

VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

3D Relative Risk Profile Comparison
Vessel Time Exposure

**CASE P: BASE CASE & 100% Double Hull Fuel Tank
Protection for All Deep Draft Vessels**

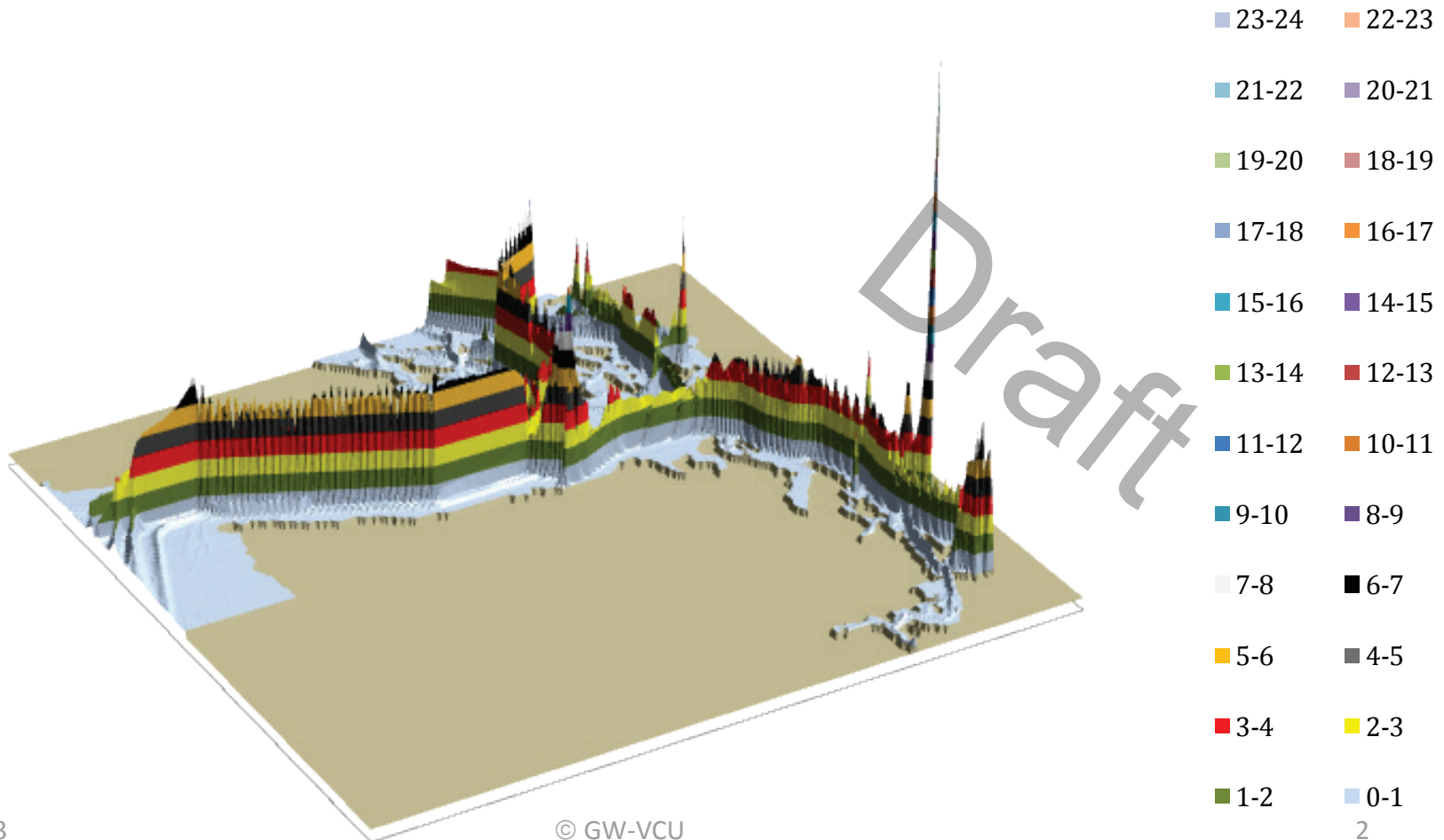
Dr. J. Rene van Dorp and Dr. Jason R.W Merrick

