

# VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

3D Relative Risk Profile Comparison  
Vessel Time Exposure

**CASE T – GW 487 – KM 348 – DP 415**

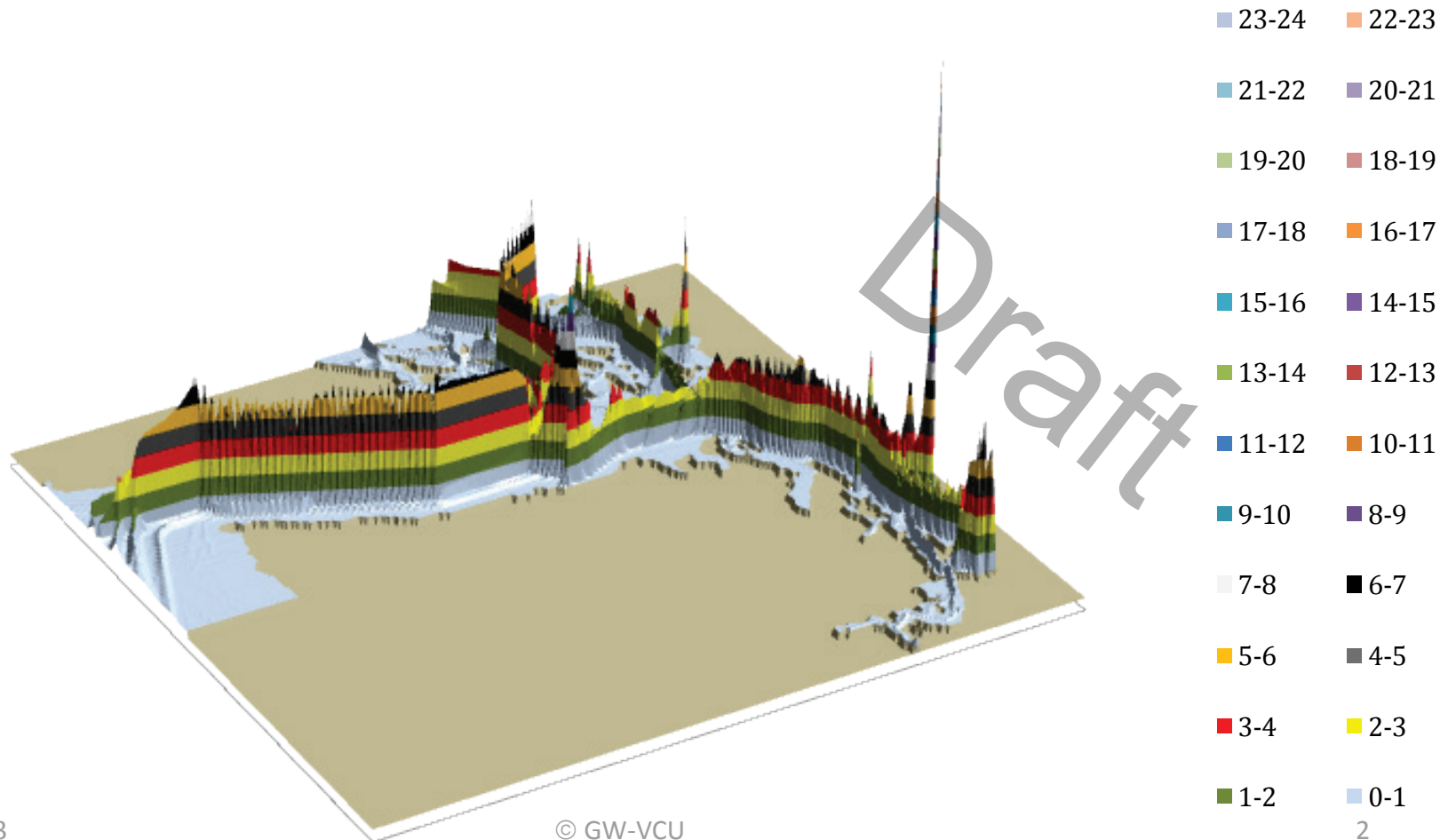
**Dr. J. Rene van Dorp and Dr. Jason R.W Merrick**

