

VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

3D Relative Risk Profile Comparison
Potential Collision Accident Frequency

CASE S – DP 415 + Bunkering

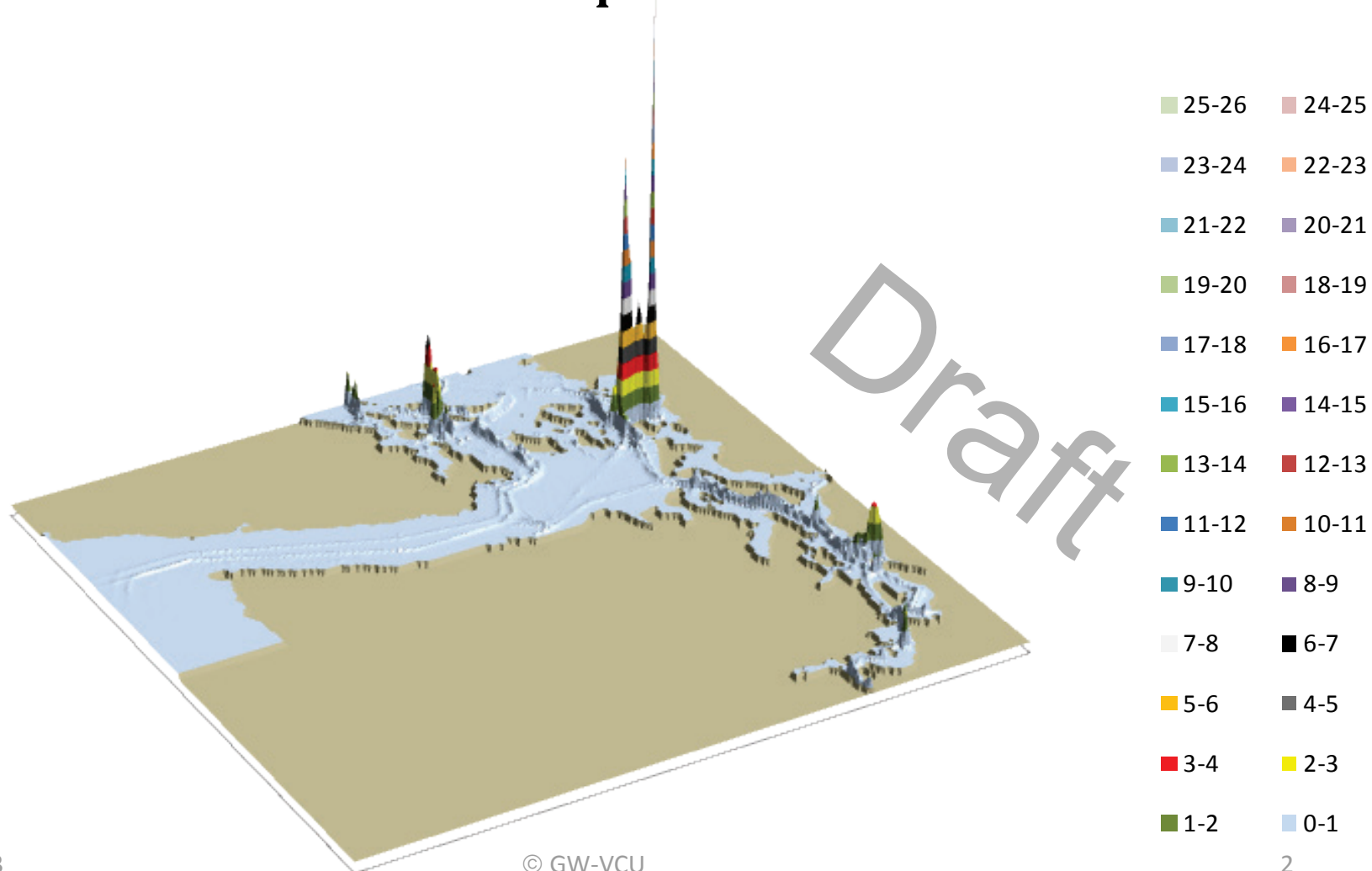
Dr. J. Rene van Dorp and Dr. Jason R.W Merrick

