship Scheduling**
- **Marine Mammals and Acoustic Permitting Issues**
- **Frequency Spectrum Management Issues**
- **Shipboard Over-the-Side Handling Systems**
  - Winch Inspections
  - Load Handling System Symposium

# Fleet Renewal – UNOLS Activities

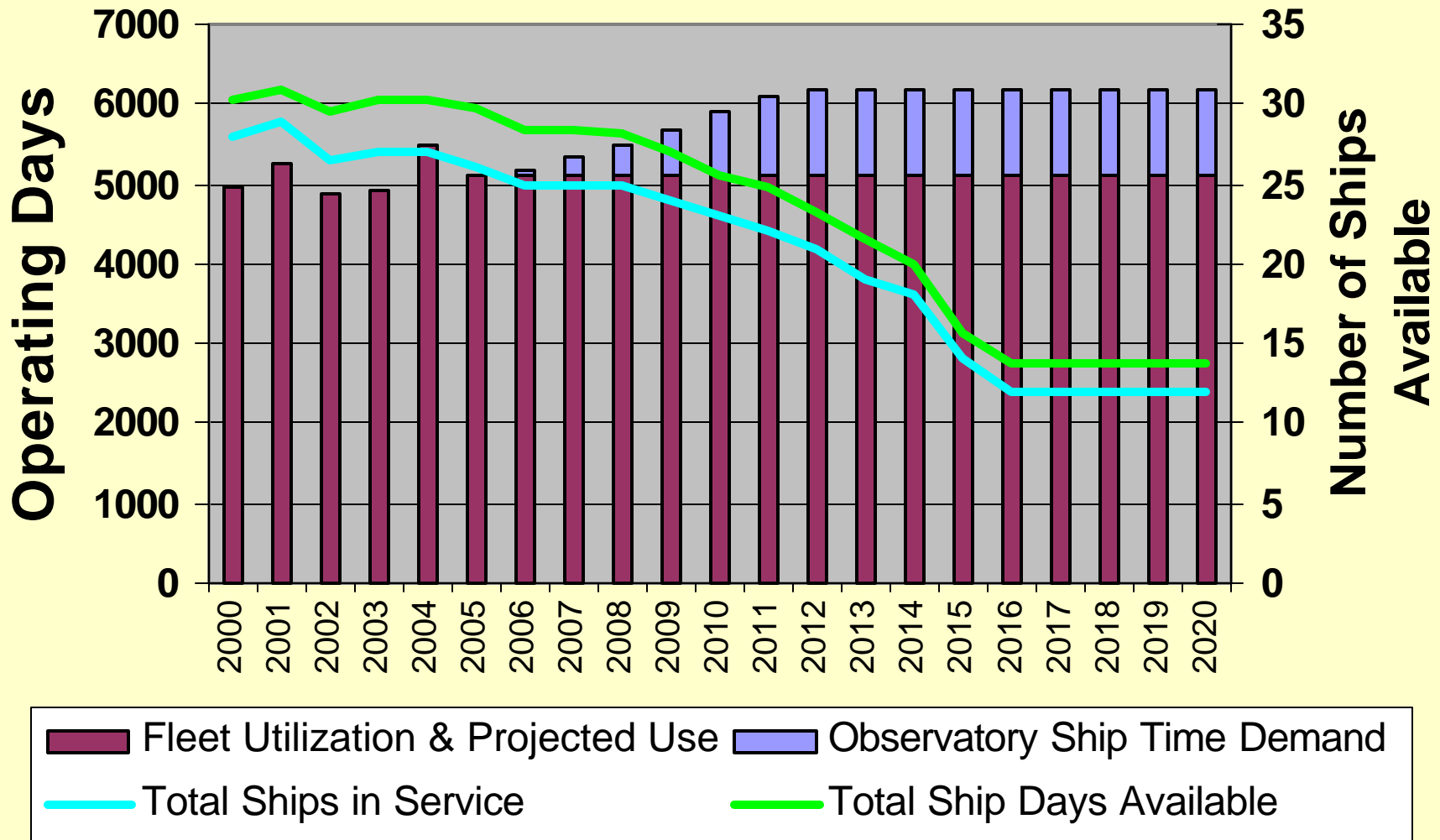
- **Regional Class** - Engaged in Phase III study and acquisition process. Ensure community input
- **Ocean Class** - Actively participating in Phase II study
- **Ongoing Design and Construction Efforts** - Staying engaged in ARRV, EWING replacement planning, and CHRV
- **Long-Range Plan for Fleet Renewal** - Providing FOFC with information to assist in the FOFC Plan update.
  - Ocean Observatory Facility Needs – incorporate ship time estimates from UNOLS Working Group Report
  - Update vessel retirement dates
  - Update Fleet utilization trends