**November 2013**



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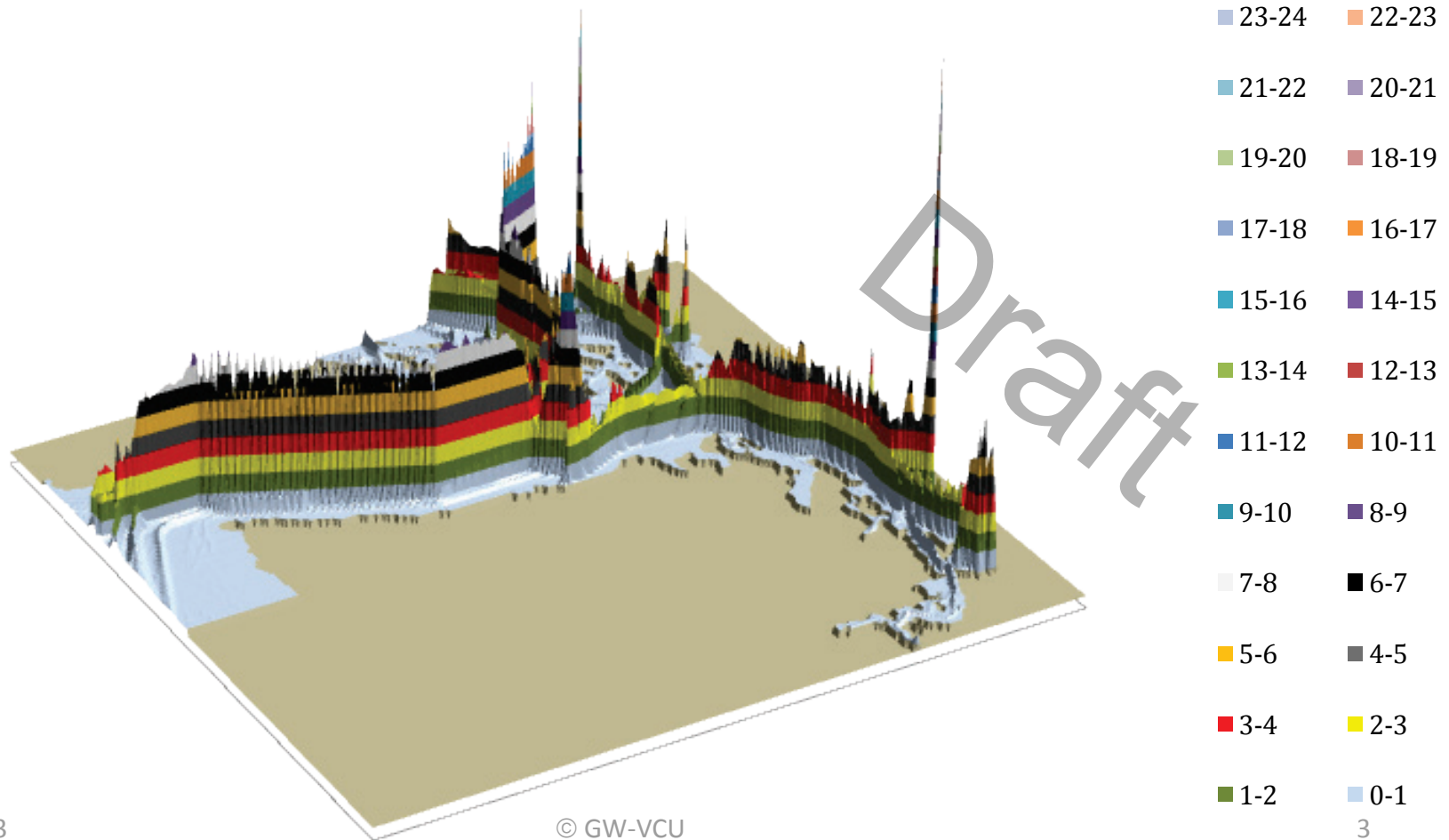
## P: Base Case 3D Risk Profile All FV - Vessel Time Exposure: 100% of Base Case VTE



# VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

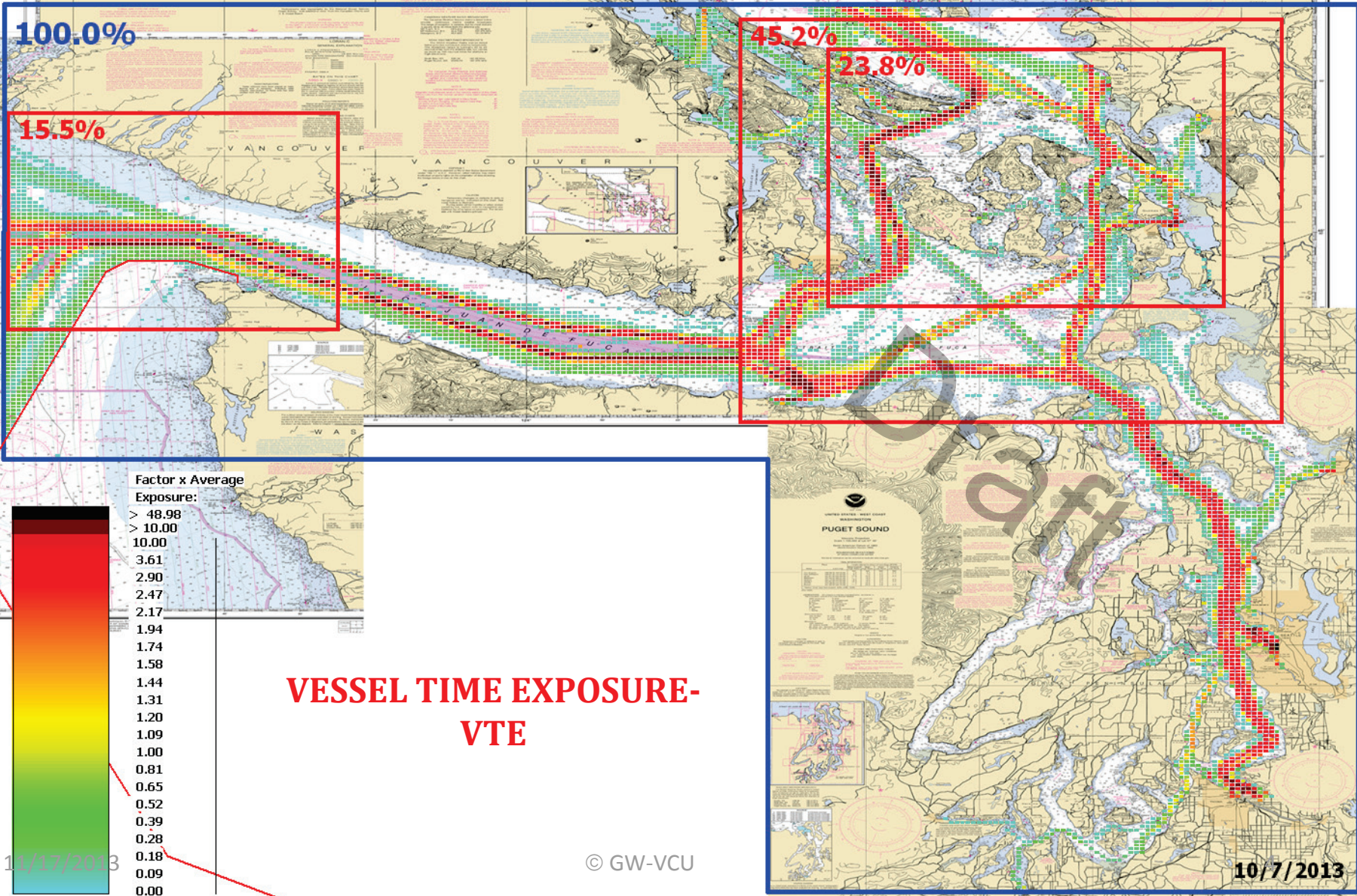


## T: GW - KM - DP 3D Risk Profile All FV - Vessel Time Exposure: 125% of Base Case VTE



# VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

P: VTRA 2010 - BASE CASE - All FV



- Factor x Average Exposure:
- > 48.98
  - > 10.00
  - 10.00
  - 3.61
  - 2.90
  - 2.47
  - 2.17
  - 1.94
  - 1.74
  - 1.58
  - 1.44
  - 1.31
  - 1.20
  - 1.09
  - 1.00
  - 0.81
  - 0.65
  - 0.52
  - 0.39
  - 0.28
  - 0.18
  - 0.09
  - 0.00

