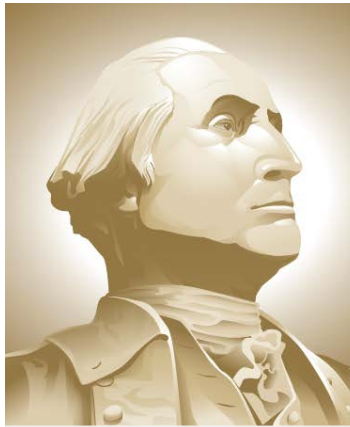


# **VTRA 2010**

## **TRAFFIC DENSITY ANALYSIS**

### **BY LOCATION CARGO AND TANK VESSELS**

Presentation by: J. Rene van Dorp



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**THE GEORGE  
WASHINGTON  
UNIVERSITY**

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WASHINGTON, DC

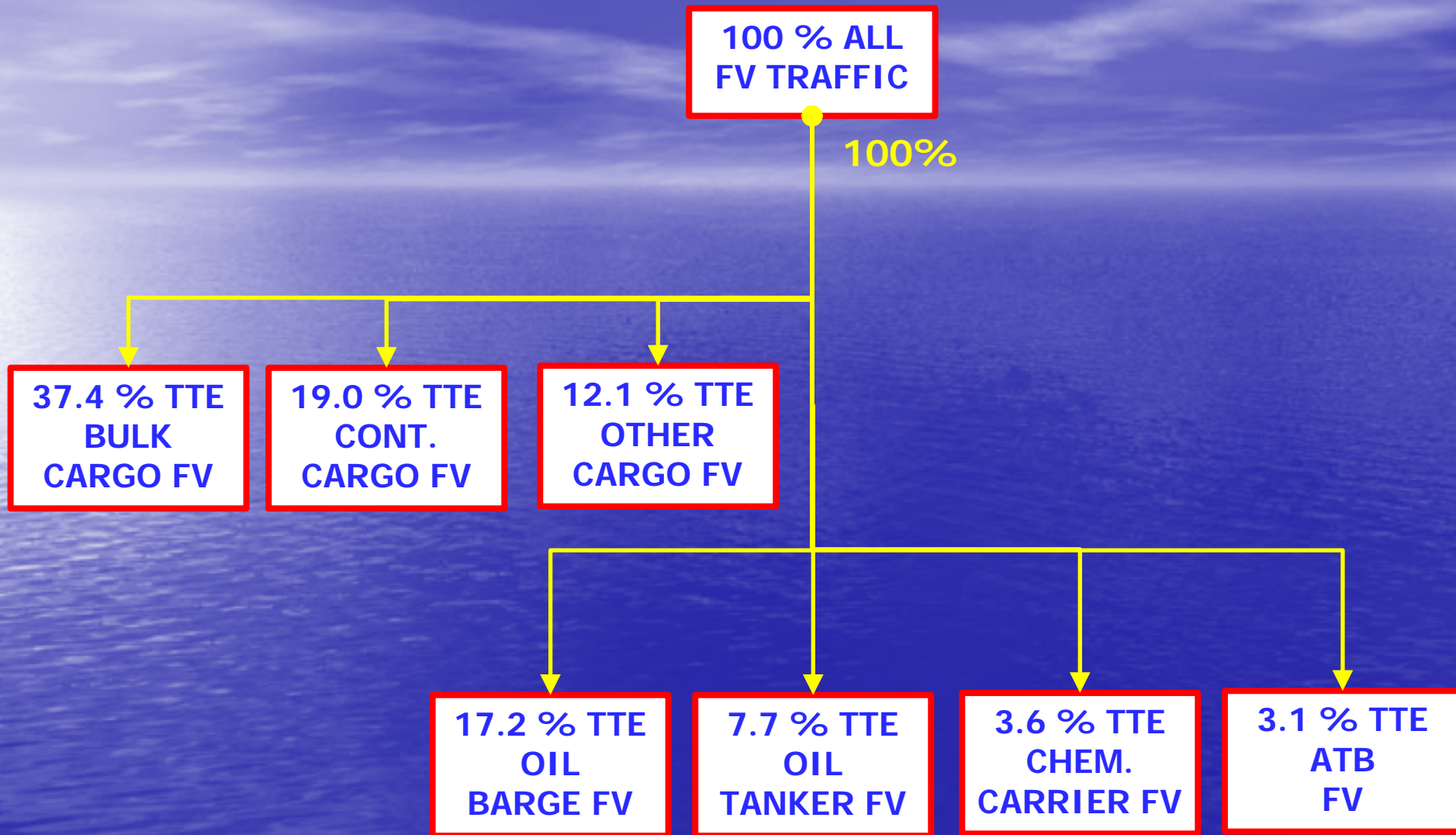
