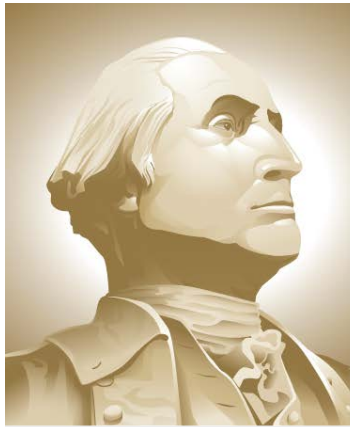


# **VTRA 2010**

## **TRAFFIC DENSITY ANALYSIS**

### **BY LOCATION TANK – FOCUS VESSELS**

Presentation by: J. Rene van Dorp



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**THE GEORGE  
WASHINGTON  
UNIVERSITY**

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WASHINGTON, DC

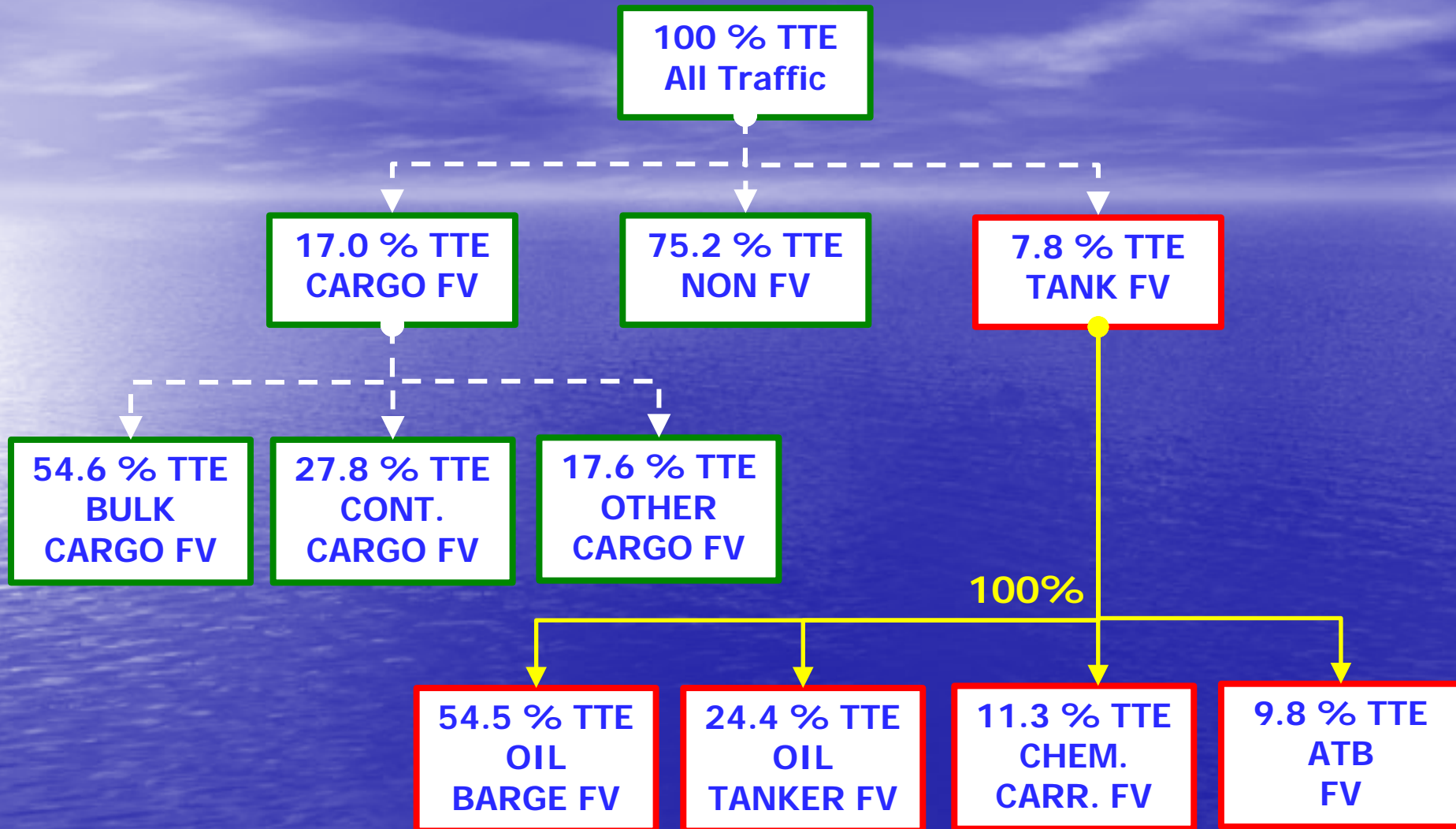
**VCU**

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

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

