

VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

3D Relative Risk Profile Comparison
Potential Collision Accident Frequency

CASE T: GW – KM – DP & One Way ATB's Rosario

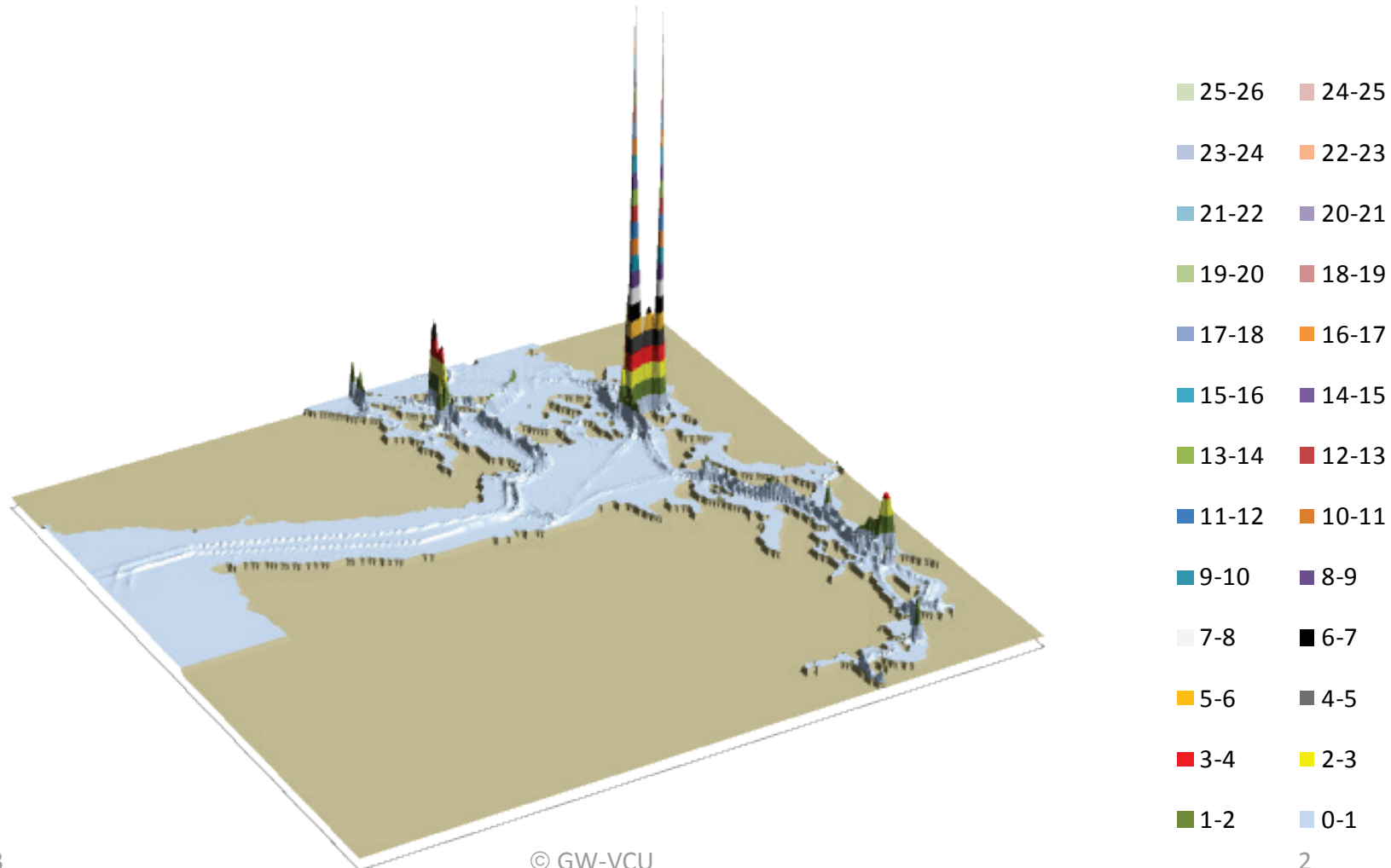
Dr. J. Rene van Dorp and Dr. Jason R.W Merrick