November 2013



VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

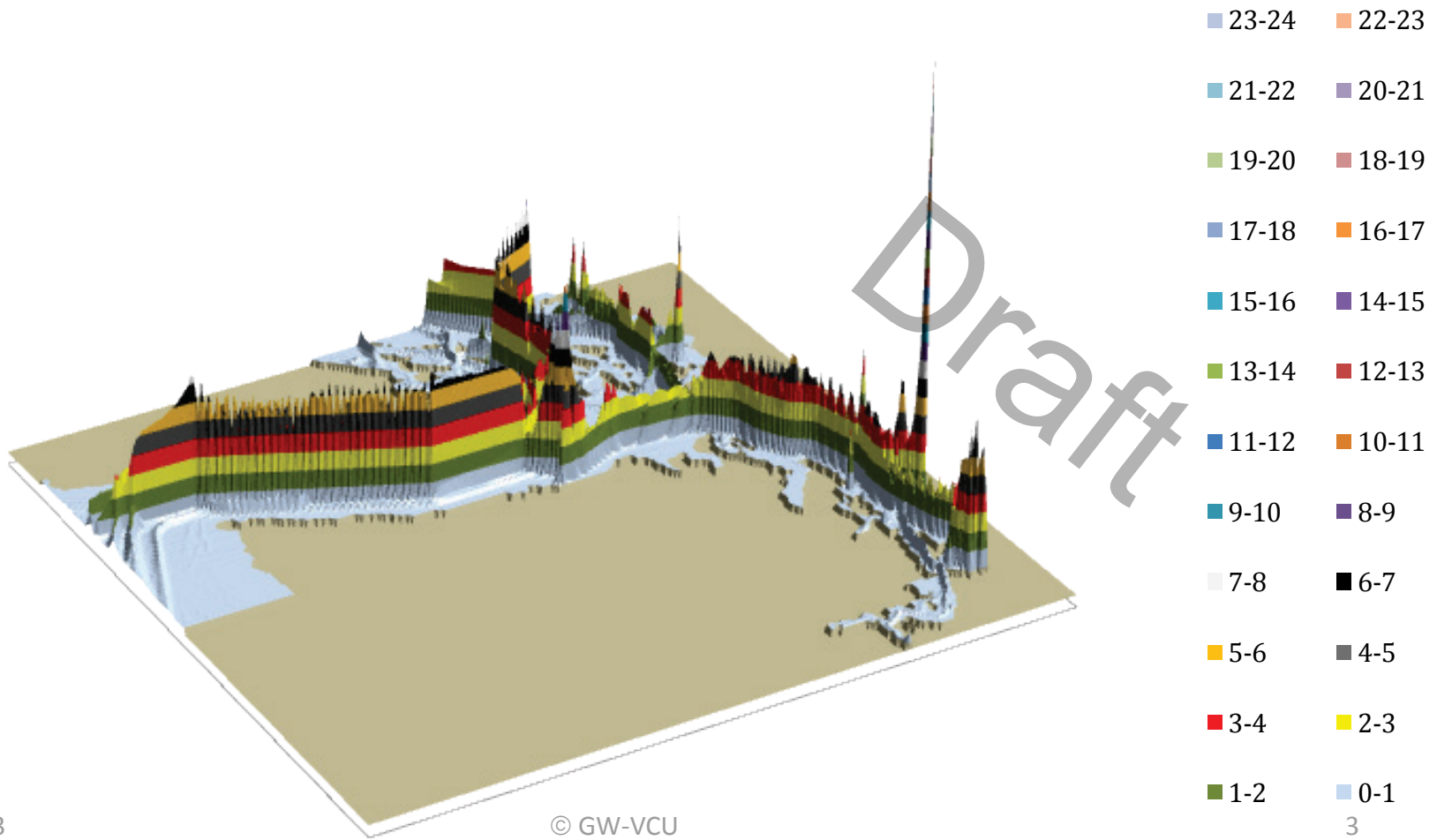
P: Base Case 3D Risk Profile All FV - Vessel Time Exposure: 100% of Base Case VTE



VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

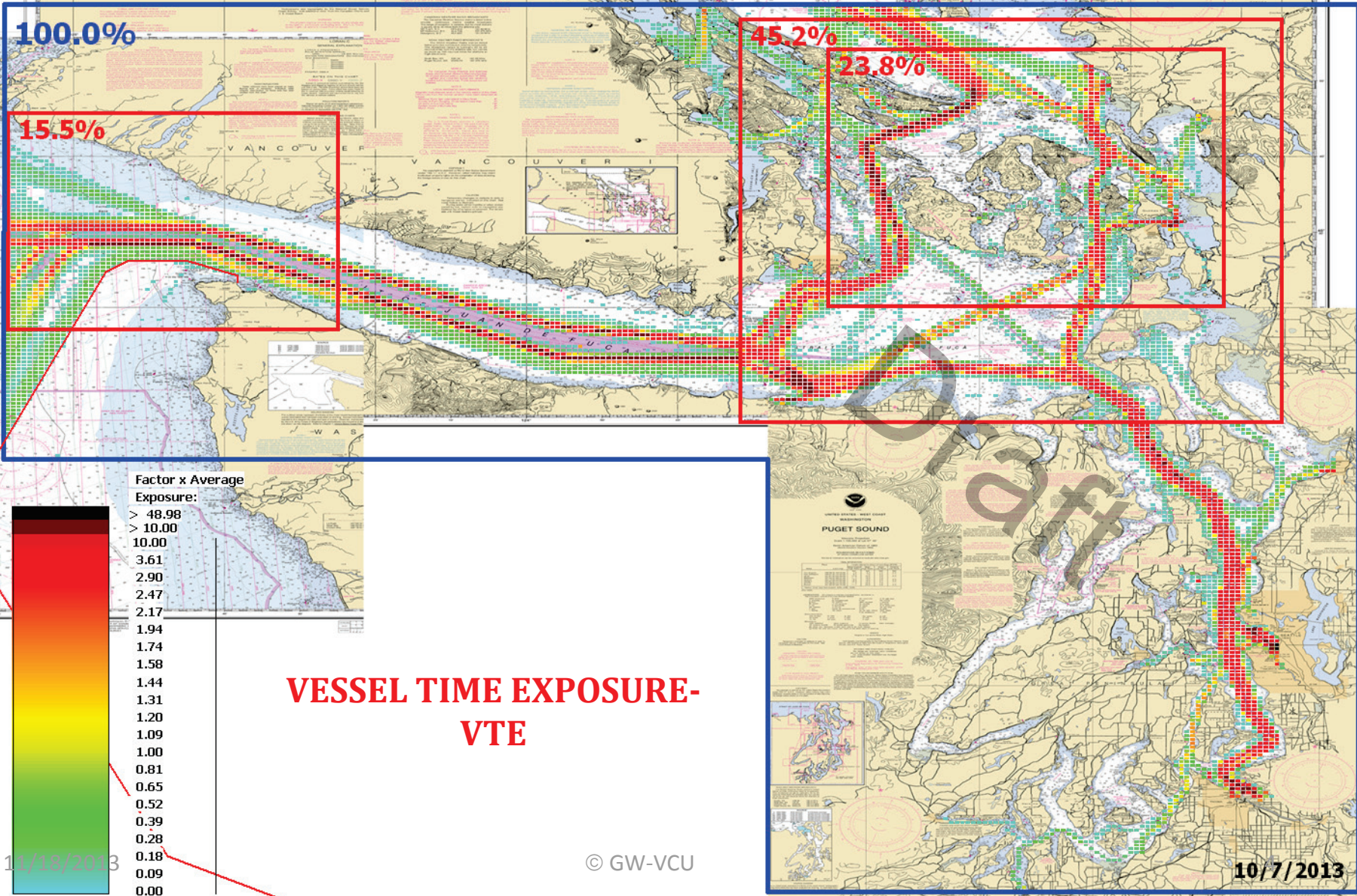


P: BC & DH100 3D Risk Profile All FV - Vessel Time Exposure: 100% of Base Case VTE