VESSEL TIME EXPOSURE-  
VTE

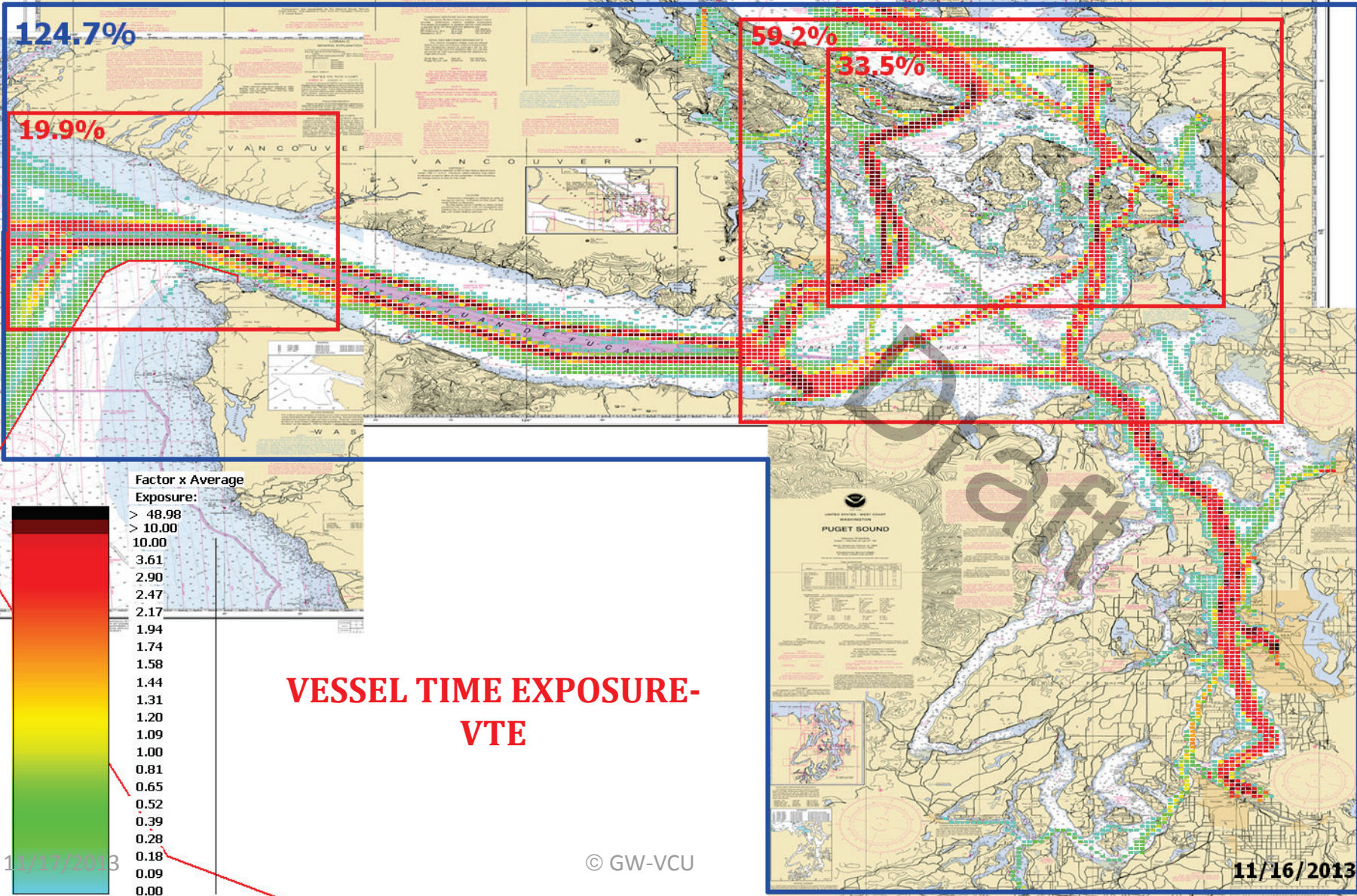
11/17/2013

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# VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