November 2013



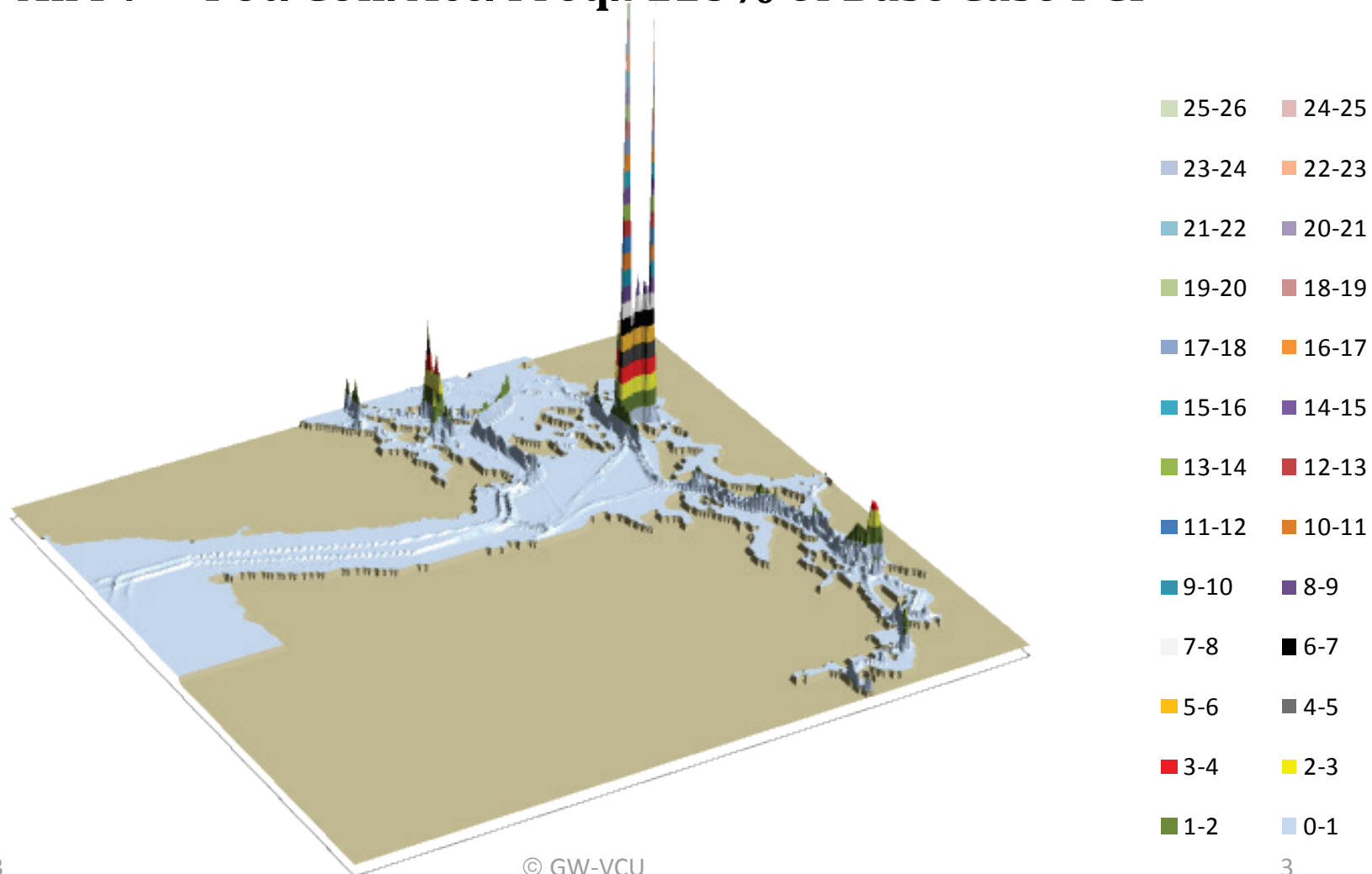
VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

T: GW - KM - DP 3D Risk Profile All FV - Pot. Coll. Acc. Freq.: 121% of Base Case PCF



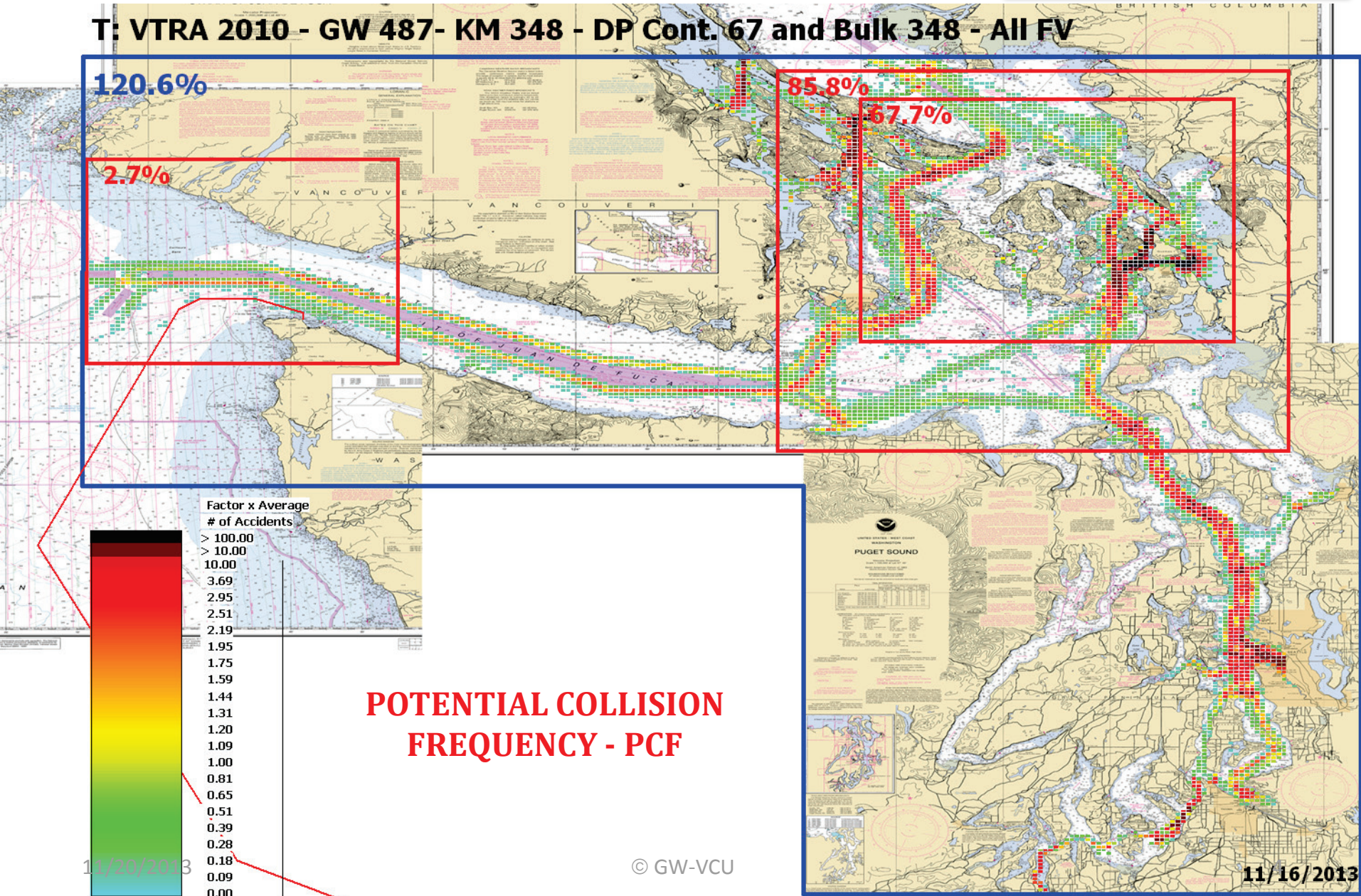
VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