**JUNE 5, 2013**

# A TAXONOMY OF 2010 VESSEL TRAFFIC

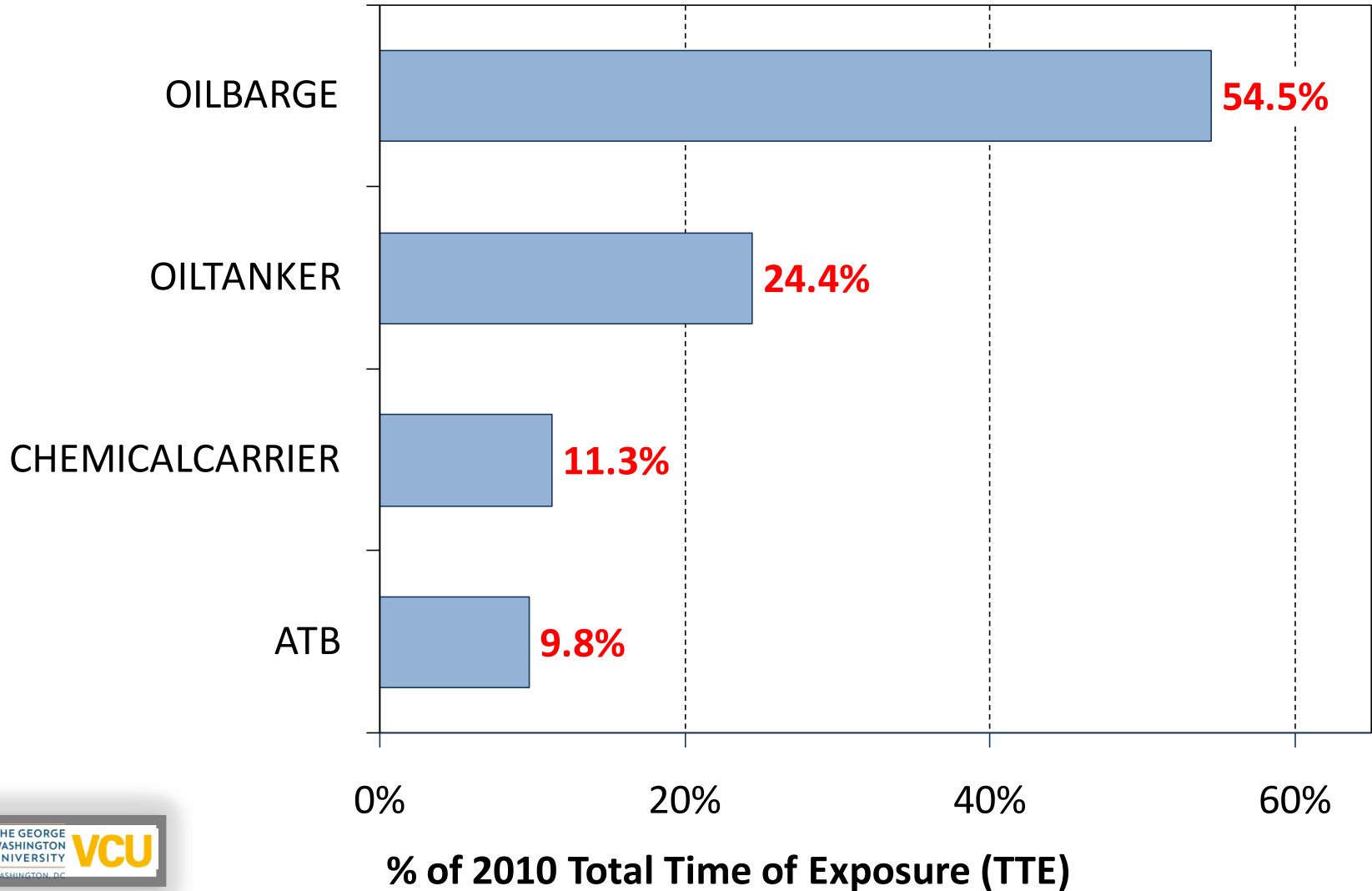


**TTE = TOTAL TIME EXPOSURE:**

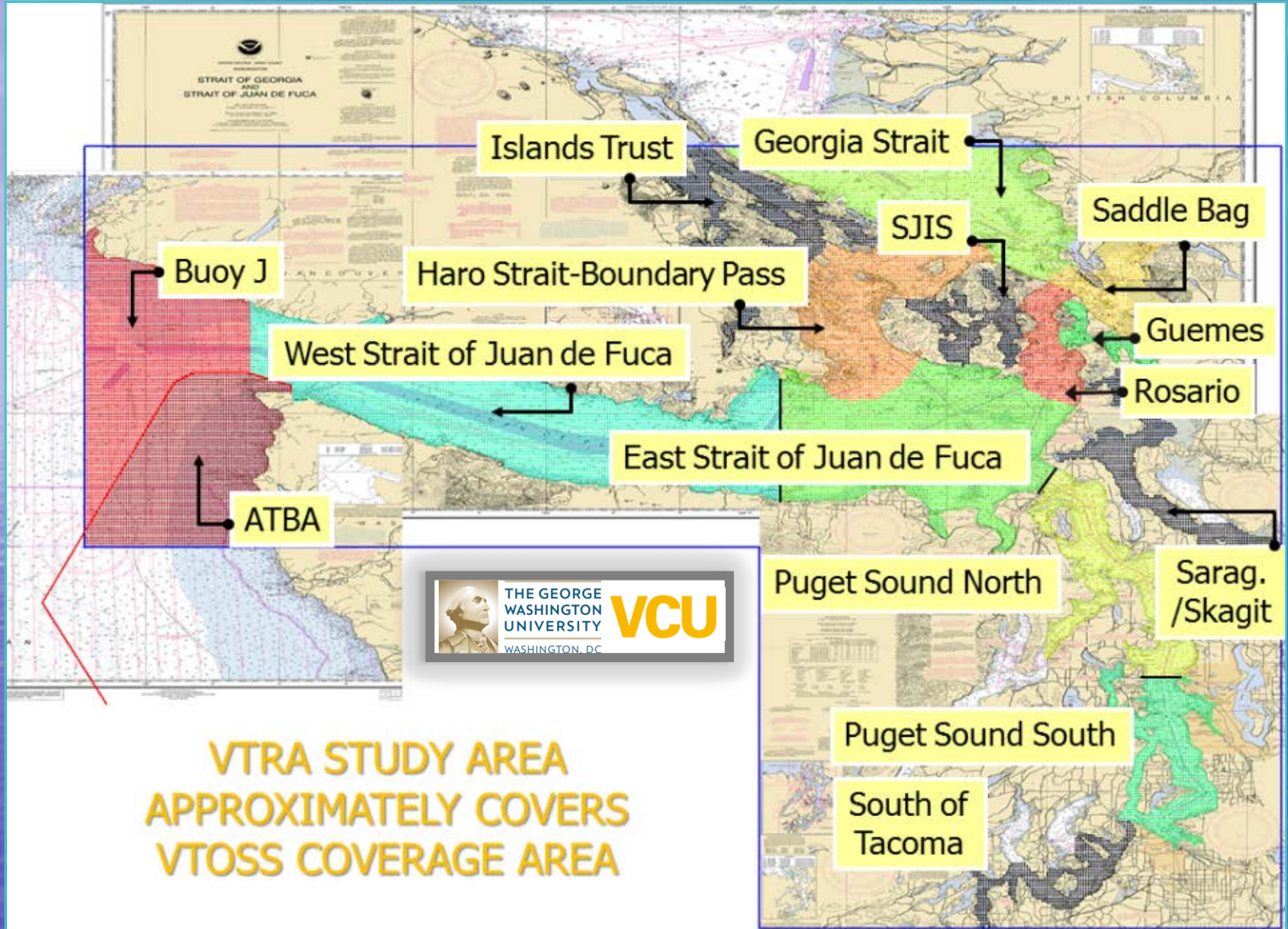
TOTAL AMOUNT OF ANNUAL TIME A VESSEL IS MOVING IN THE VTRA STUDY AREA