Figure 17. Proposed schedule for new construction.



 = Launched on 11/17/01    
  = Funds Not Yet Identified    
  = Potential Additional Ships (UNOLS Recommended)

# UNOLS Fleet Utilization and Projections (2000 - 2020)



\* Only new construction with funds identified have been included in the total.

## Project Design and Construction (Next 10 years)

Project	Est. Project Cost	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>Regional Class</b>											
Phase III Study		█									
Prepare RFPs			█								
Select IPT Teams			█								
Select Operators			█								
Ship 1	\$25M			Start FY06	█						
Ship 2	\$25M					Start FY08	█				
Ship 3	\$25M							Start FY10	█		
<b>ALVIN Replacement</b>	\$20M	█	█	█	█						
<b>Ocean Class</b>											
Phase II Study		█									
ARRV	\$82M			█	█	█					
FOFC Ship NE Atl	\$50-\$70M					◇					
FOFC Ship NW Pac	\$50-\$70M									◇	
<i>* 2 FOFC ships in 2015 &amp; 2016</i>											
<b>Global Class</b>											
SMR Update			█								
Mid-life Refit Dates				◇					◇	◇	
EWING Replacement	\$20M	█	█	█	█	█	█				

# *In Summary...*

- The current Fleet includes 27 ships. In 2020 six of our current ships will still be in operation. Assuming that the new seismic vessel, ARRV, 3 NSF Regional vessels, and the CHRV are funded, six additional ships will be available for a total of 12 ships.
- With the addition of Ocean Observatory ship time (installation and O&M), demand is expected to increase ~1000 days by 2020.
- The additional Observatory ship time represents over 40% of the current use of the Global Class:
  - This is the most expensive day-rate category
  - Observatory needs will compete with the major interdisciplinary research programs that rely on the Global Class Vessels
- Funds to support the estimated future increase in ship time have not been identified.

# *Summary - continued*

- In 2020, a total of 21 NEW ships will be needed to meet estimated ship time demand (includes observatory ship time):
  - 5 Global ships (includes Seismic)
  - 5 Ocean Class ships (includes ARRV)
  - 3.5 Regional Class >40m ships (includes the 3 ships to be funded by NSF)
  - 7.5 Regional and Local Ships < 40m
- The ship time projections indicate catastrophic consequences if there are further delays in new vessel design and construction.