T: GW - KM - DP & OW ATB 3D Risk Profile All FV - Pot. Coll. Acc. Freq.: 118% of Base Case PCF



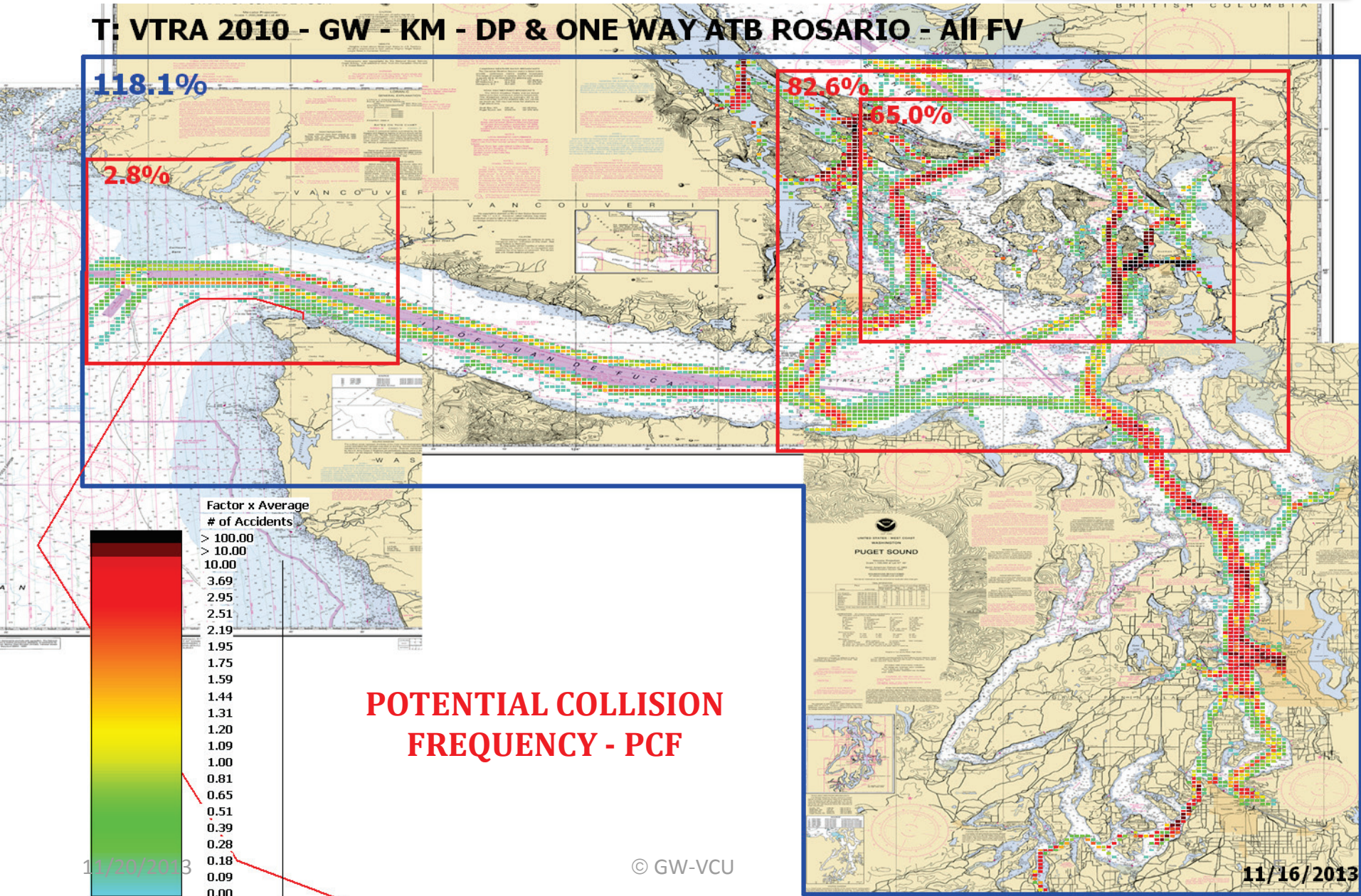
VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