# VTRA MODEL - VTOSS 2010

TANK FV CLASSIFICATION



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

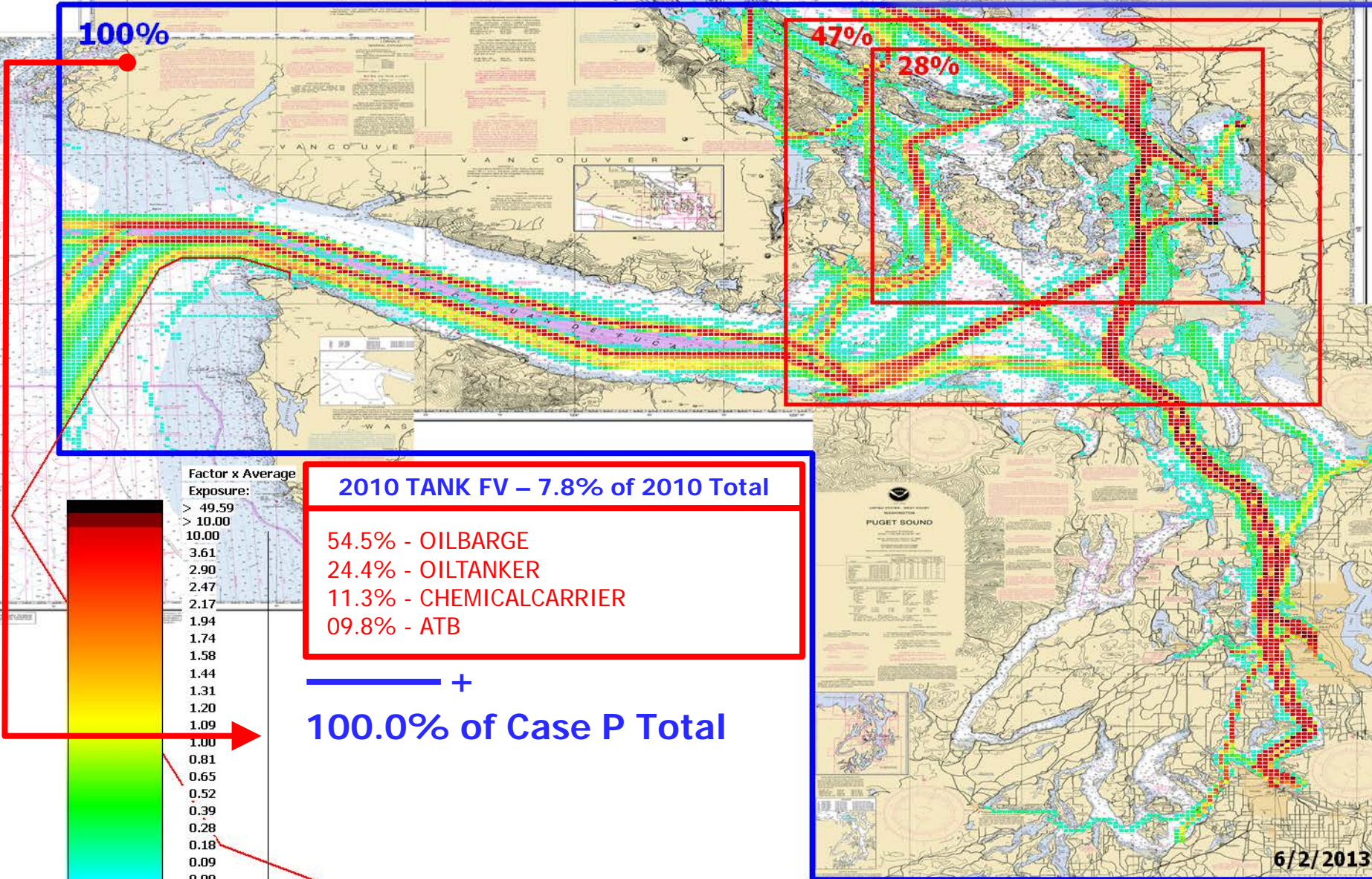


**VTRA STUDY AREA  
APPROXIMATELY COVERS  
VTOSS COVERAGE AREA**

# 7.8% of Total Traffic Density



## P: VTRA 