# UNOLS Letter Response to Ocean Commission report

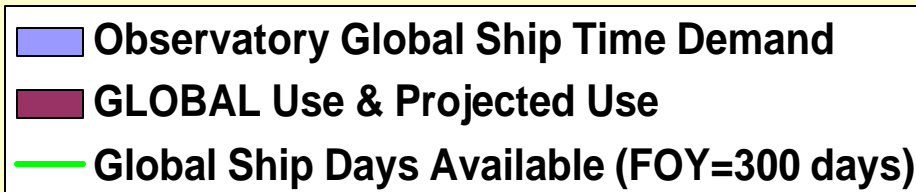
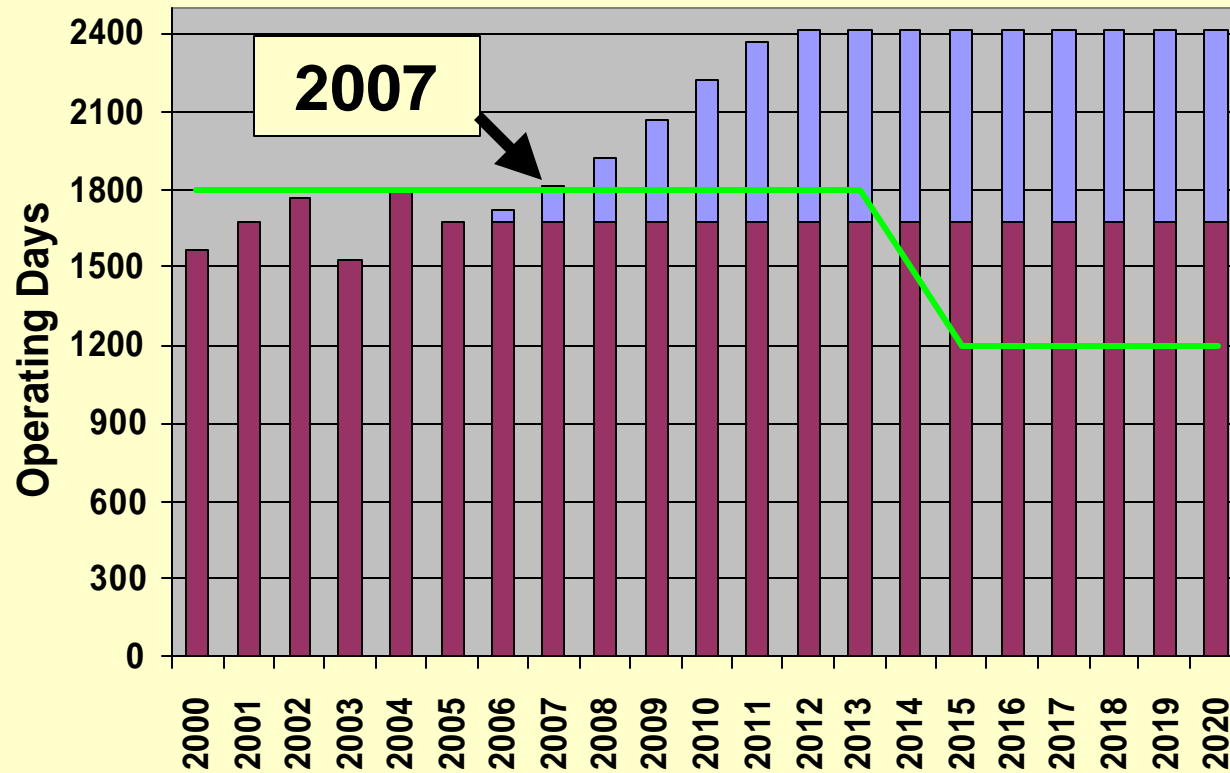
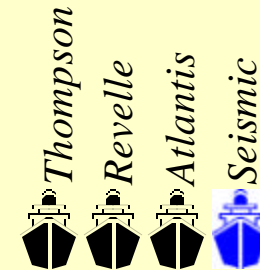
- Desperate situation with vessel infrastructure outlined in Chapter 27 of the Preliminary Report highlighted.
- UNOLS strongly supports recommendation to Congress for modernization of critical infrastructure (Recommendation 27-4) and urges placing Recommendation 27-4 near the top of the prioritization list.
- UNOLS endorses the recommendation to Congress to double the federal ocean and coastal research budget (Recommendation 25-1) and urges that 25-1 be placed at the top of the prioritization list for action by Congress.