**VCU**

**GWU Personnel:** Dr. J. Rene van Dorp

**VCU Personnel:** Dr. Jason R. W. Merrick

**JUNE 5, 2013**

# A TAXONOMY OF 2010 FOCUS VESSEL TRAFFIC

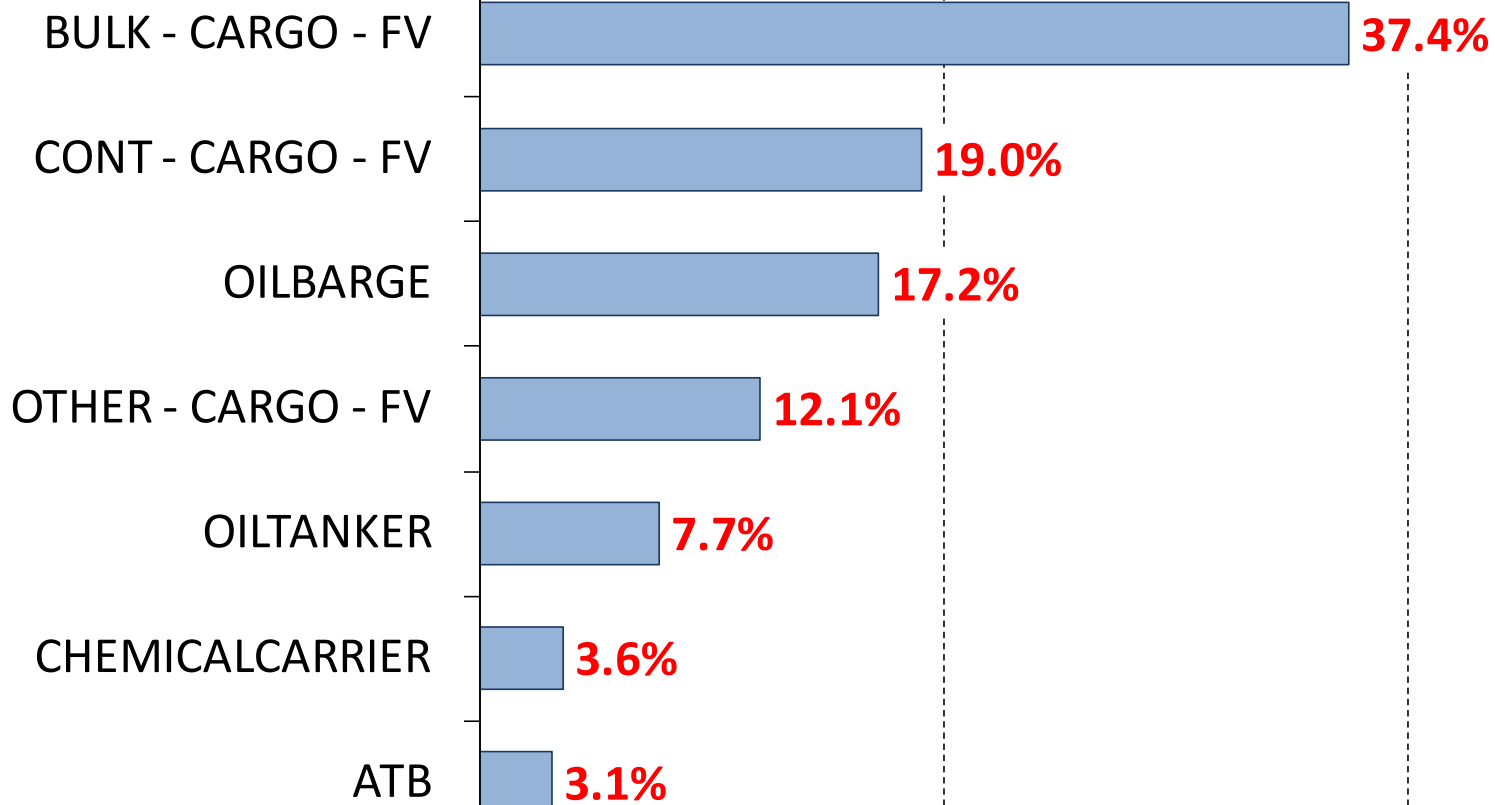


**TTE = TOTAL TIME EXPOSURE:**

TOTAL AMOUNT OF ANNUAL TIME A VESSEL IS MOVING IN THE VTRA STUDY AREA

## VTRA MODEL - VTOSS 2010

**FOCUS VESSEL CLASSIFICATION**



0%

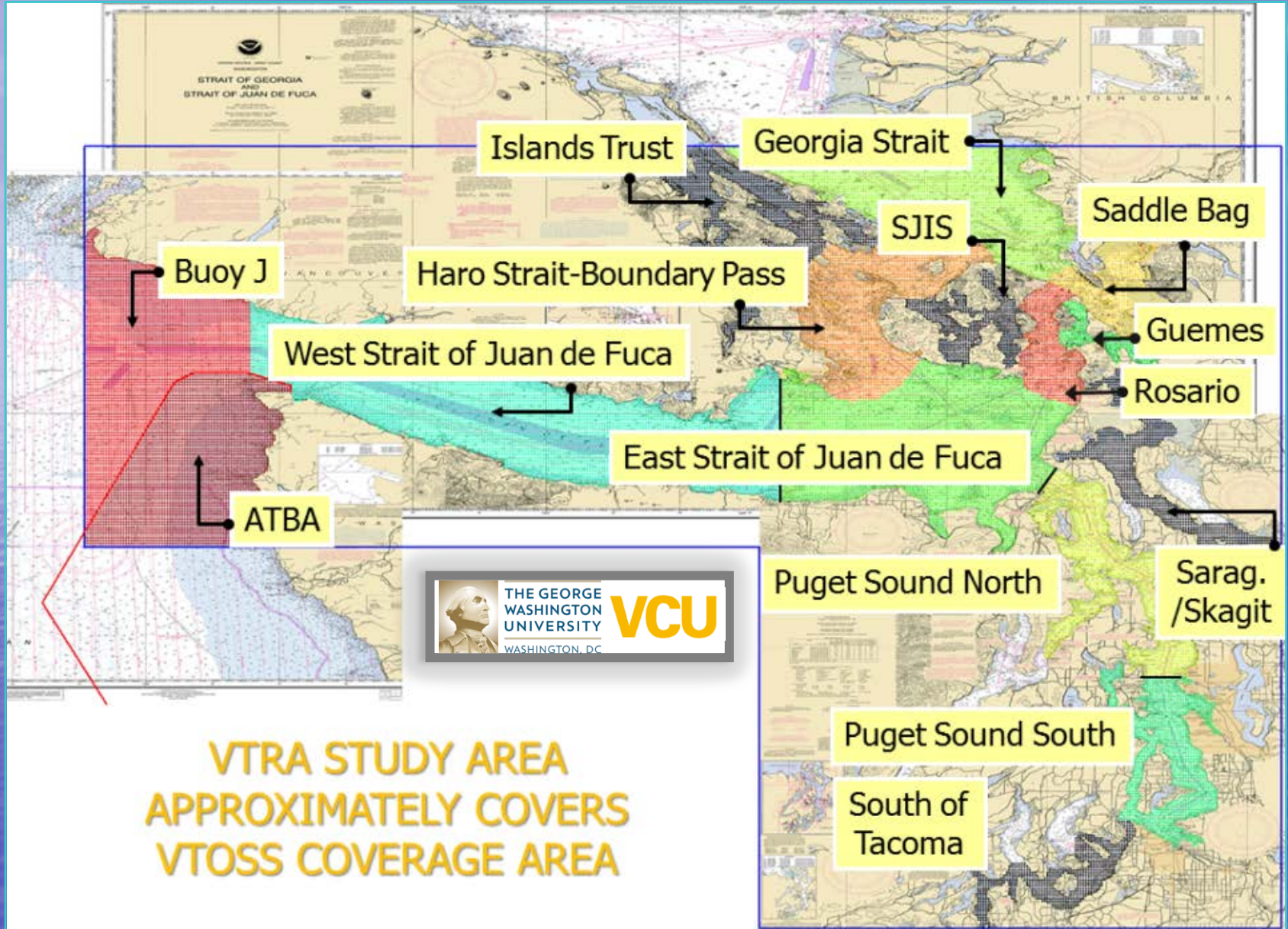
20%

40%