2010 - Tank Focus Vessel Density



100%

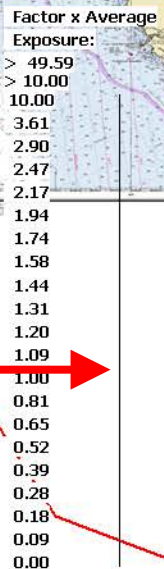
47%

28%

**2010 TANK FV – 7.8% of 2010 Total**

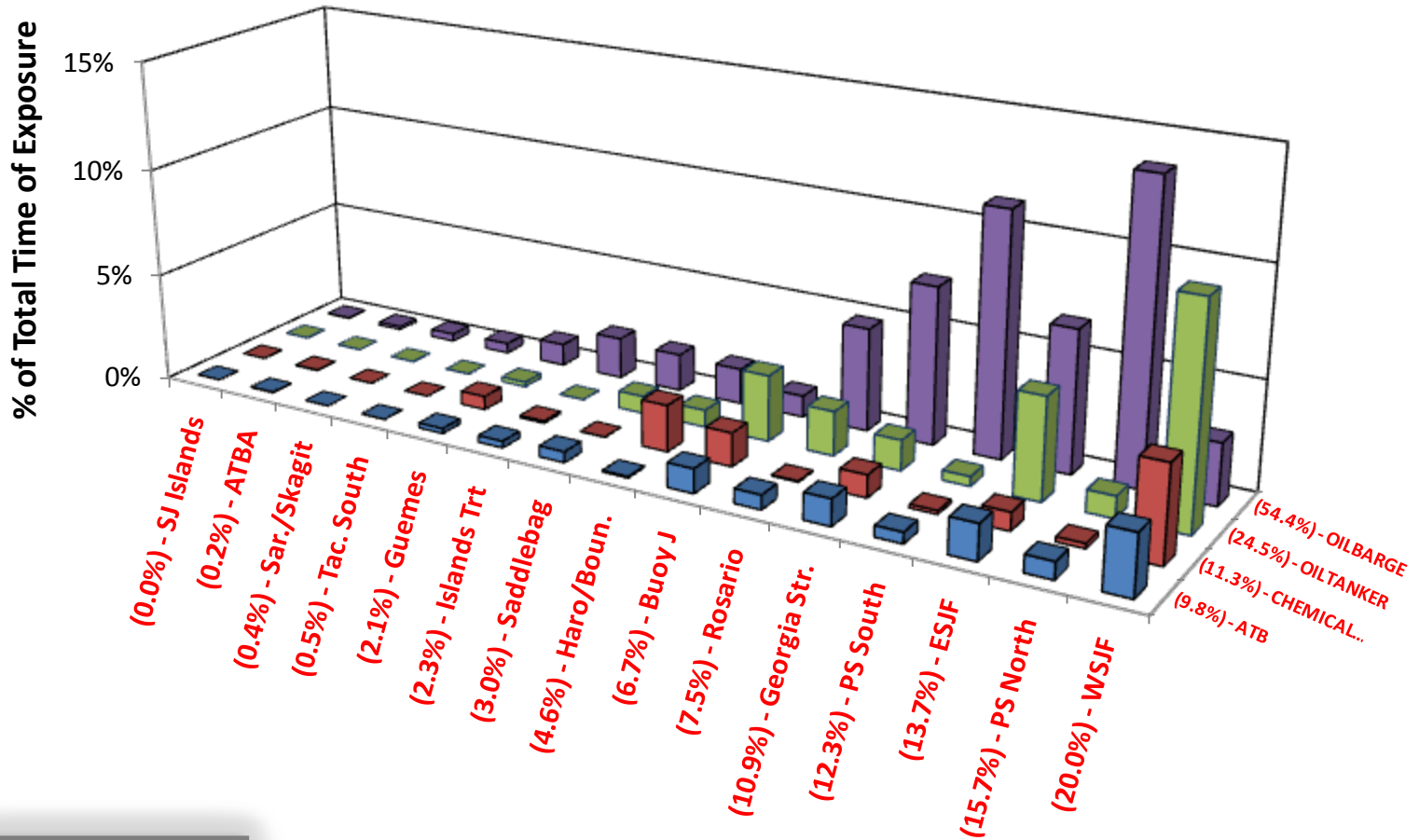
- 54.5% - OILBARGE
- 24.4% - OILTANKER
- 11.3% - CHEMICALCARRIER
- 09.8% - ATB