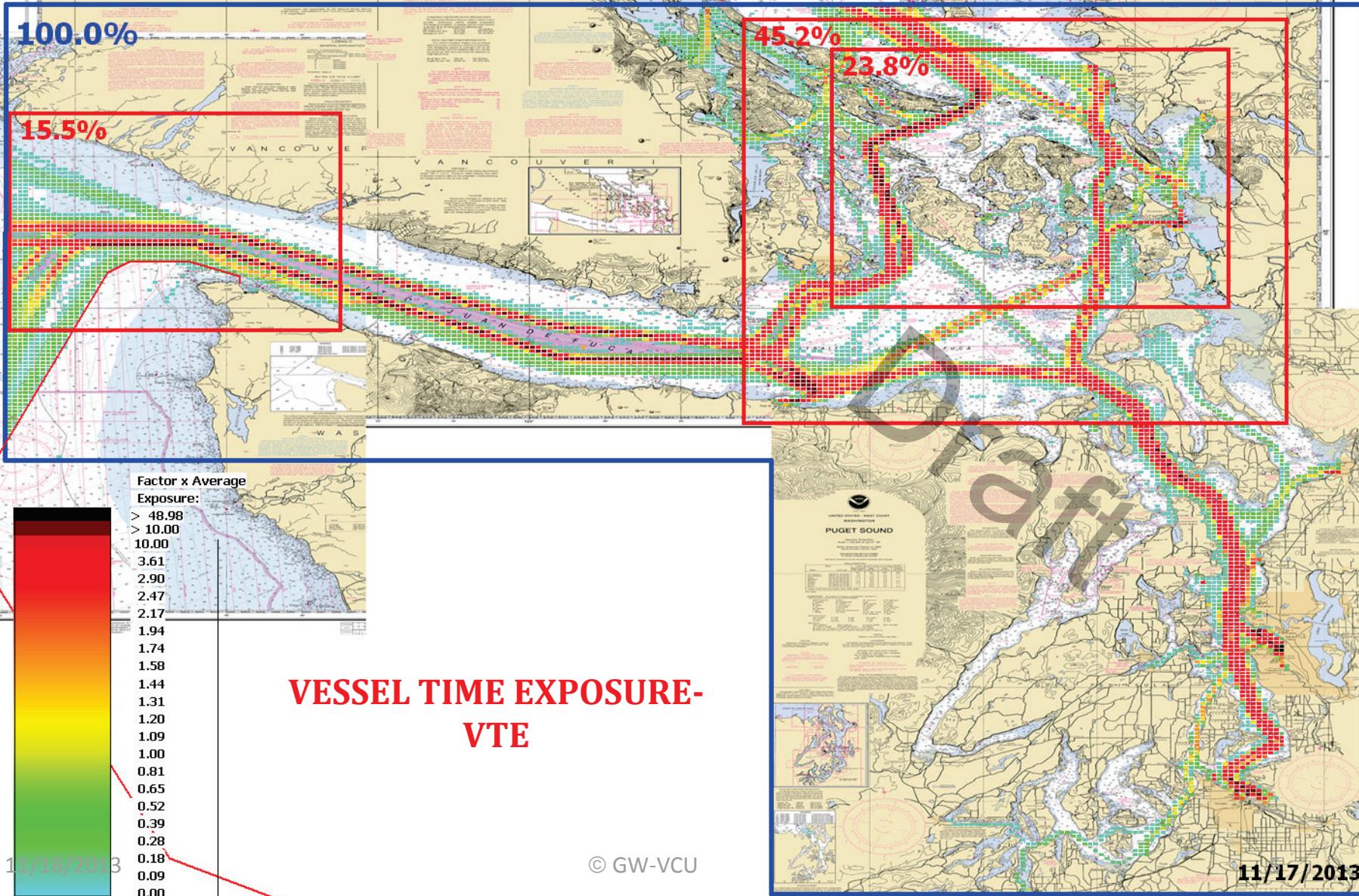
VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