**% of 2010 Total Time of Exposure (TTE)**



# Location definitions used in the GW/VCU MTS simulation model.

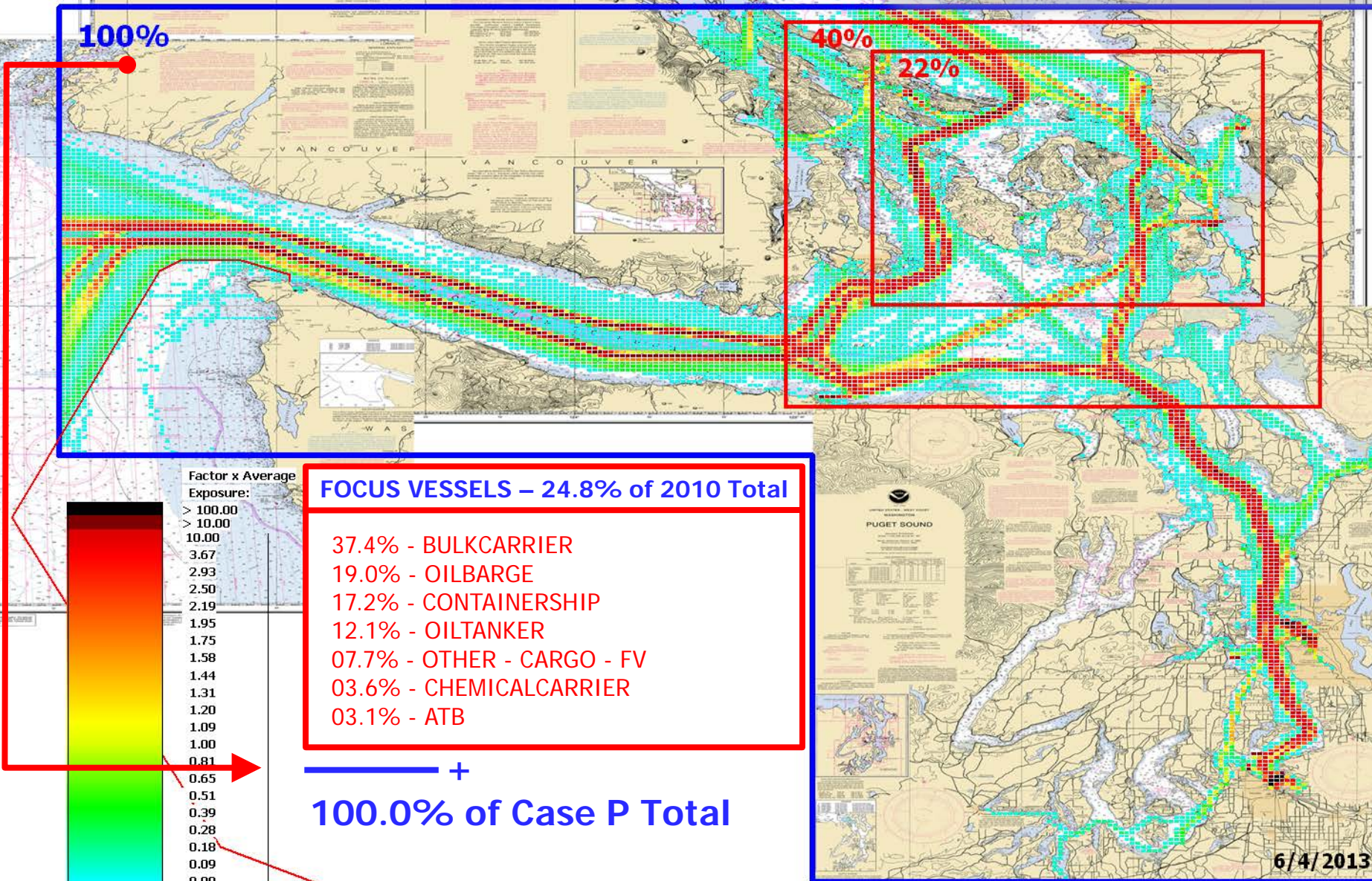




# 24.8% of Total Traffic Density

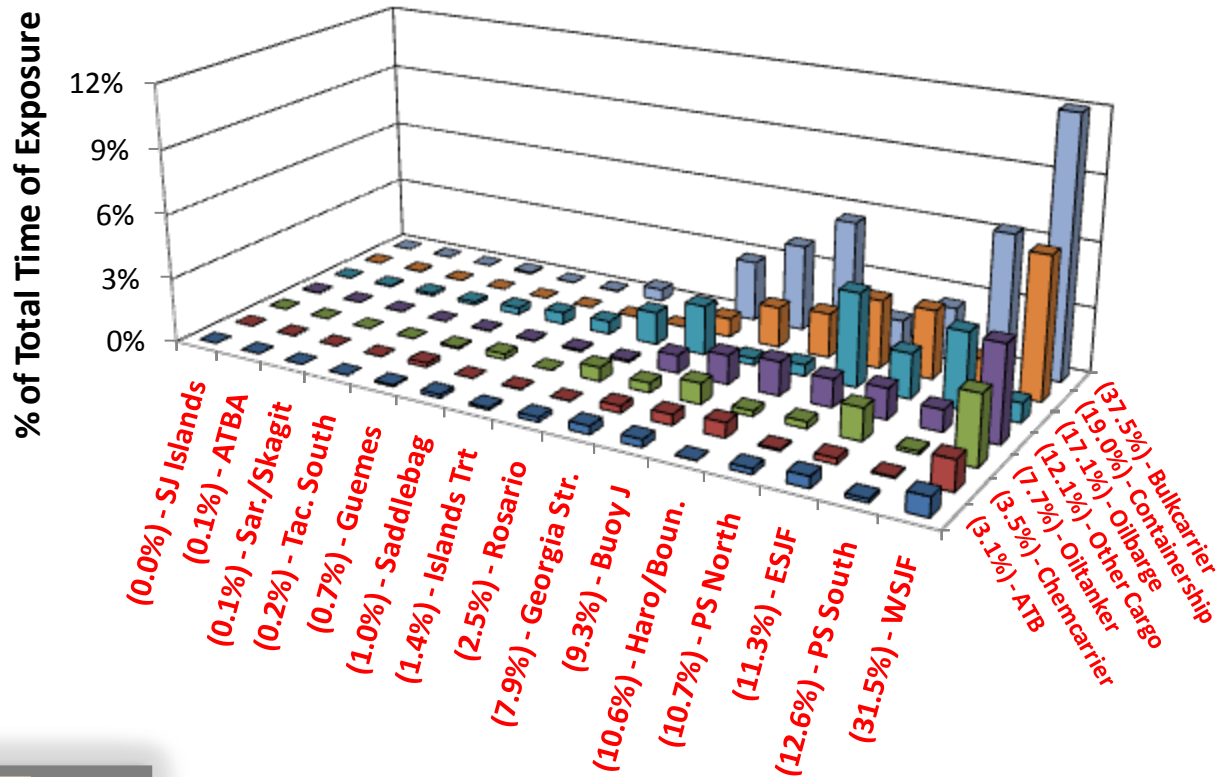


## P: VTRA 2010 - Focus Vessel Density





## VTRA MODEL - VTOSS 2010 - 24.8% of TRAFFIC



# 2010 Traffic Density Analysis by Location limited to Focus Vessels

<i>Column 1</i>	<i>Column 2</i>	<i>Column 3</i>	<i>Column 4</i>	<i>Column 5</i>	<i>Column 6</i>	<i>Column 7</i>