November 2013



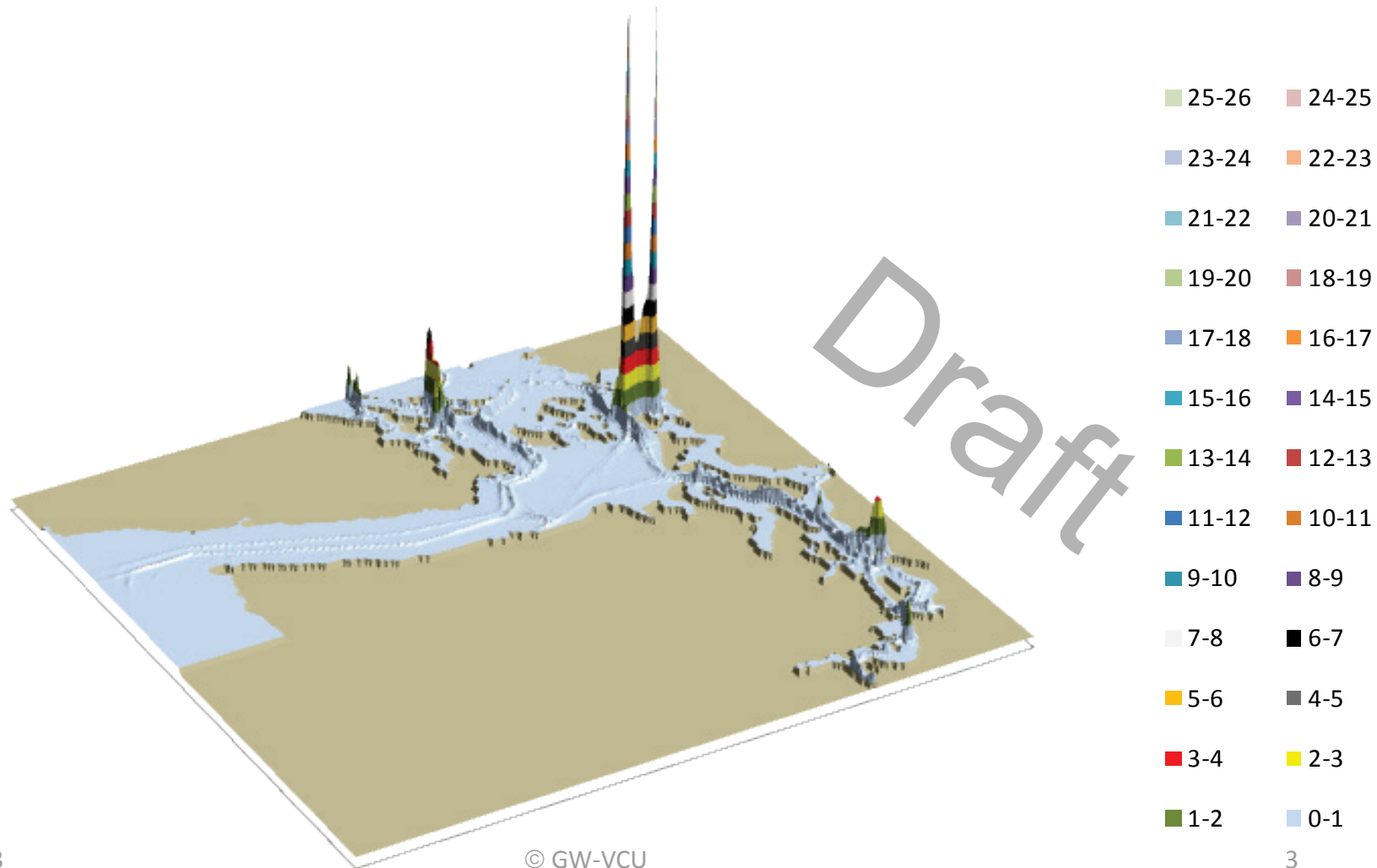
VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

P: Base Case 3D Risk Profile All FV - Pot. Coll. Acc. Freq.: 100% of Base Case PCF