— +  
100.0% of Case P Total



# Traffic Density by Location – Tank Focus Vessel Traffic

VTRA MODEL - VTOSS 2010 - 17% of TRAFFIC - 100% of CARGO FV



# 2010 Traffic Density Analysis by Location limited to TANK-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%	409	1.1	20.1%	1.02
PS South	619	4.3%	250	0.7	12.3%	2.89
Guemes	127	0.9%	43	0.1	2.1%	2.39
ESJF	2049	14.1%	280	0.8	13.7%	0.98
Georgia Str.	1424	9.8%	222	0.6	10.9%	1.11
PS North	983	6.8%	319	0.9	15.7%	2.32
Saddlebag	375	2.6%	62	0.2	3.0%	1.18
Haro/Boun.	1066	7.3%	94	0.3	4.6%	0.63
Rosario	307	2.1%	153	0.4	7.5%	3.56
Bouy J	1478	10.2%	137	0.4	6.7%	0.66
ATBA	1520	10.5%	4	0.0	0.2%	0.02
Tac. South	326	2.2%	9	0.0	0.5%	0.21
SJ Islands	259	1.8%	1	0.0	0.0%	0.02
Sar./Skagit	459	3.2%	7	0.0	0.4%	0.11
Islands Trt	696	4.8%	47	0.1	2.3%	0.48
<b>Total</b>	<b>14545</b>	<b>100.0%</b>	<b>2036</b>	<b>5.6</b>	<b>100.0%</b>	<b>1.0</b>