# Questions ???



# Global Ship Utilization and Projections

**Ships needed in 2020:**



**1 ship = 300 operating days**



= existing ship



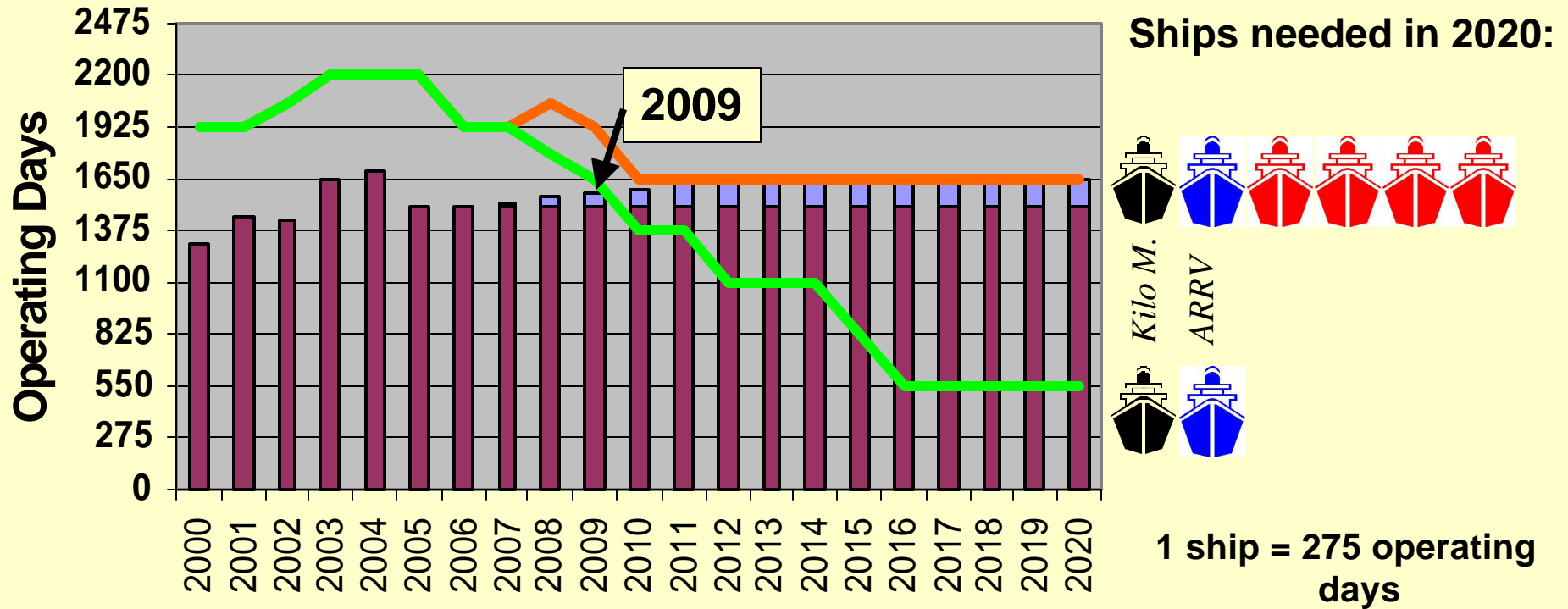
= new construction (Seismic\* vessel)



= ship needed to meet demand

\* Seismic ship demand is expected to increase, this will make less time available for general purpose oceanography for this vessel.

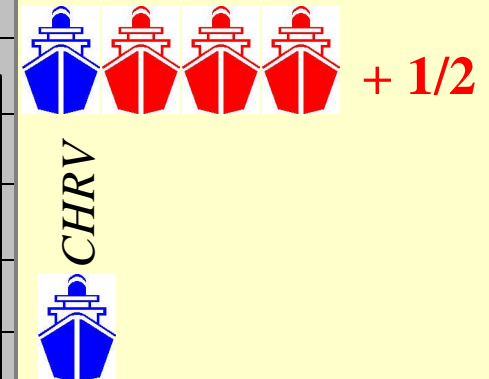
# Ocean/Intermediate Utilization and Projected Use