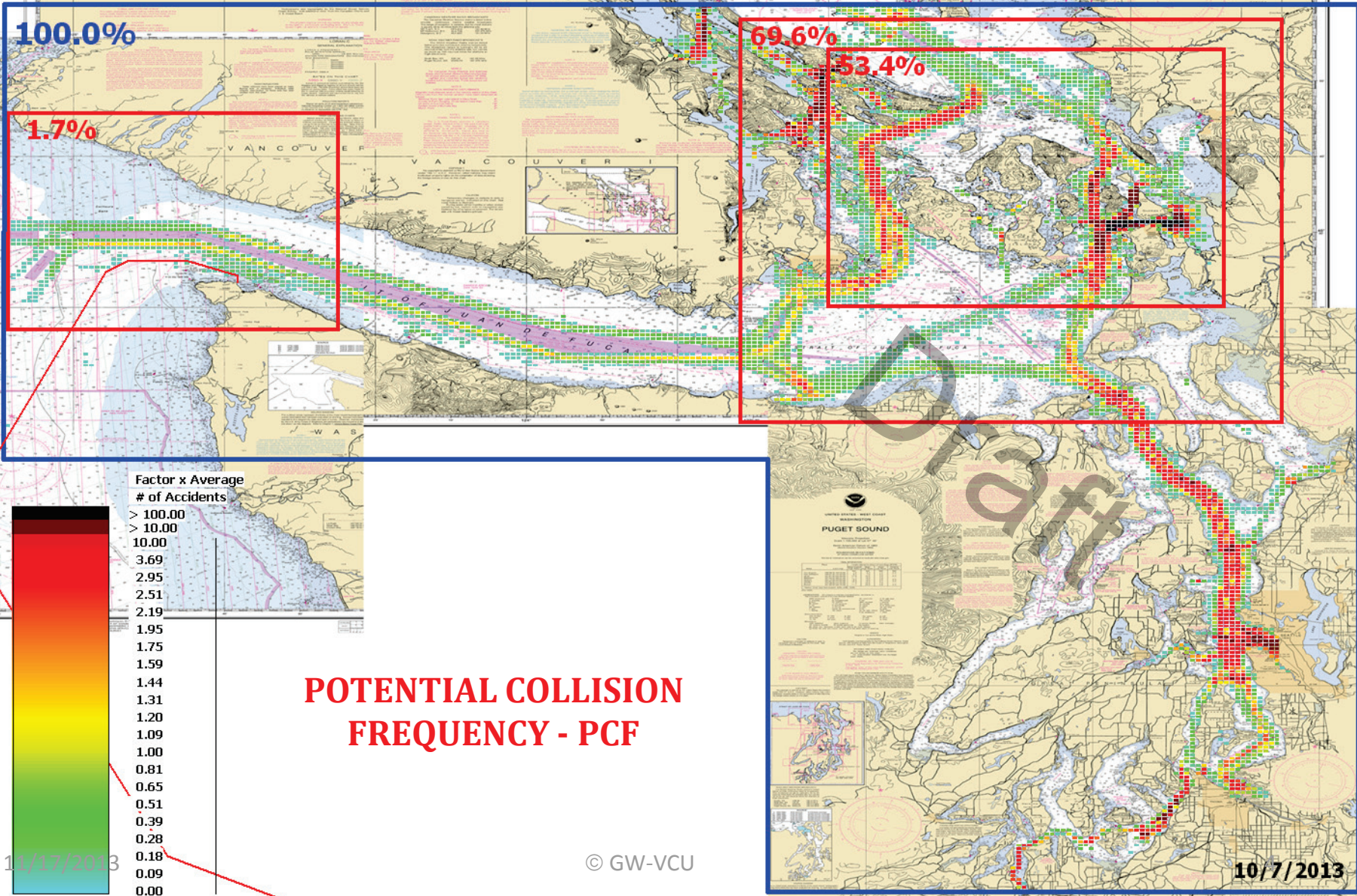
VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