↑  
Column 4  
 365

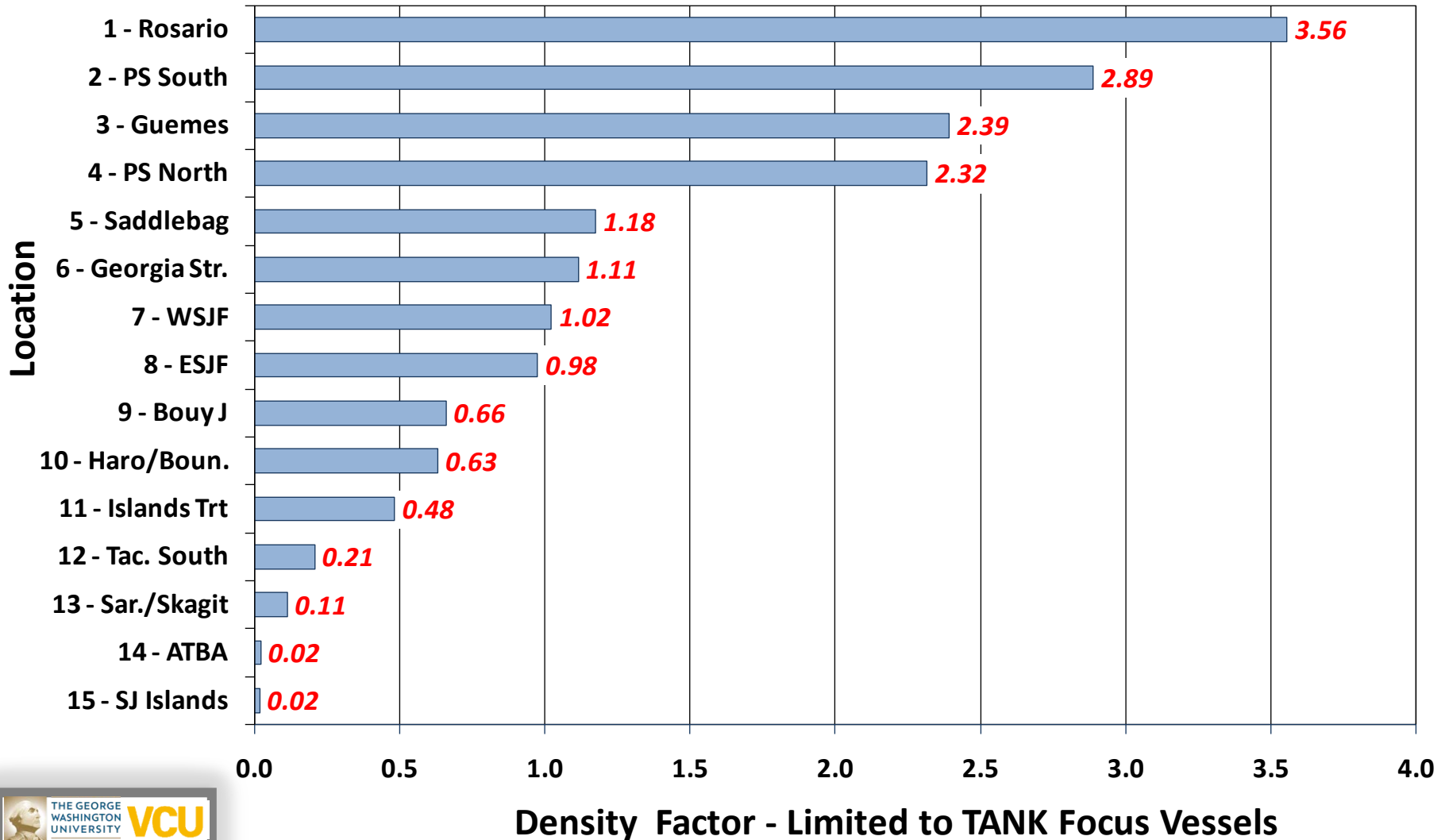
↑  
Column 4  
 Tot. Col. 4

↑  
Column 4  
 Column 3

# Locations ranked by Density Factor limited to TANK Focus Vessels

**VTRA  
2010**

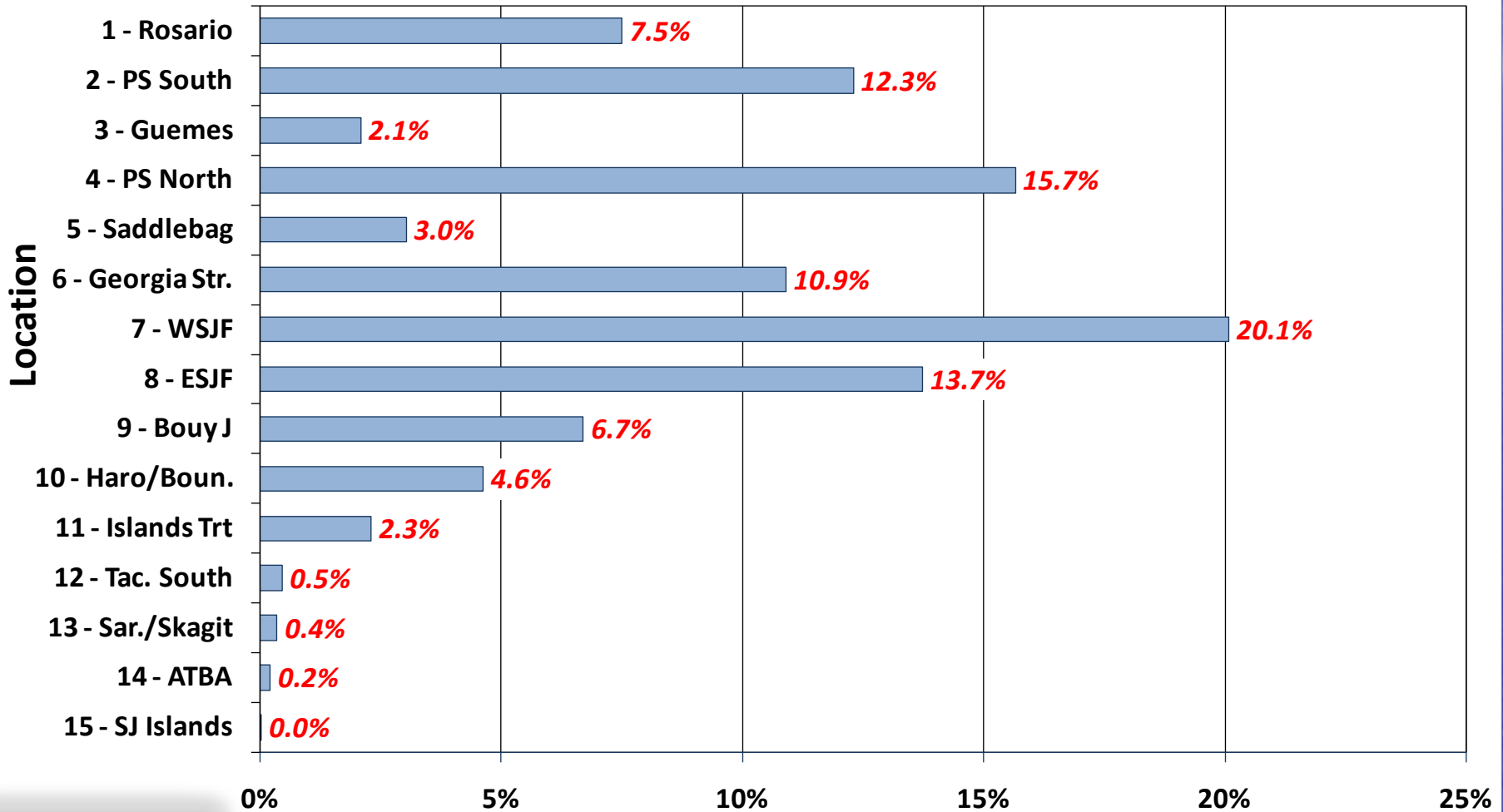
**Density Factor (DF) by Location - Tank Focus Vessel Only =  
7.8% of total traffic - 31.5% of FV Traffic**





# Locations ranked by Density Factor limited to TANK Focus Vessels

**VTRA** Total Time Exposure (TTE) by Location - Tank Focus Vessel Only  
**2010** = 7.8% of total traffic - 31.5% of FV Traffic



% Total Time of Exposure - Limited to TANK Focus Vessels