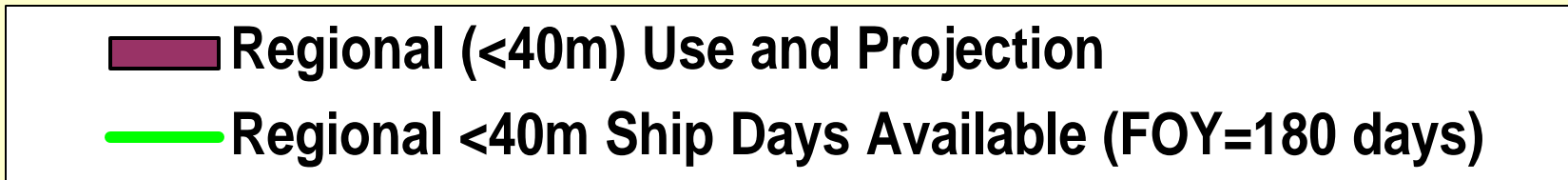
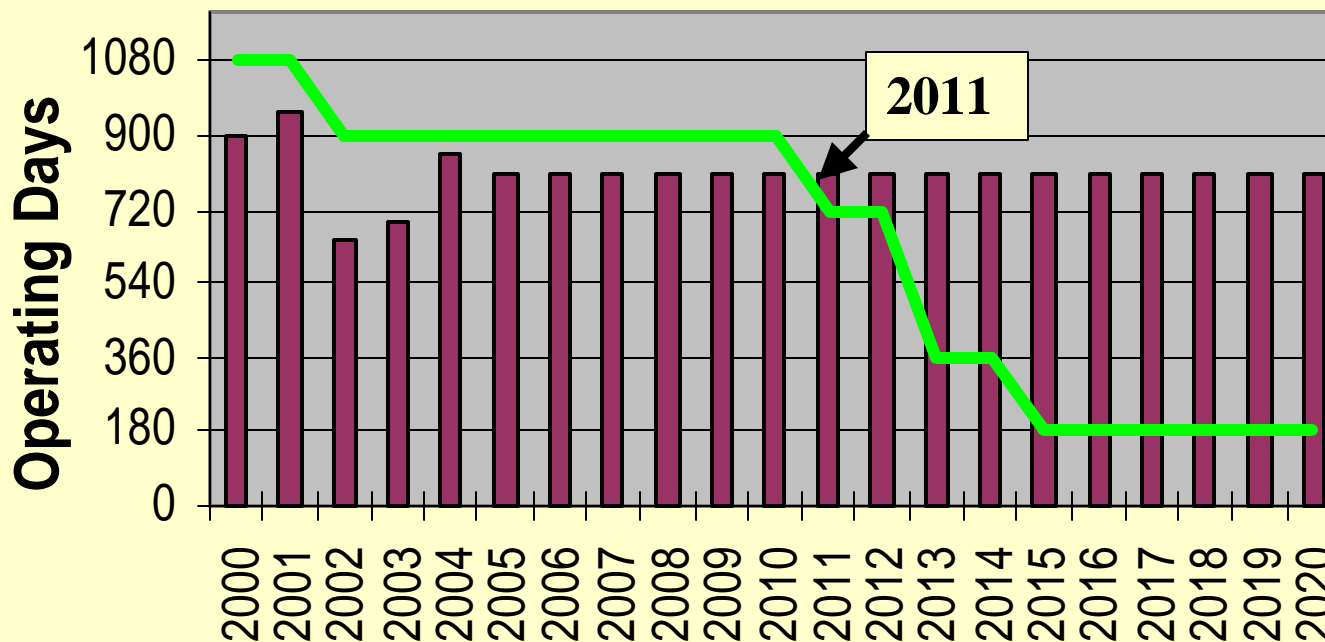
- Observatory - O&M Coastal mooring (4/site)
- Intermediate Use & Projections
- Ocean Ship Days Available - includes ARRV (FOY=275 days)
- Ocean Ship Days Available - includes ARRV and New Ocean Class Vessels in FOFC Plan