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



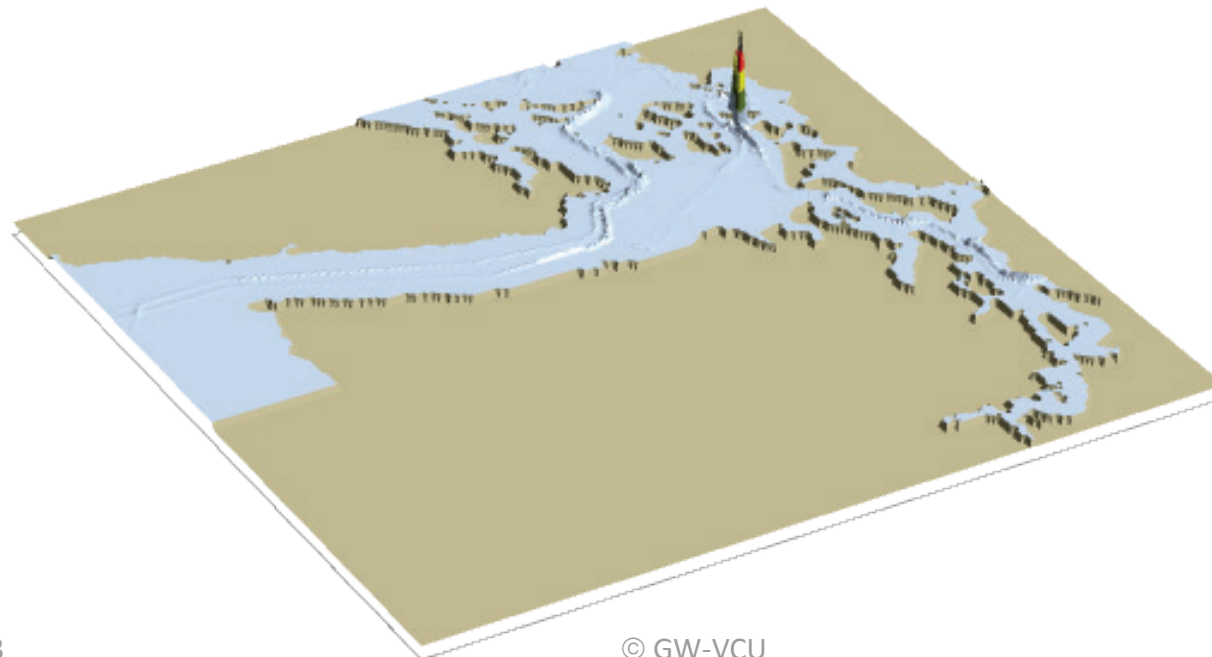
VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

T: VTRA 2010 - GW - KM - DP & ONE WAY ATB ROSARIO - All FV



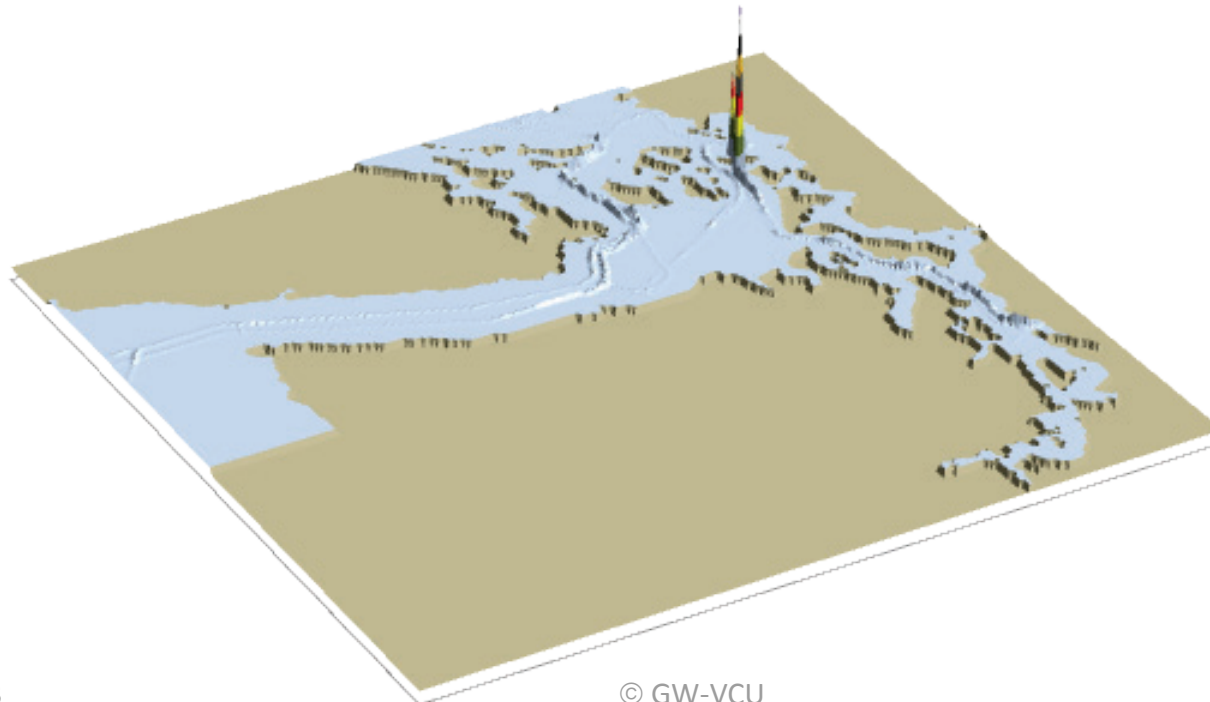
VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