<b>LOCATION</b>	<b># Grid Cells</b>	<b>% Area</b>	<b># Days Vessel is Moving per year</b>	<b>Average # of Vessels in Location</b>	<b>% of Total Time of Exposure</b>	<b>Density Factor (DF)</b>
WSJF	2857	19.6%	2040	5.6	31.5%	1.61
PS South	619	4.3%	812	2.2	12.5%	2.95
Guemes	127	0.9%	45	0.1	0.7%	0.80
ESJF	2049	14.1%	732	2.0	11.3%	0.80
Georgia Str.	1424	9.8%	511	1.4	7.9%	0.81
PS North	983	6.8%	693	1.9	10.7%	1.59
Saddlebag	375	2.6%	67	0.2	1.0%	0.40
Haro/Boun.	1066	7.3%	685	1.9	10.6%	1.44
Rosario	307	2.1%	163	0.4	2.5%	1.19
Buoy J	1478	10.2%	601	1.6	9.3%	0.91
ATBA	1520	10.5%	6	0.0	0.1%	0.01
Tac. South	326	2.2%	14	0.0	0.2%	0.10
SJ Islands	259	1.8%	3	0.0	0.0%	0.02
Sar./Skagit	459	3.2%	9	0.0	0.1%	0.04
Islands Trt	696	4.8%	88	0.2	1.4%	0.28
<b>Total</b>	<b>14545</b>	<b>100.0%</b>	<b>6469</b>	<b>17.7</b>	<b>100.0%</b>	<b>1.0</b>