# Regional Class (<40m) - Utilization and Projections

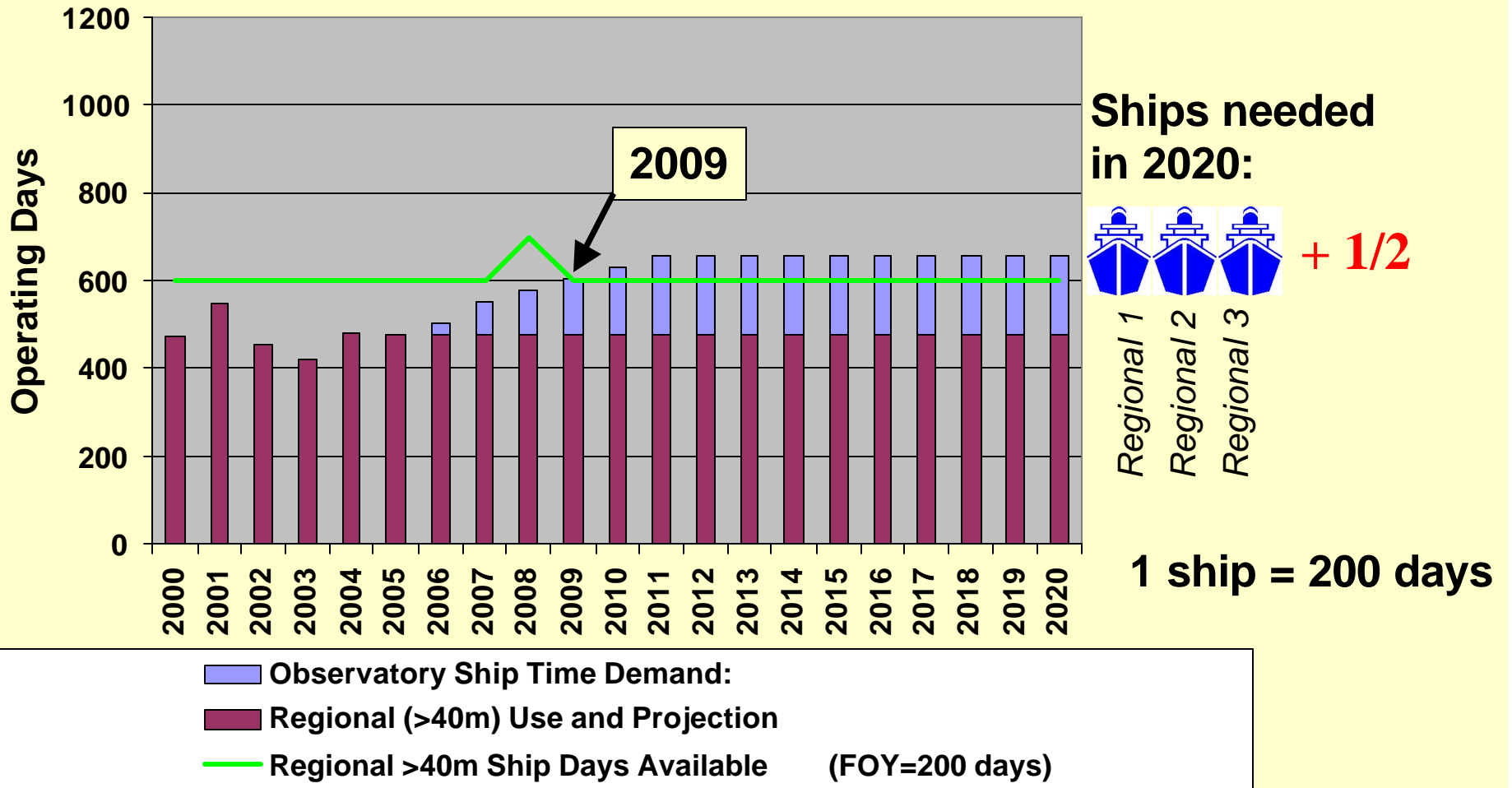
Ships needed in 2020:



1 ship = 180 days

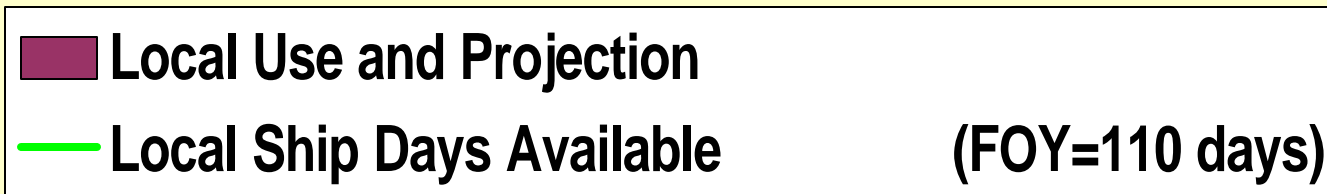
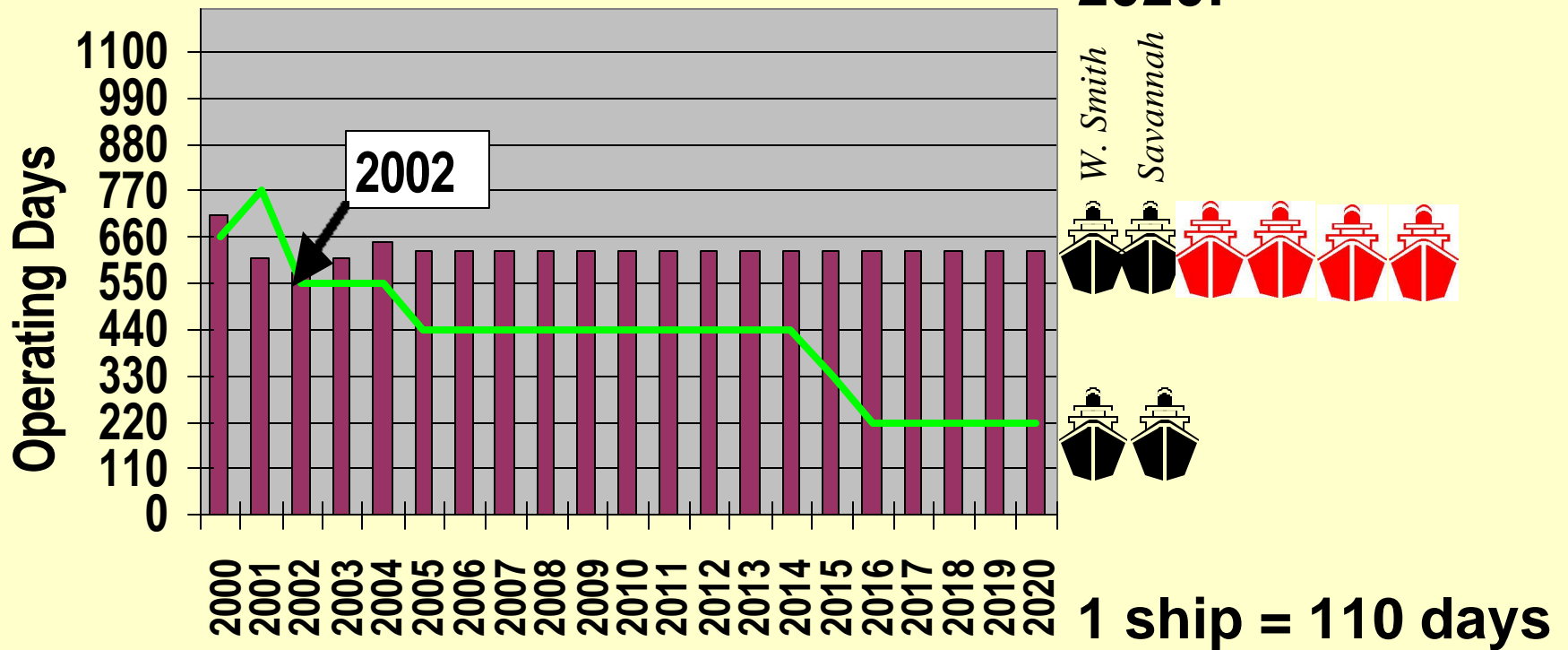