T: GW - KM - DP 3D Risk Profile What If FV - Pot. Coll. Acc. Fr.: 18% of Base Case PCF



VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

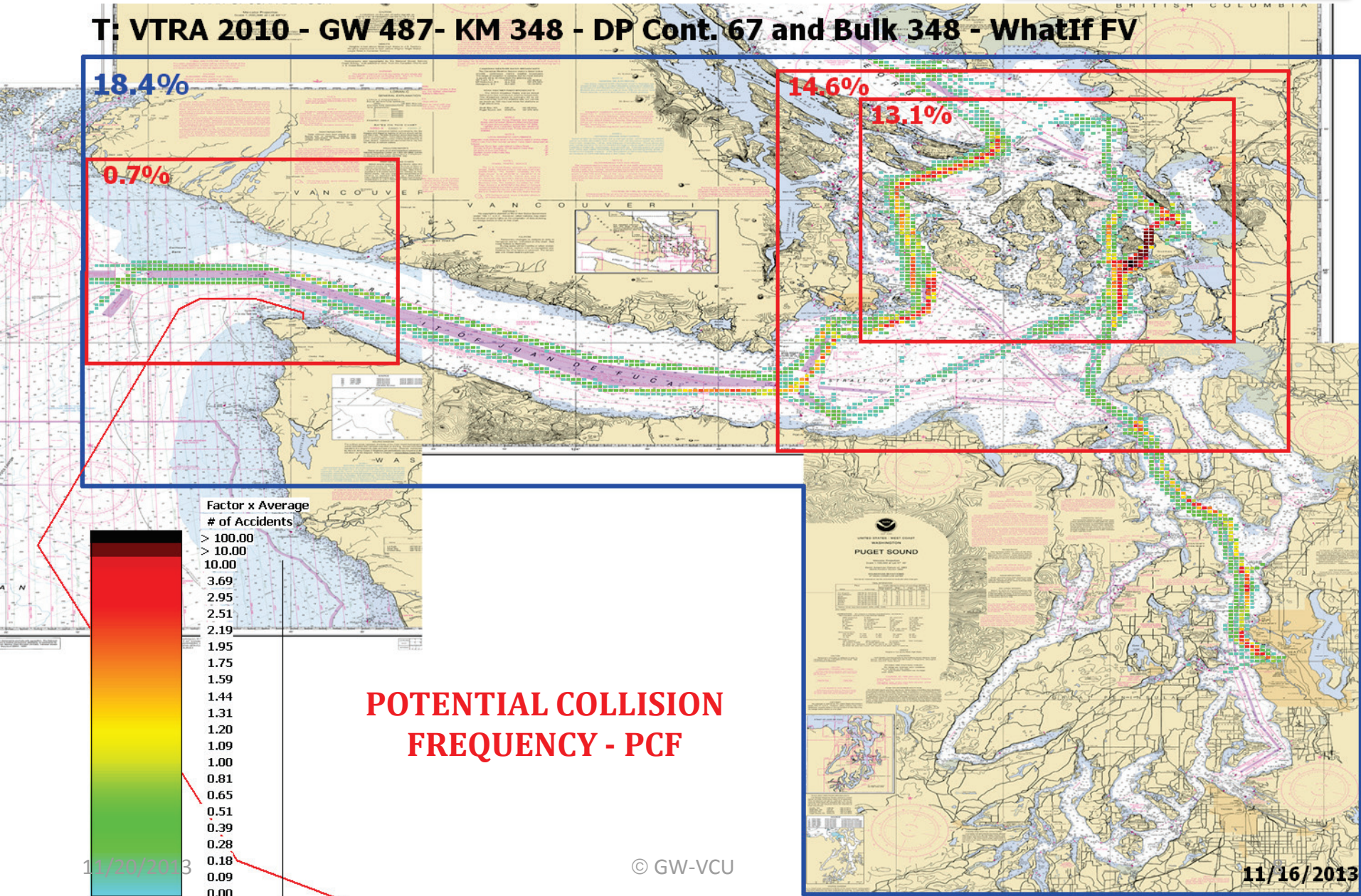
T: GW - KM - DP & OW ATB 3D Risk Profile What If FV - Pot. Coll. Acc. Fr.: 18% of Base Case PCF



- | | |
|-------|-------|
| 25-26 | 24-25 |
| 23-24 | 22-23 |
| 21-22 | 20-21 |
| 19-20 | 18-19 |
| 17-18 | 16-17 |
| 15-16 | 14-15 |
| 13-14 | 12-13 |
| 11-12 | 10-11 |
| 9-10 | 8-9 |
| 7-8 | 6-7 |
| 5-6 | 4-5 |
| 3-4 | 2-3 |
| 1-2 | 0-1 |

VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

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



POTENTIAL COLLISION FREQUENCY - PCF

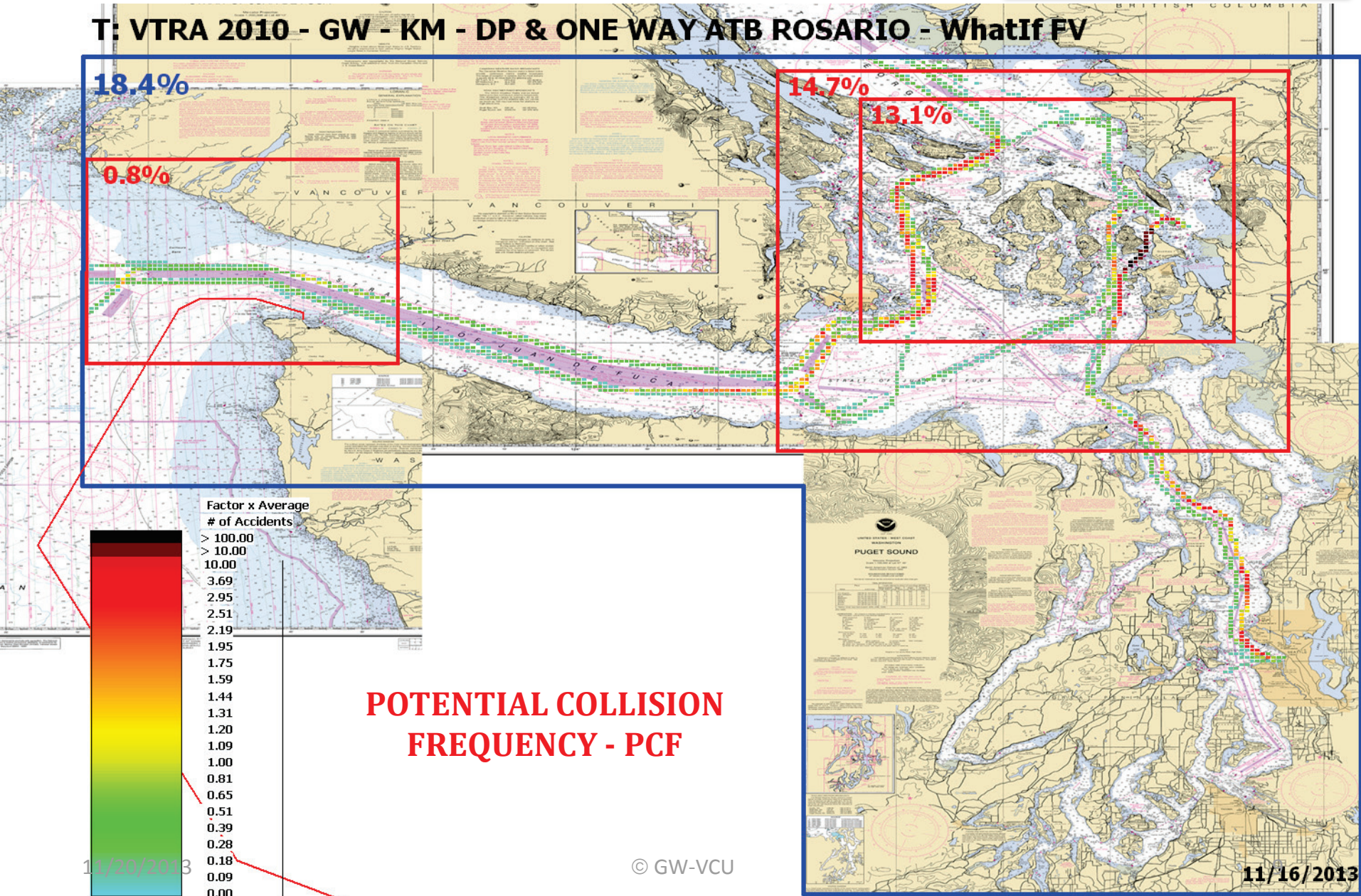
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VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