T: VTRA 2010 - GW 487- KM 348 - DP Cont. 67 and Bulk 348 - All FV



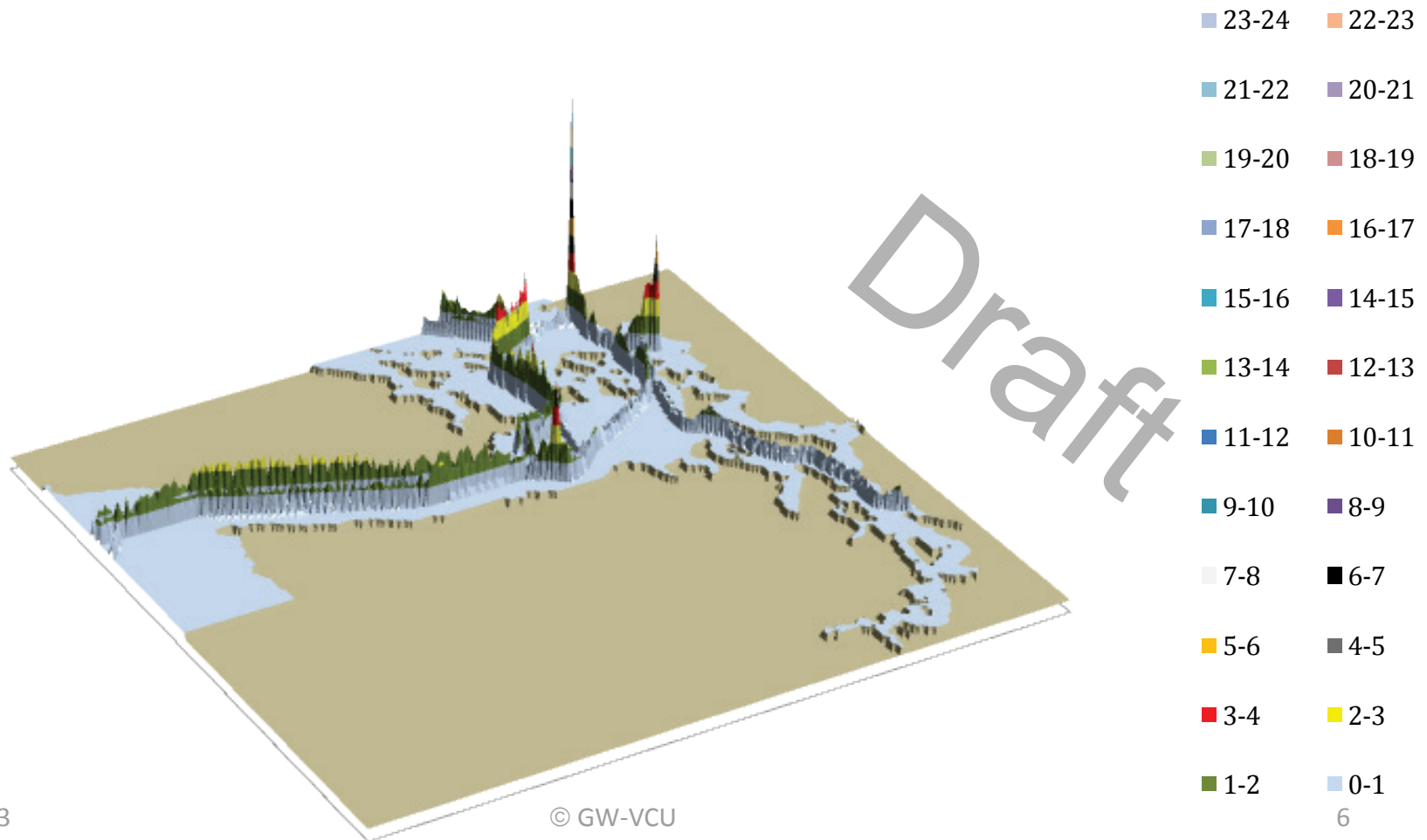
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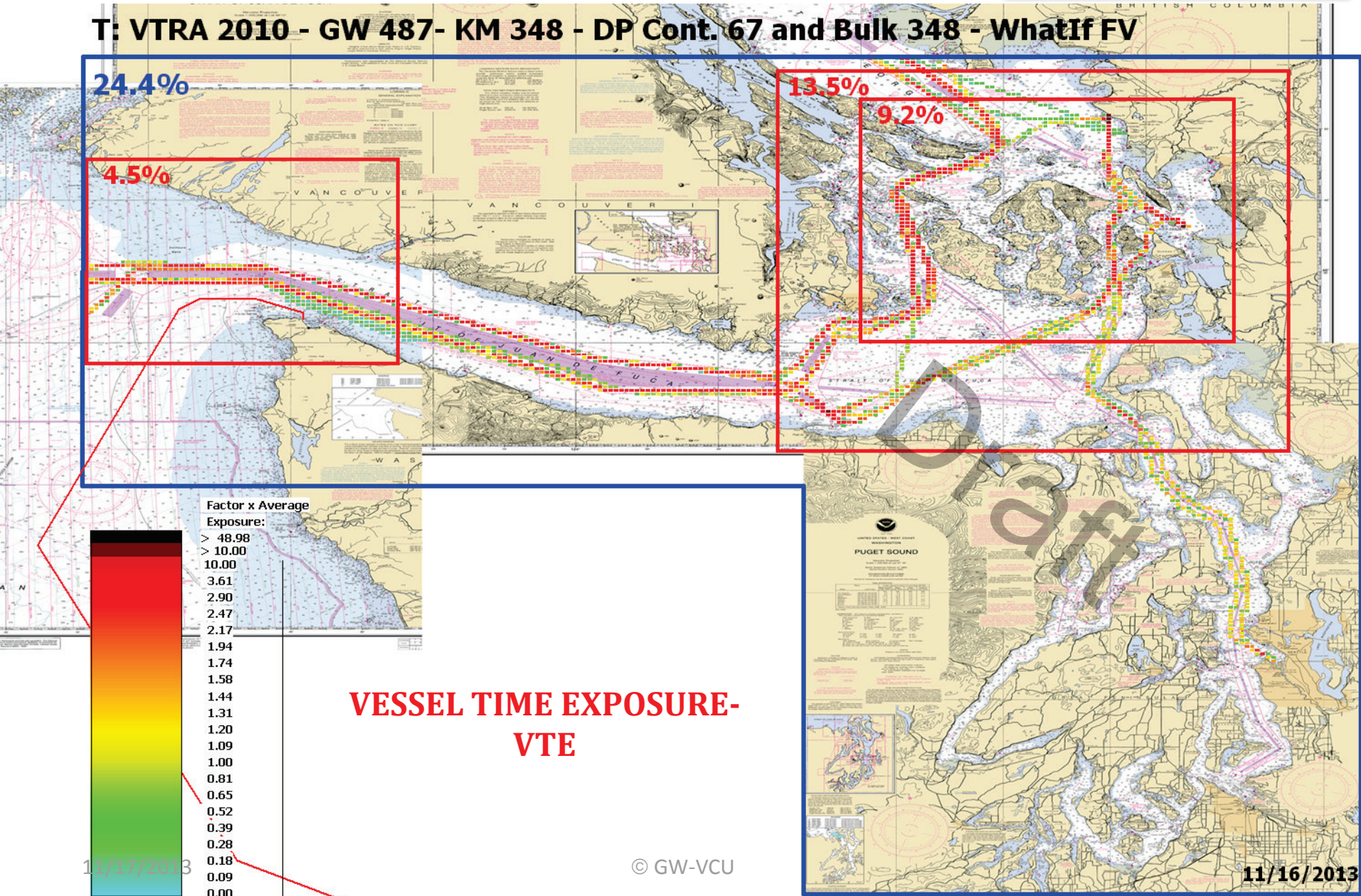
# VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