P: VTRA 2010 - BASE CASE - All FV



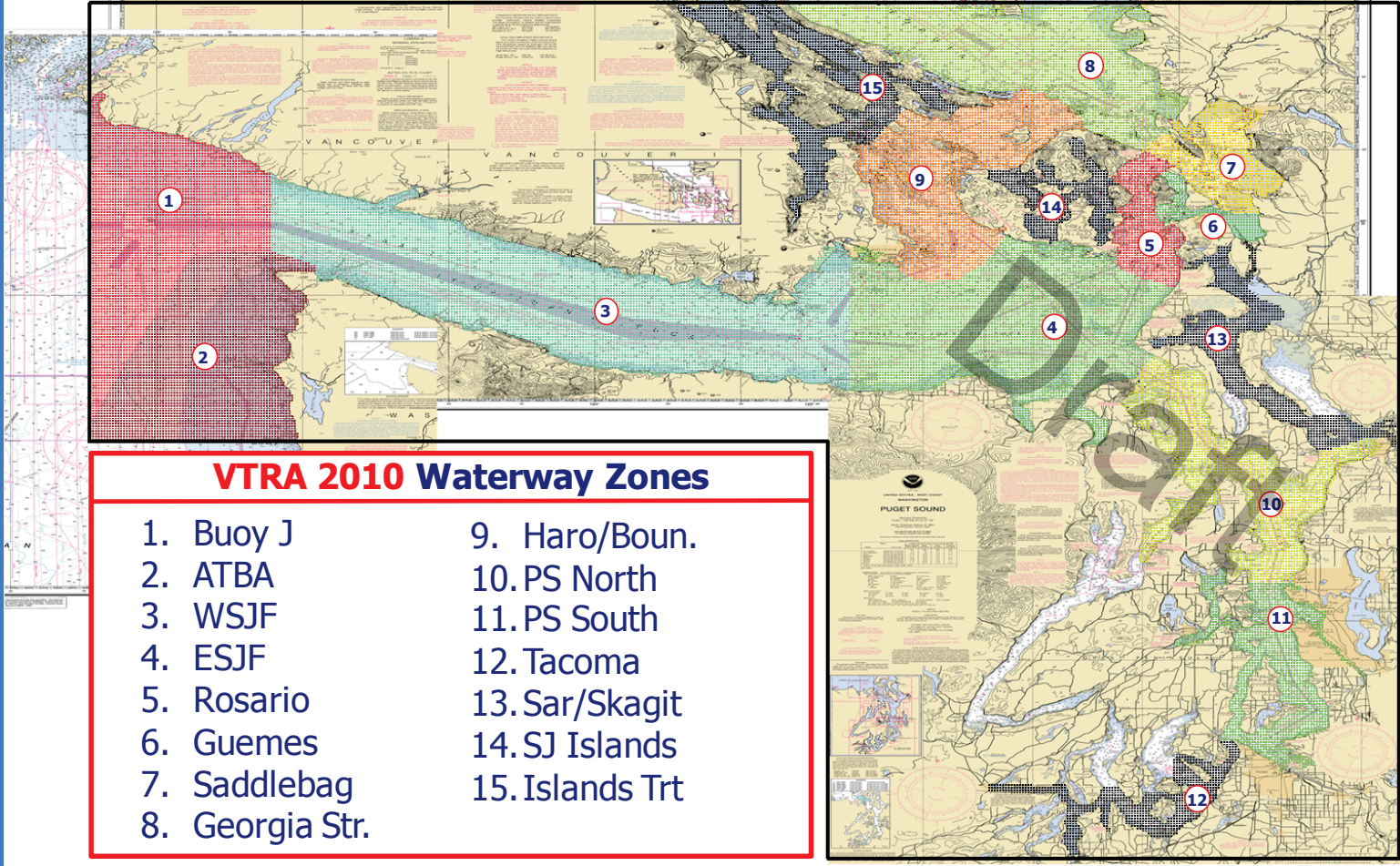
VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