S: DP 415 3D Risk Profile All FV - Pot. Coll. Acc. Freq.: 110% of Base Case PCF



VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

P: VTRA 2010 - BASE CASE - All FV



POTENTIAL COLLISION FREQUENCY - PCF

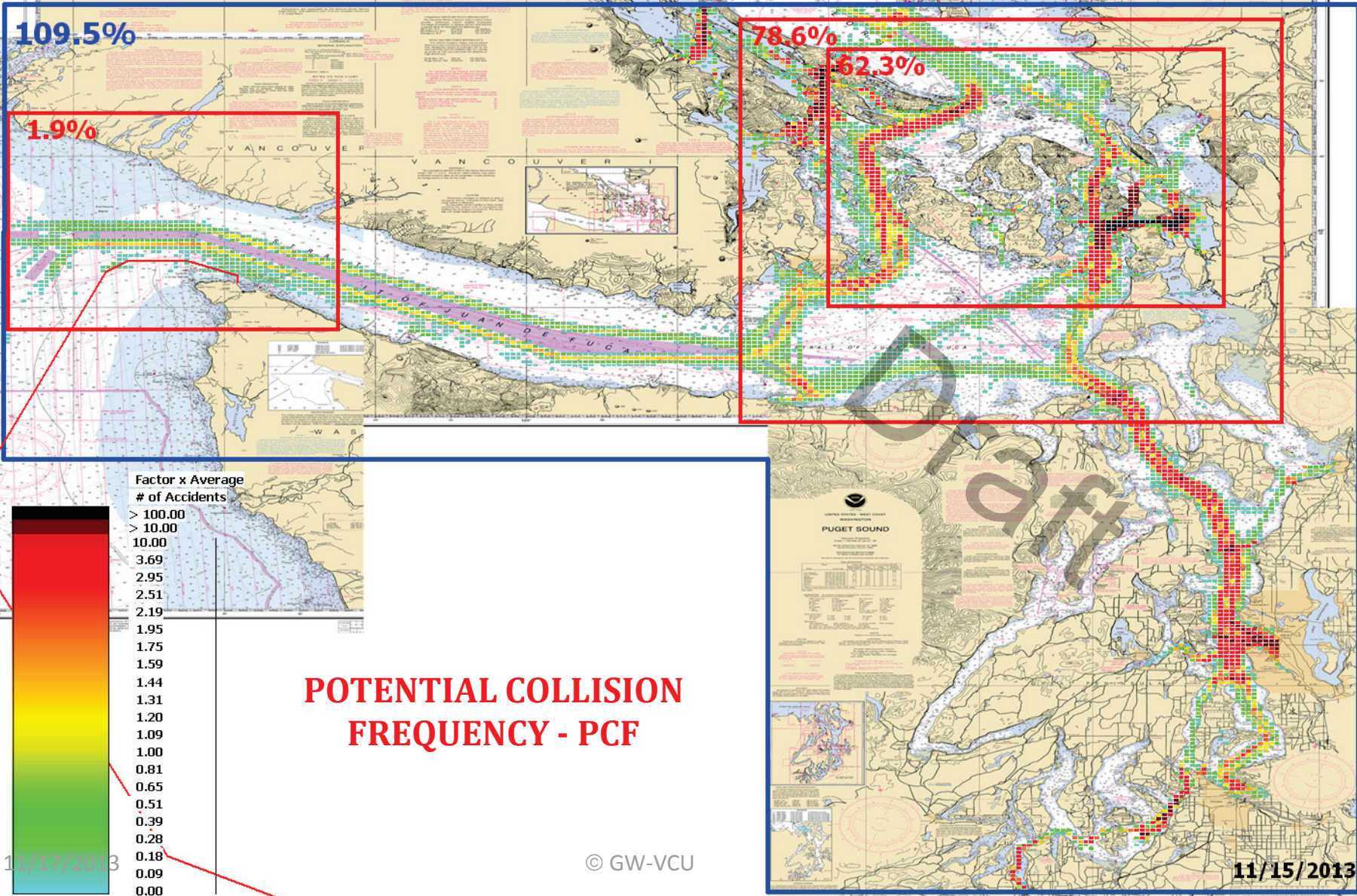
11/17/2013

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VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