## T: GW - KM - DP 3D Risk Profile What-If FV - Vessel Time Exp.: 24.4% of Base Case VTE



# VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

T: VTRA 2010 - GW 487- KM 348 - DP Cont. 67 and Bulk 348 - WhatIf FV



VESSEL TIME EXPOSURE-  
VTE

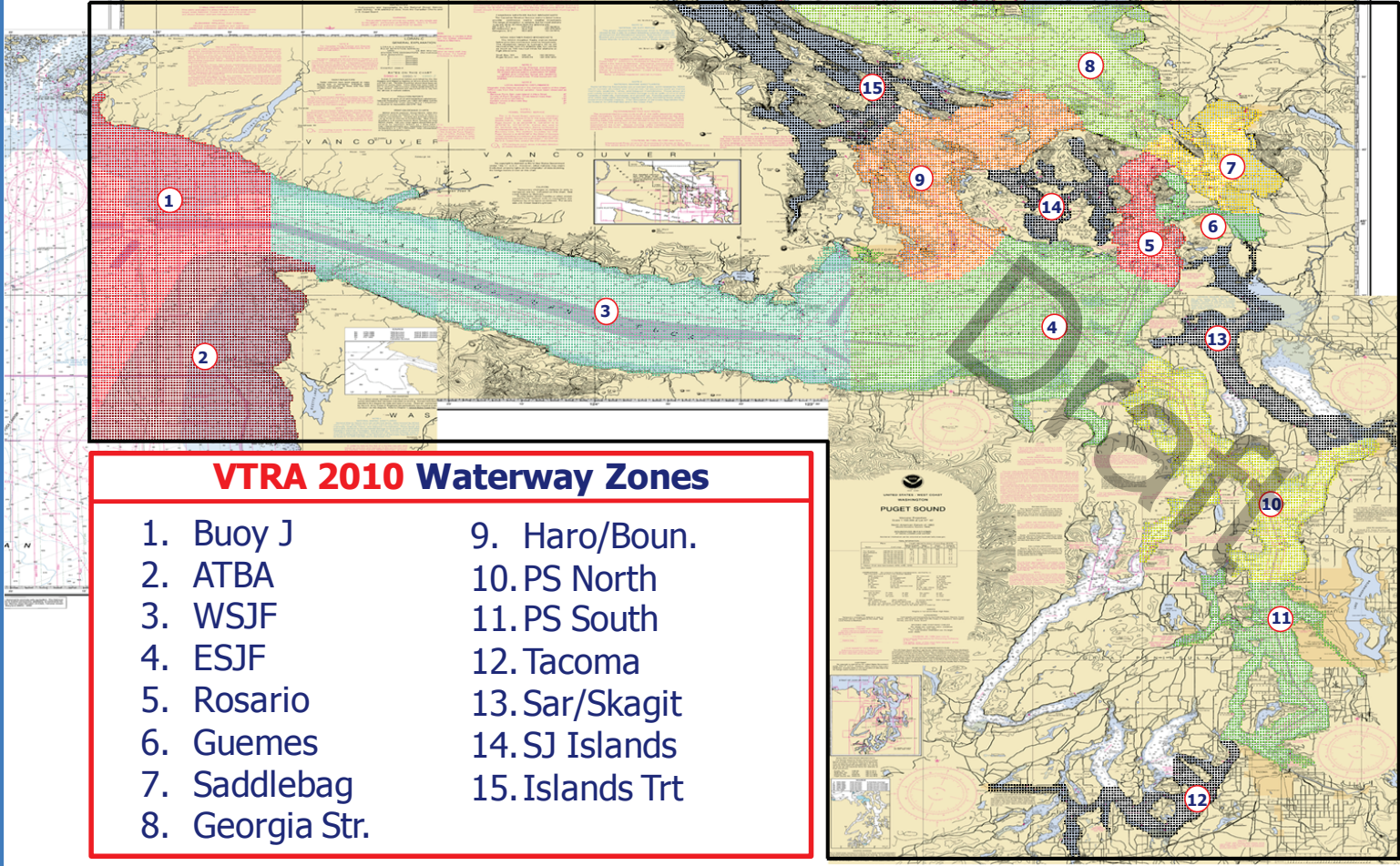
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# VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