T: VTRA 2010 - GW - KM - DP & ONE WAY ATB ROSARIO - WhatIf FV



POTENTIAL COLLISION FREQUENCY - PCF

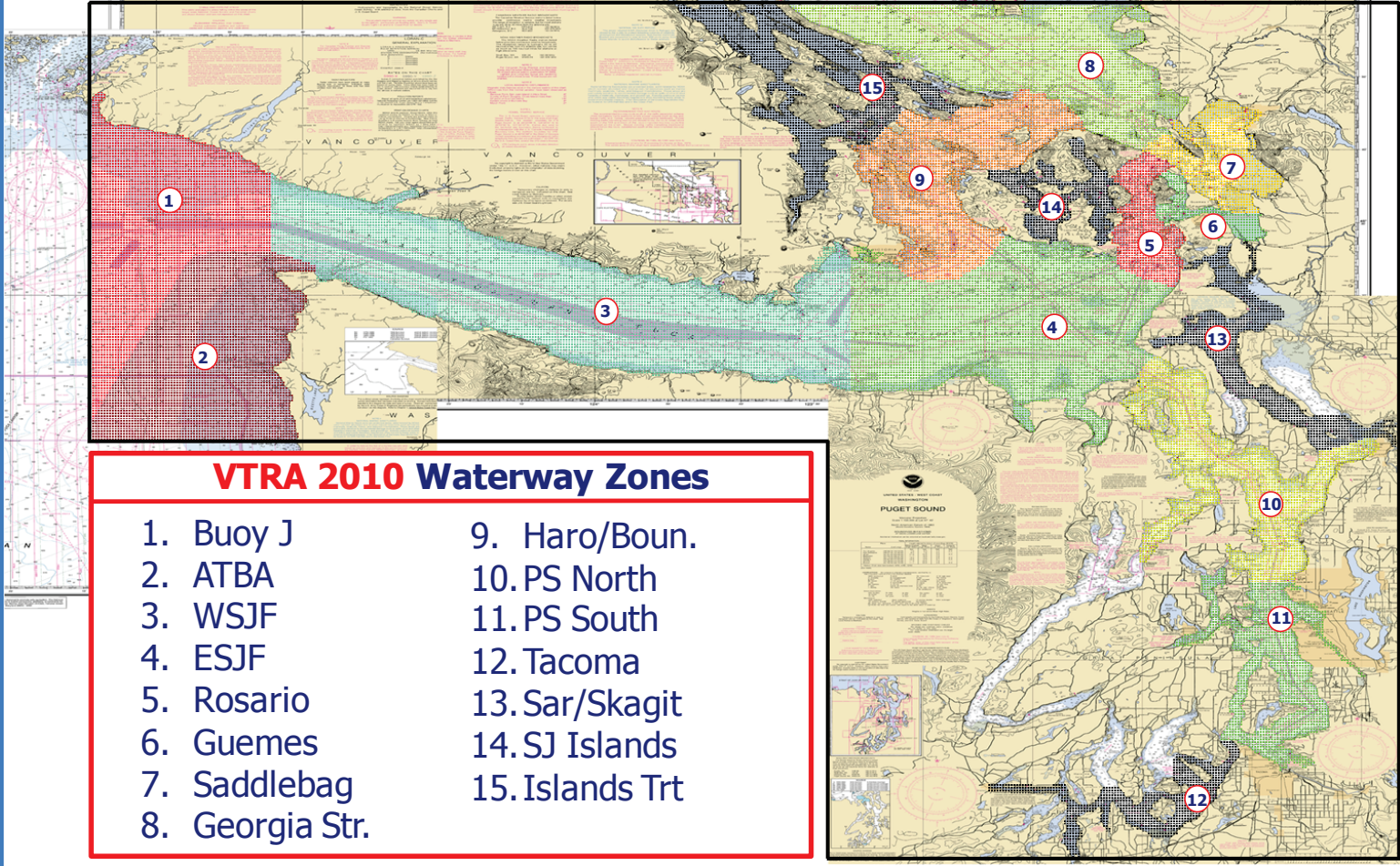
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VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