S: VTRA 2010 - Delta Port - Cont. 67 and Bulk 348 - All FV



POTENTIAL COLLISION FREQUENCY - PCF

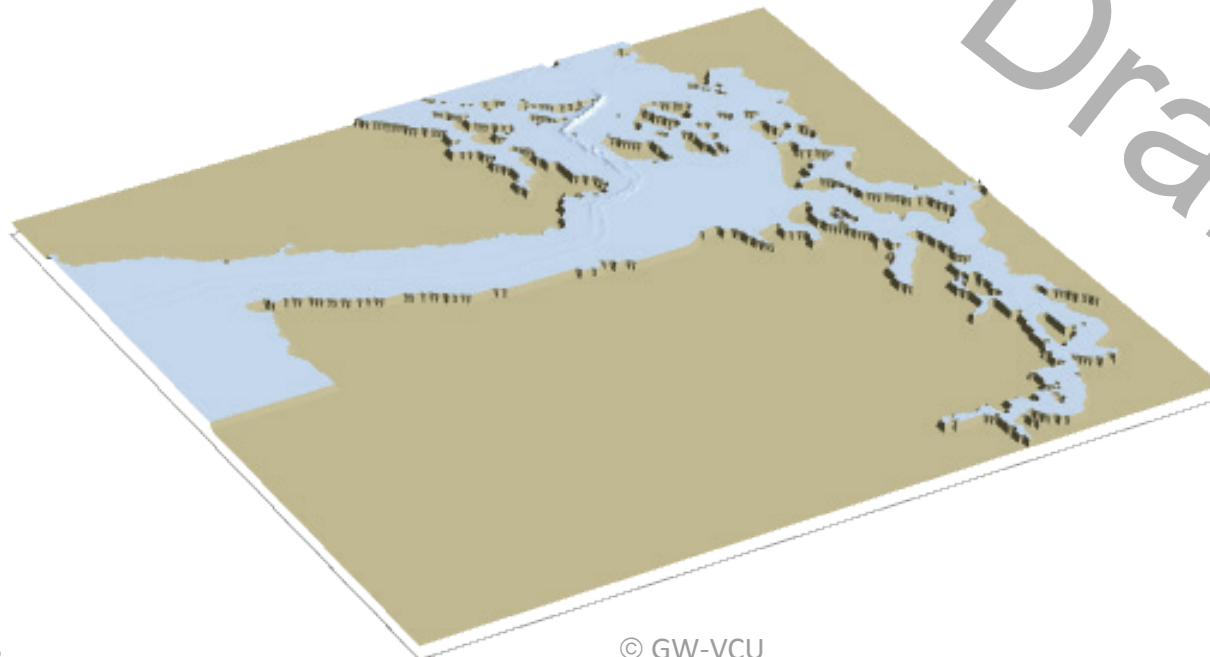
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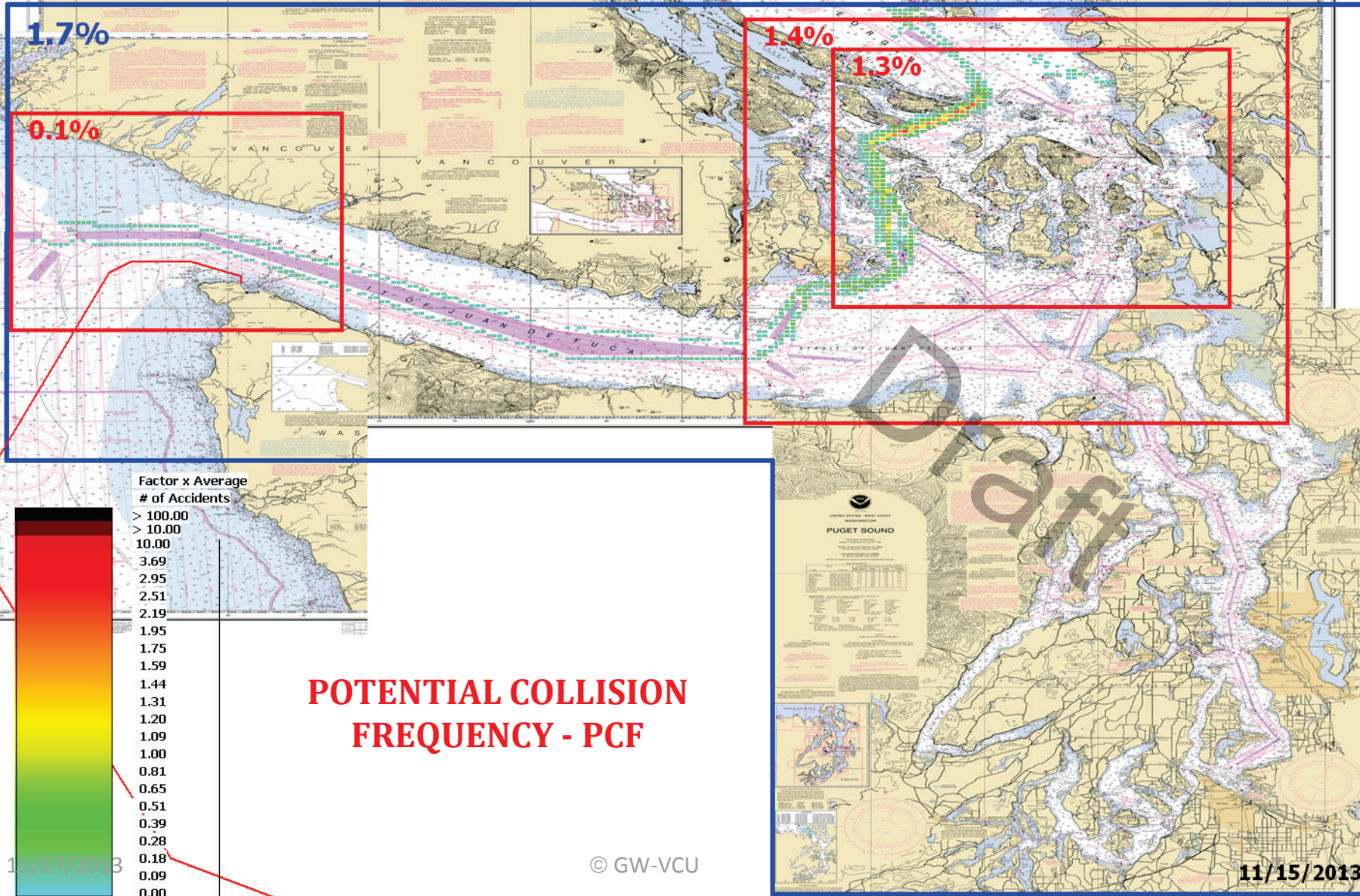
VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