↑  
**Column 4**  


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 365

↑  
**Column 4**  


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 Tot. Col. 4

↑  
**Column 4**  

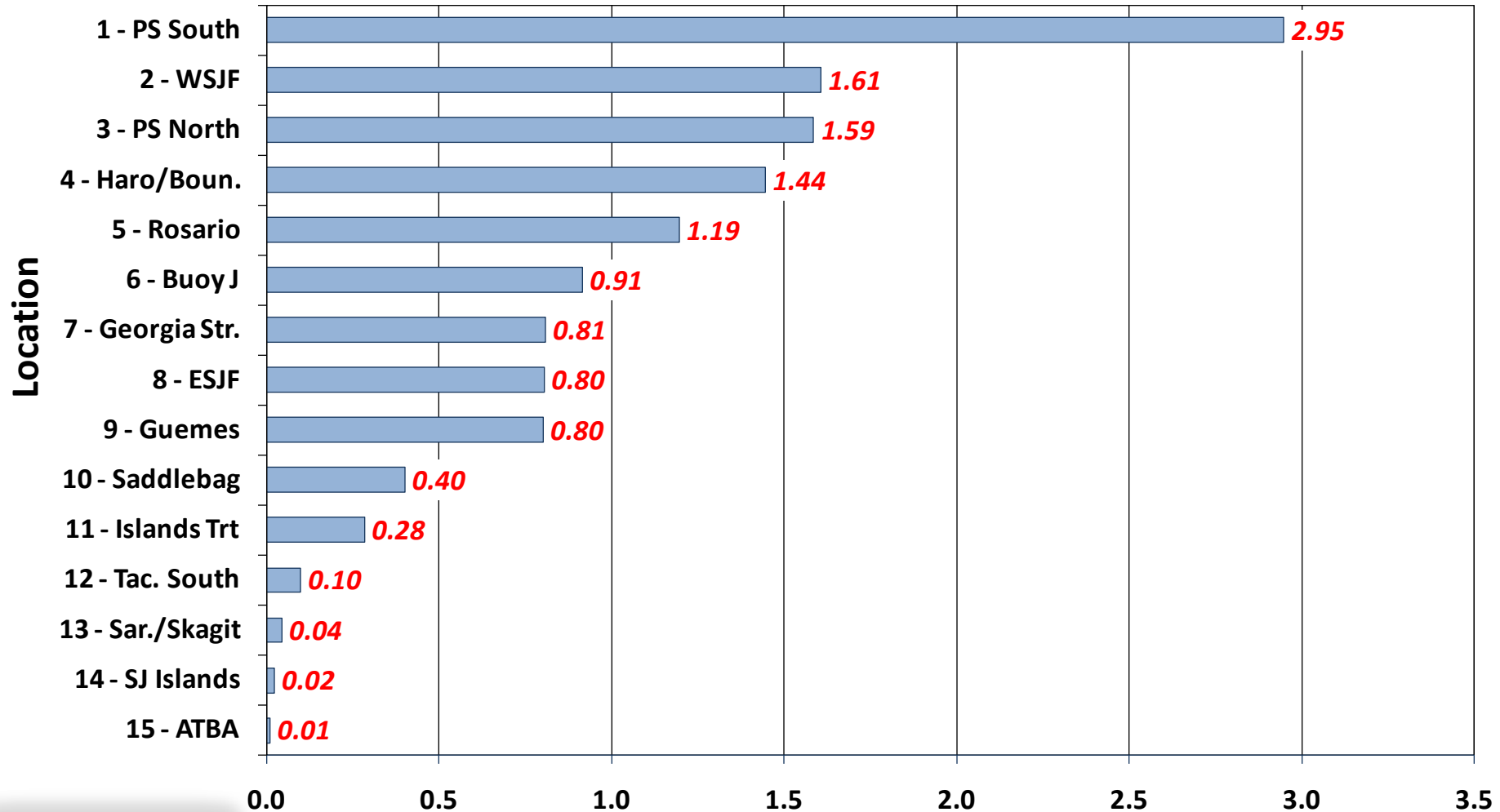

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 Column 3

# Locations ranked by Density Factor limited to TANK Focus Vessels

**VTRA  
2010**

**Density Factor (DF) by Location - Focus Vessel Only =  
24.8% of total traffic - 100% of FV Traffic**



**Density Factor - Limited to Focus Vessels**





# Locations ranked by Density Factor limited to TANK Focus Vessels

**VTRA  
2010**

**Total Time Exposure (TTE) by Location - Focus Vessel Only =  
24.8% of total traffic - 100% of FV Traffic**