P: VTRA 2010 - BASE CASE & 100% DH FUEL TANKS - All FV



VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

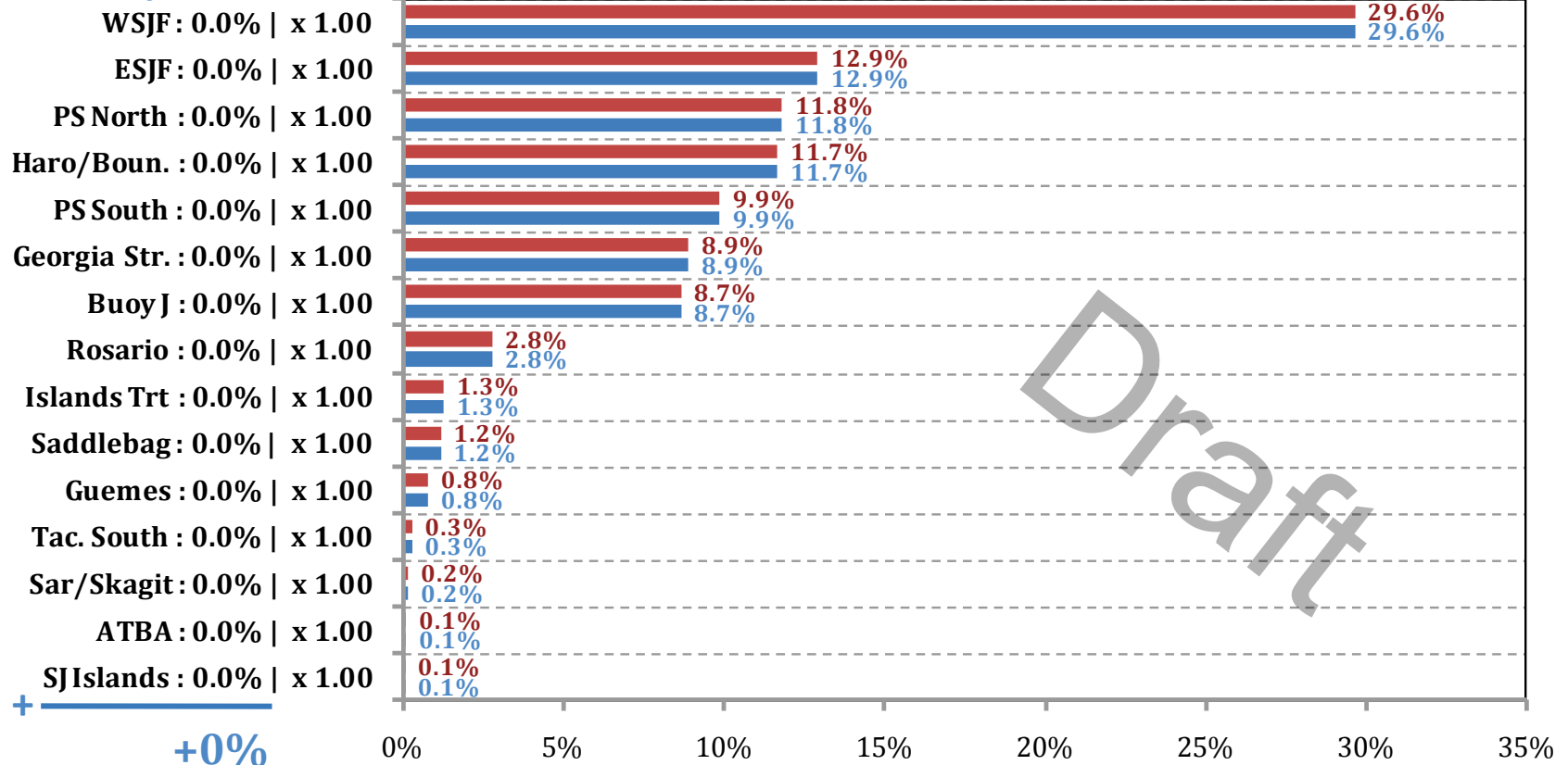
DEFINITION OF 15 WATERWAY ZONES



VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

% Base Case Vessel Time Exposure (VTE) - ALL_FV

Waterway Zone:



% Base Case Vessel Time Exposure (VTE) - ALL_FV

■ P: BC & DH100 : 100% (+0% | x 1.00)

■ P: Base Case : 100%