S: DP 415 3D Risk Profile What If FV - Pot. Coll. Acc. Fr.: 2% of Base Case PCF



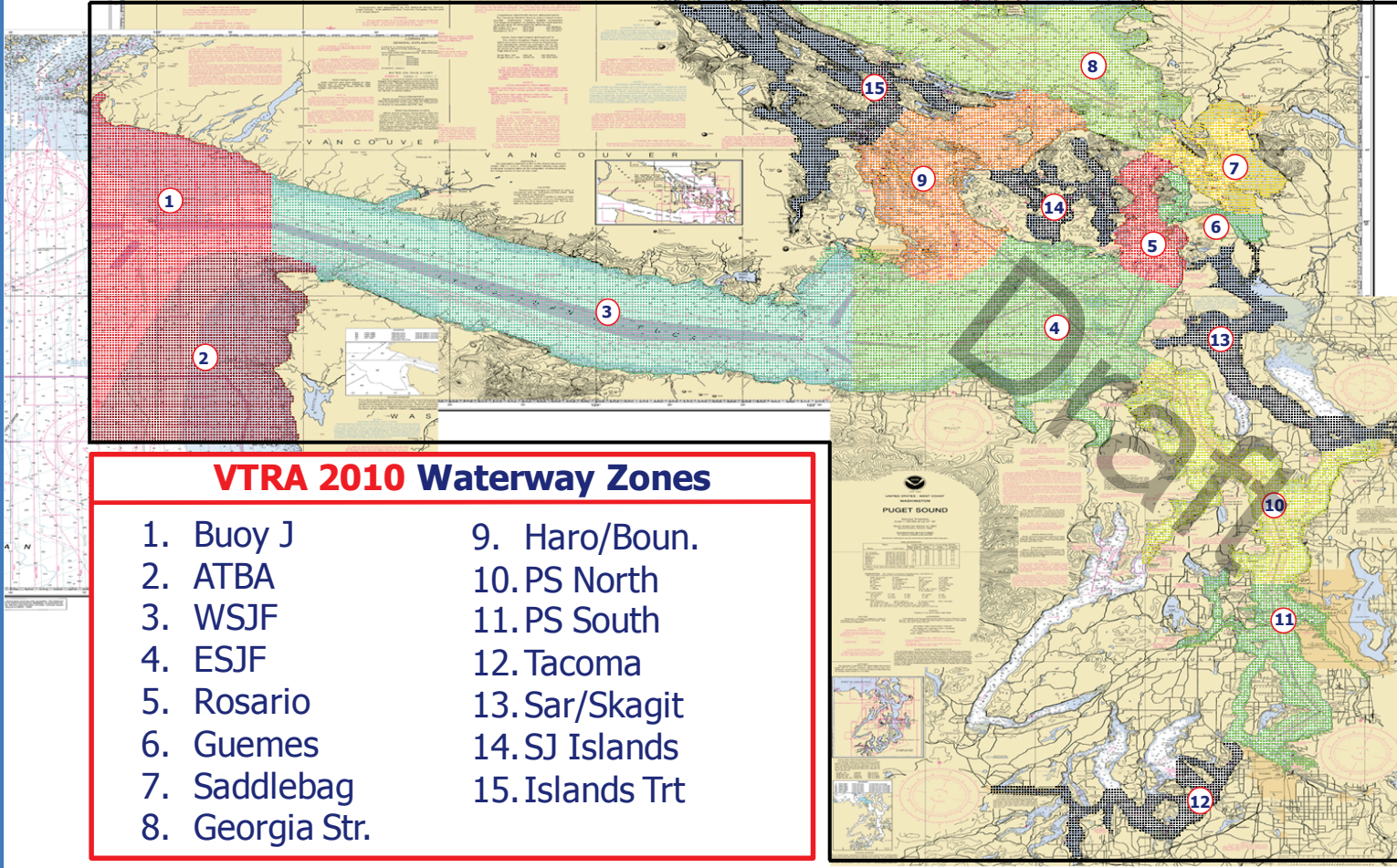
VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