DEFINITION OF 15 WATERWAY ZONES



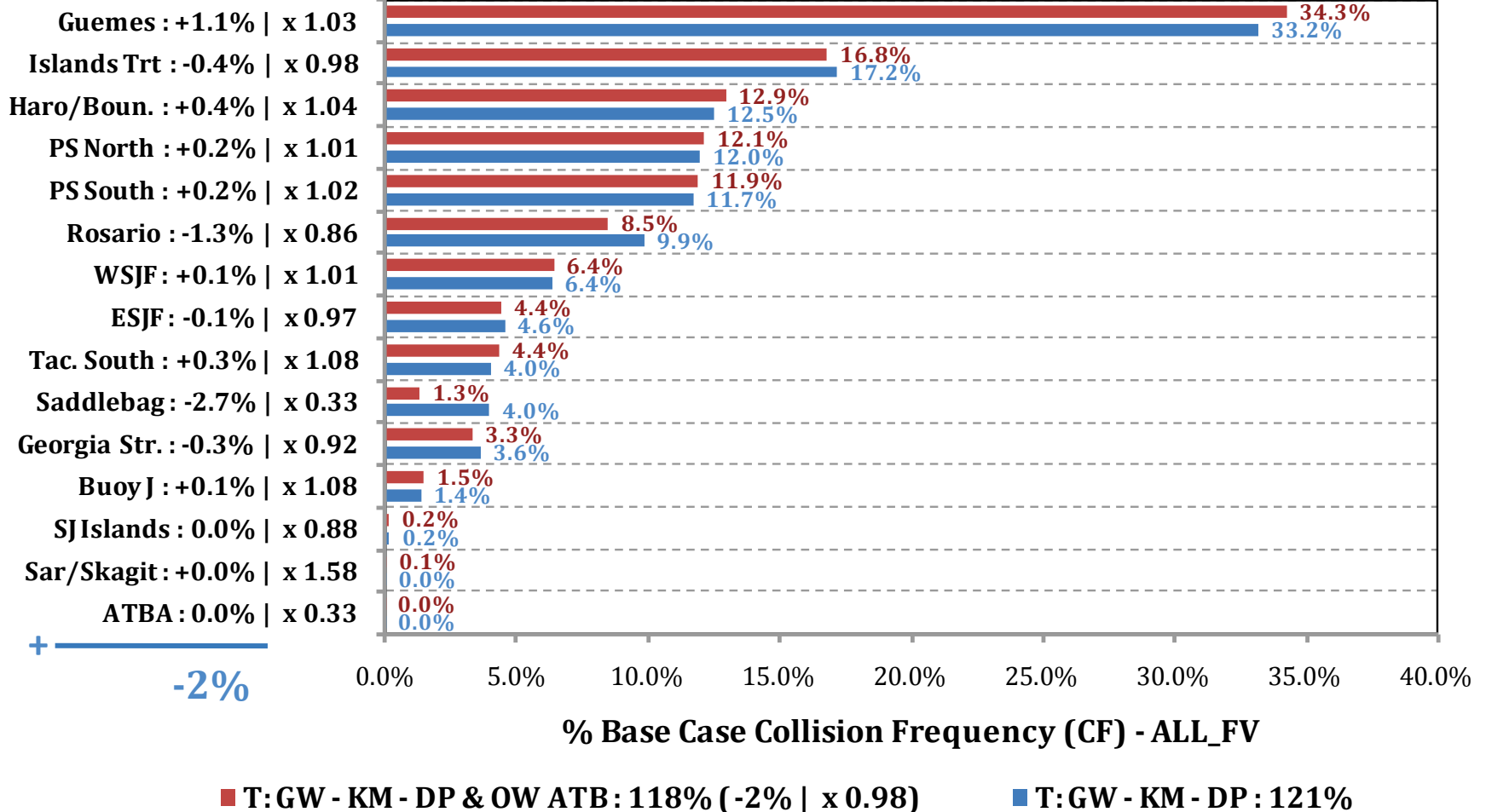
VTRA 2010 Waterway Zones

- | | |
|-----------------|-----------------|
| 1. Buoy J | 9. Haro/Boun. |
| 2. ATBA | 10. PS North |
| 3. WSJF | 11. PS South |
| 4. ESJF | 12. Tacoma |
| 5. Rosario | 13. Sar/Skagit |
| 6. Guemes | 14. SJ Islands |
| 7. Saddlebag | 15. Islands Trt |
| 8. Georgia Str. | |

VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

% Base Case Collision Frequency - ALL_FV

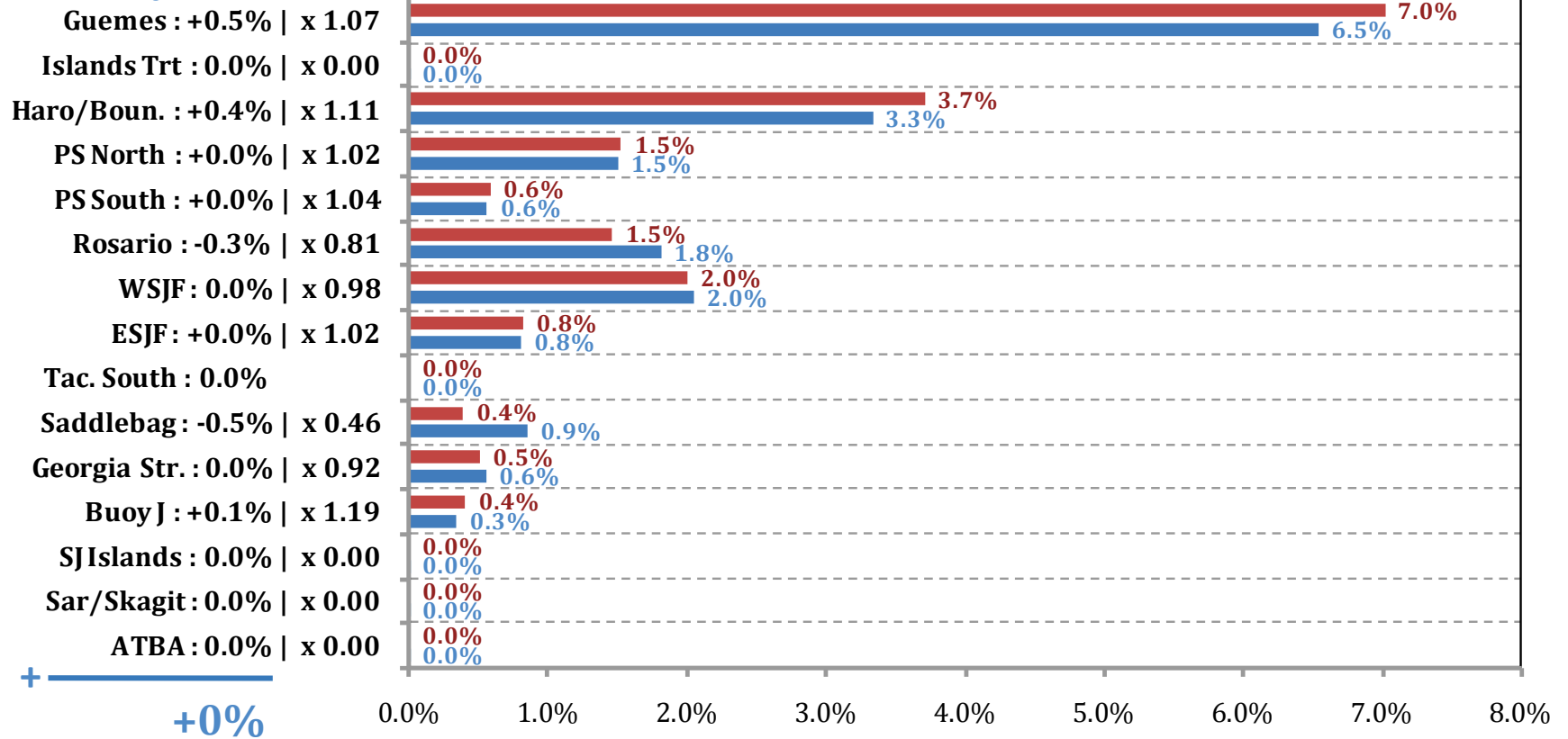
Waterway Zone:



VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

% Base Case Collision Frequency - WhatIf

Waterway Zone:



% Base Case Collision Frequency (CF) - WhatIf

■ T:GW - KM - DP & OW ATB : 18% (+0% | x 1.00)

■ T:GW - KM - DP : 18%