## DEFINITION OF 15 WATERWAY ZONES

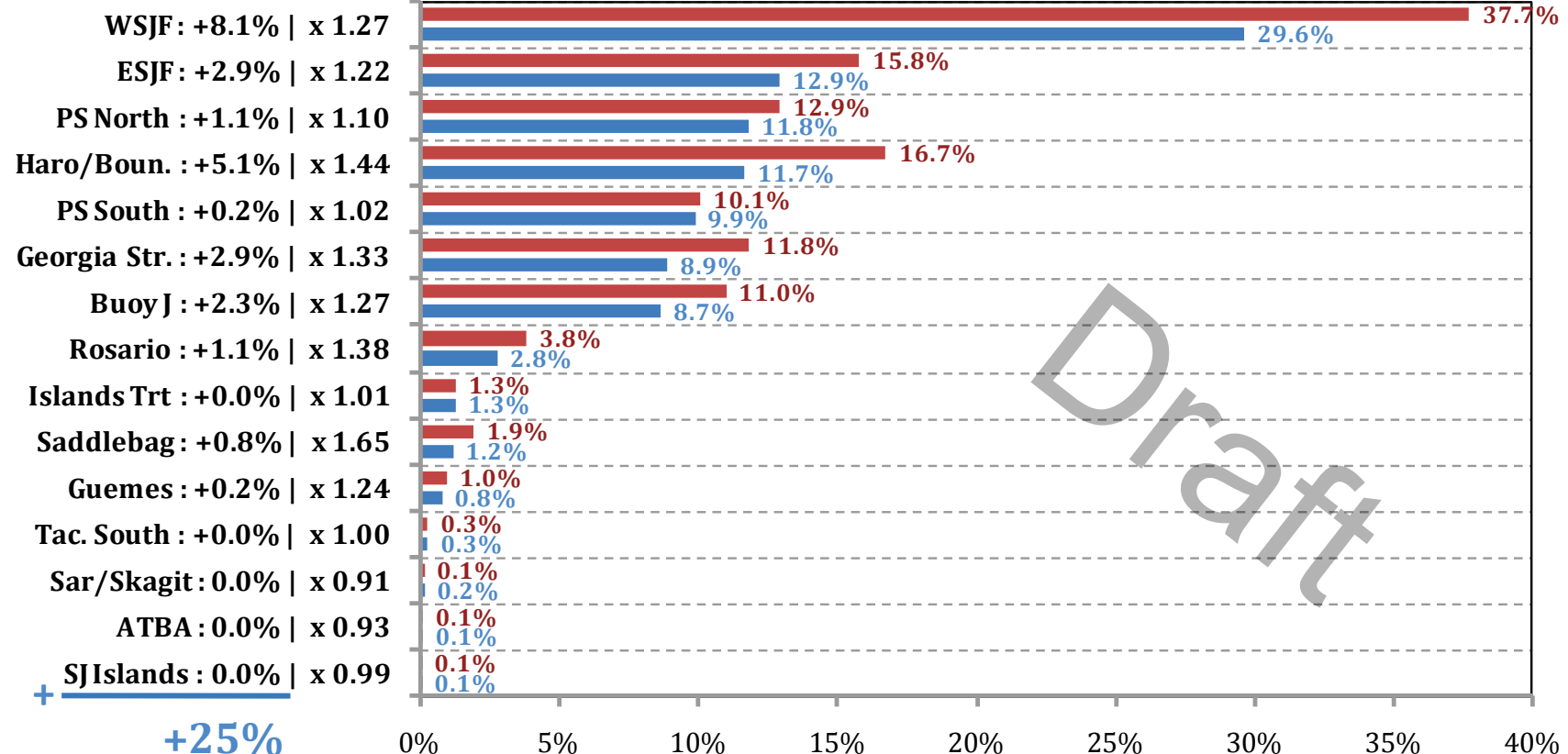




# VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

## % Base Case Vessel Time Exposure (VTE) - ALL\_FV

### Waterway Zone:



## % Base Case Vessel Time Exposure (VTE) - ALL\_FV

■ T: GW - KM - DP : 125% (+25% | x 1.25)      ■ P: Base Case: 100%

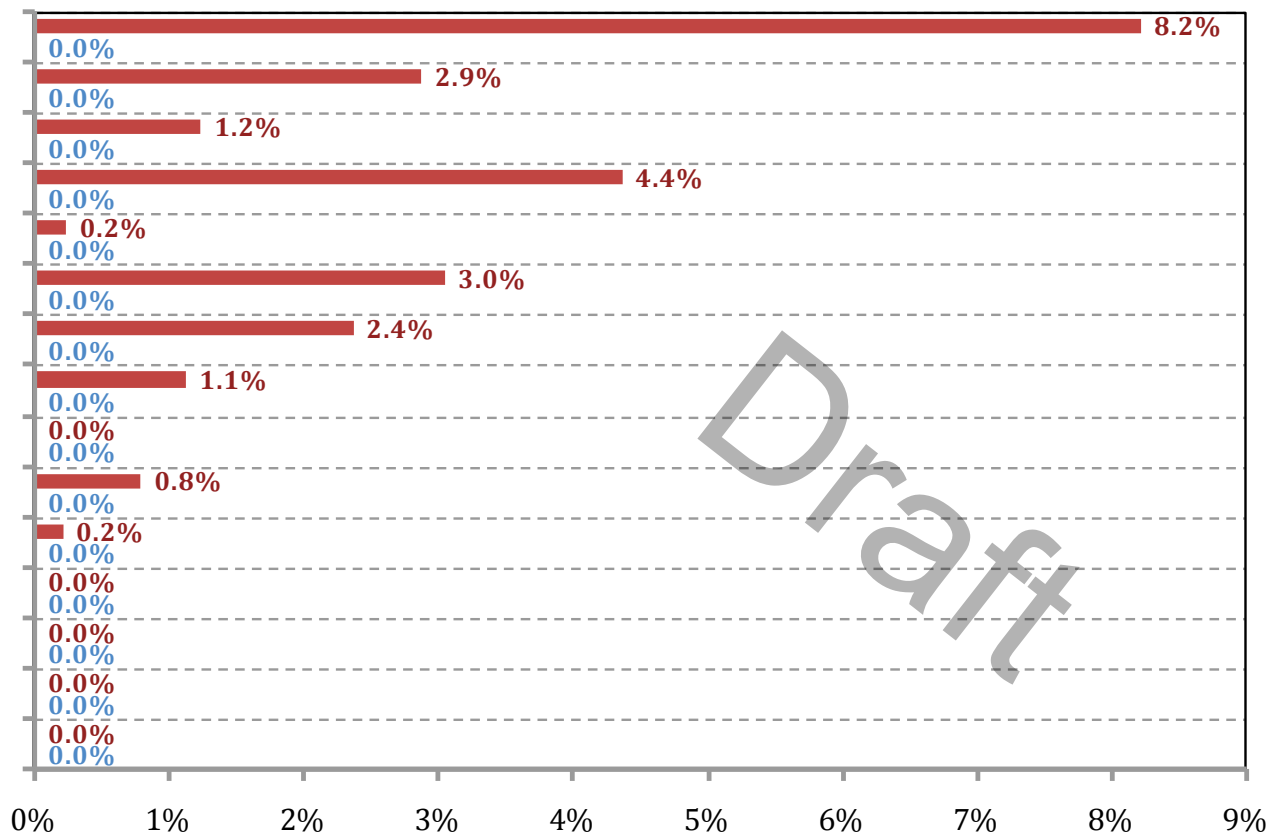
# VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

## % Base Case Vessel Time Exposure (VTE) - WhatIf

### Waterway Zone:

- WSJF : +8.2%
- ESJF : +2.9%
- PS North : +1.2%
- Haro/Boun. : +4.4%
- PS South : +0.2%
- Georgia Str. : +3.0%
- Buoy J : +2.4%
- Rosario : +1.1%
- Islands Trt : 0.0%
- Saddlebag : +0.8%
- Guemes : +0.2%
- Tac. South : 0.0%
- Sar/Skagit : 0.0%
- ATBA : 0.0%
- SJIslands : 0.0%

**+24%**



## % Base Case Vessel Time Exposure (VTE) - WhatIf

■ T: GW - KM - DP : 24% ( +24%)

■ P: Base Case : 0%