# Regional Class >40m Utilization and Projections



# Local Class - Utilization and Projections

**Ships needed in 2020:**









	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
WEATHERBIRD II	130	140	131	148	165	x	x	x	x	x	x	x	x								
PELICAN	253	265	204	163	248	x	x	x	x	x	x	x	x								
R. SPROUL	83	143	139	106	177	x	x	x	x	x	x	x	x	x	x						
<b>Regional (&lt;40m) Use and Projection</b>	<b>903</b>	<b>955</b>	<b>649</b>	<b>693</b>	<b>856</b>	<b>811.2</b>	<b>811</b>	<b>811</b>	<b>811</b>	<b>811</b>	<b>811</b>	<b>811</b>	<b>811</b>	<b>811</b>	<b>811</b>	<b>811</b>	<b>811</b>	<b>811</b>	<b>811</b>	<b>811</b>	<b>811</b>
<b>New Regional (&lt;40m) Class Construction:</b>																					
CHR/V							x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
<b>Total Regional &lt;40m Ships in Service:</b>	<b>6</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
<b>Regional &lt;40m Ship Days Available (FOY=180 days)</b>	<b>1080</b>	<b>1080</b>	<b>900</b>	<b>900</b>	<b>900</b>	<b>900</b>	<b>900</b>	<b>900</b>	<b>900</b>	<b>900</b>	<b>900</b>	<b>720</b>	<b>720</b>	<b>360</b>	<b>360</b>	<b>180</b>	<b>180</b>	<b>180</b>	<b>180</b>	<b>180</b>	<b>180</b>
<b>Local Ships:</b>																					
LAURENTIAN	194	33.5																			
BLUE FIN	74	67																			
BARNES	119	70	130	121	120																
BLUE HERON	88	67	63.5	50	39.5	x	x	x	x	x	x	x	x	x	x						
URRACA	87	105	103	141	152	x	x	x	x	x	x	x	x	x	x	x					
WALTON SMITH	149	212	181	196	227	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
SAVANNAH		52	94	97	108	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
<b>Local Use and Projection</b>	<b>711</b>	<b>606.5</b>	<b>571.5</b>	<b>605</b>	<b>646.5</b>	<b>628.1</b>	<b>628</b>	<b>628</b>	<b>628</b>	<b>628</b>	<b>628</b>	<b>628</b>	<b>628</b>	<b>628</b>	<b>628</b>	<b>628</b>	<b>628</b>	<b>628</b>	<b>628</b>	<b>628</b>	<b>628</b>
<b>Total Local Ships in Service:</b>	<b>6</b>	<b>7</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
<b>Local Ship Days Available (FOY=110 days)</b>	<b>660</b>	<b>770</b>	<b>550</b>	<b>550</b>	<b>550</b>	<b>440</b>	<b>440</b>	<b>440</b>	<b>440</b>	<b>440</b>	<b>440</b>	<b>440</b>	<b>440</b>	<b>440</b>	<b>440</b>	<b>330</b>	<b>220</b>	<b>220</b>	<b>220</b>	<b>220</b>	<b>220</b>
<b>Fleet Totals:</b>																					
<b>Fleet Utilization &amp; Projected Use</b>	<b>4949</b>	<b>5233</b>	<b>4871</b>	<b>4906</b>	<b>5480</b>	<b>5088</b>	<b>5088</b>	<b>5088</b>	<b>5088</b>	<b>5088</b>	<b>5088</b>	<b>5088</b>	<b>5088</b>	<b>5088</b>	<b>5088</b>	<b>5088</b>	<b>5088</b>	<b>5088</b>	<b>5088</b>	<b>5088</b>	<b>5088</b>
<b>Observatory Ship Time Demand</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>82</b>	<b>244</b>	<b>406</b>	<b>598</b>	<b>799</b>	<b>1003</b>	<b>1080</b>	<b>1080</b>	<b>1080</b>	<b>1080</b>	<b>1080</b>	<b>1080</b>	<b>1080</b>	<b>1080</b>	<b>1080</b>
<b>Total Ship Days Available</b>	<b>6065</b>	<b>6175</b>	<b>5913</b>	<b>6050</b>	<b>6050</b>	<b>5940</b>	<b>5665</b>	<b>5665</b>	<b>5628</b>	<b>5390</b>	<b>5115</b>	<b>4935</b>	<b>4660</b>	<b>4300</b>	<b>4000</b>	<b>3135</b>	<b>2750</b>	<b>2750</b>	<b>2750</b>	<b>2750</b>	<b>2750</b>
<b>Total Ships in Service</b>	<b>28</b>	<b>29</b>	<b>26.5</b>	<b>27</b>	<b>27</b>	<b>26</b>	<b>25</b>	<b>25</b>	<b>25</b>	<b>24</b>	<b>23</b>	<b>22</b>	<b>21</b>	<b>19</b>	<b>18</b>	<b>14</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>	<b>12</b>
<b>Year</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>