S: VTRA 2010 - Delta Port - Cont. 67 and Bulk 348 - WhatIf FV



VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

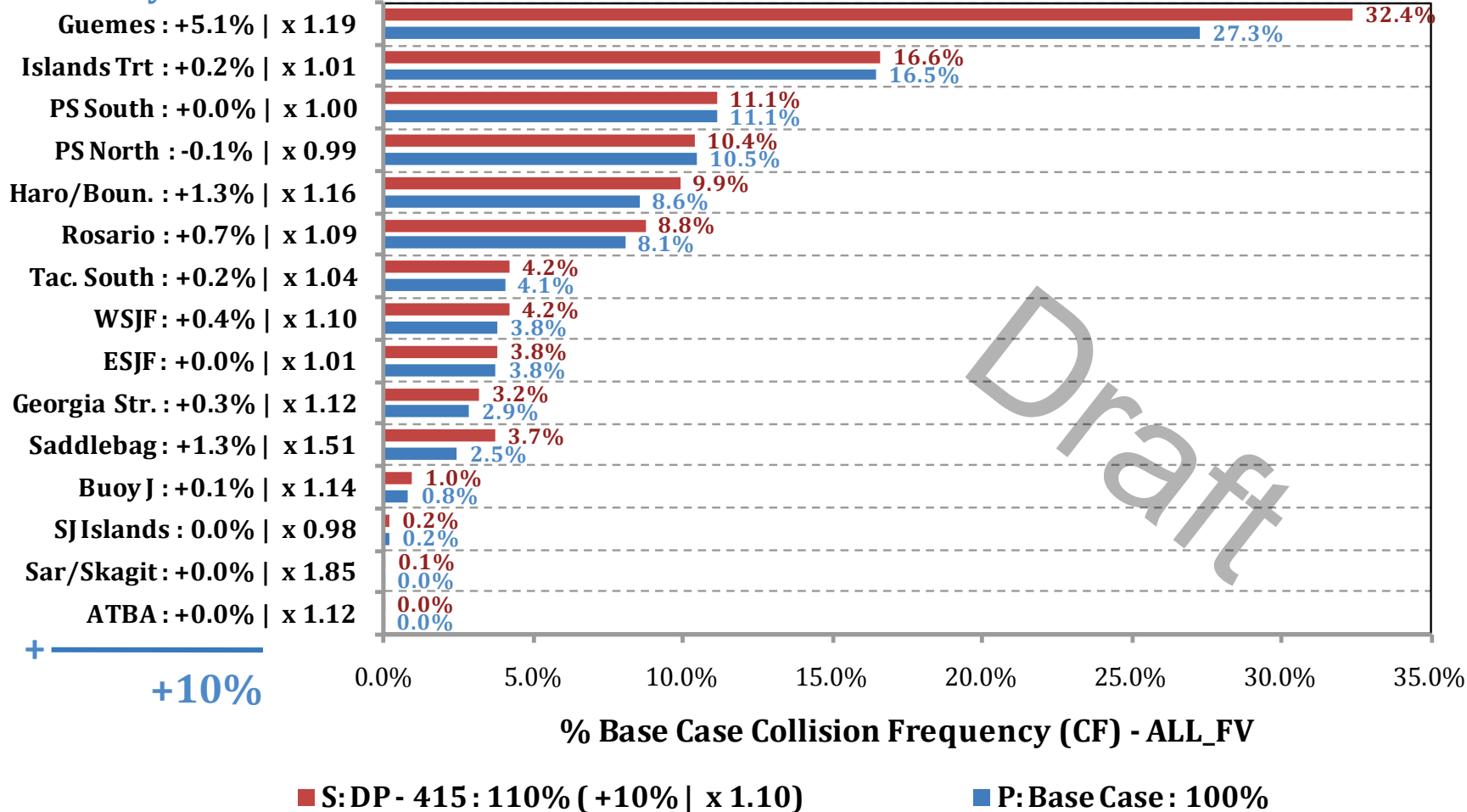
DEFINITION OF 15 WATERWAY ZONES



VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

% Base Case Collision Frequency - ALL_FV

Waterway Zone:



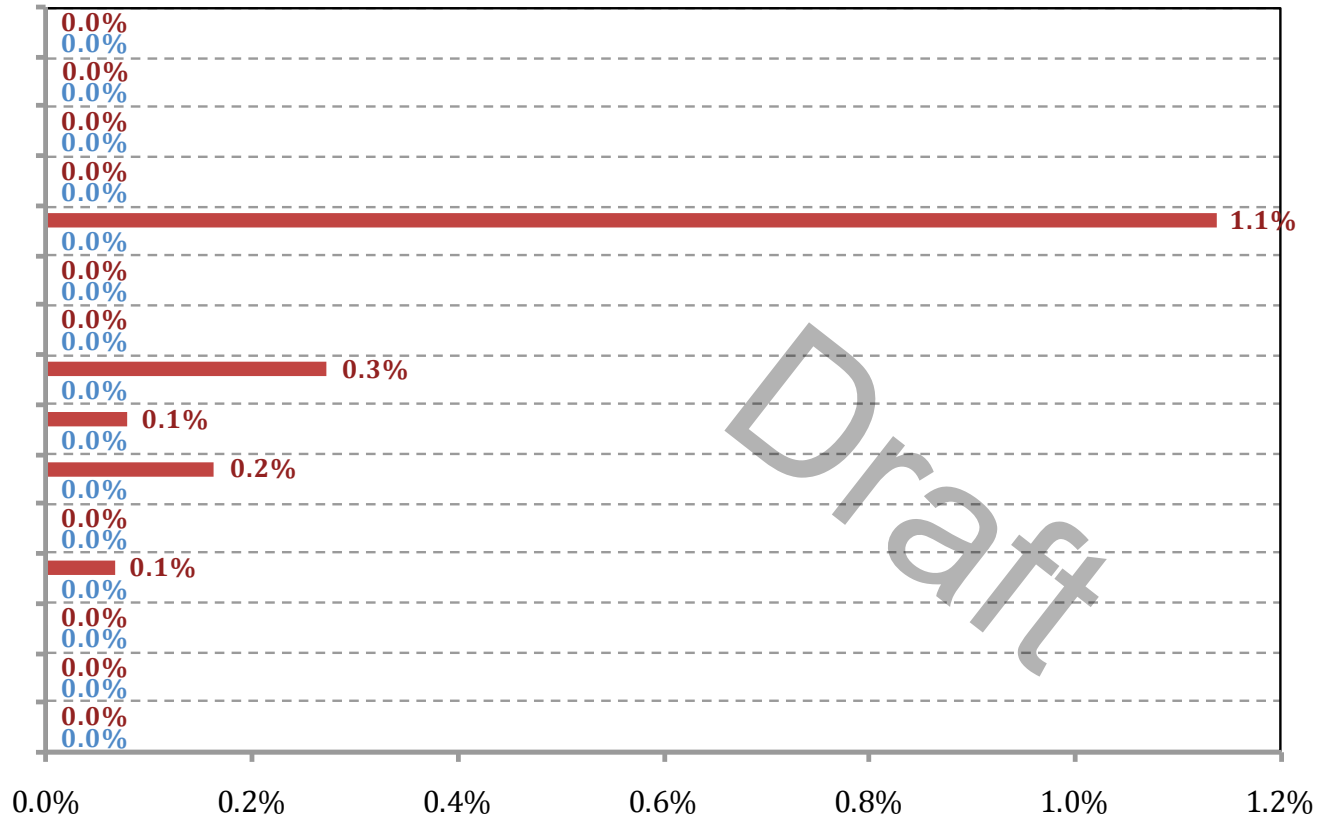
VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

% Base Case Collision Frequency - WhatIf

Waterway Zone:

Guemes : 0.0%
 Islands Trt : +0.0%
 PS South : 0.0%
 PS North : 0.0%
 Haro/Boun. : +1.1%
 Rosario : 0.0%
 Tac. South : 0.0%
 WSJF : +0.3%
 ESJF : +0.1%
 Georgia Str. : +0.2%
 Saddlebag : 0.0%
 Buoy J : +0.1%
 SJ Islands : +0.0%
 Sar/Skagit : 0.0%
 ATBA : +0.0%

+
+2%



% Base Case Collision Frequency (CF) - WhatIf

■ S: DP - 415 : 2% (+2%)

■ P: Base Case : 0%