

# VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

3D Relative Risk Profile Comparison  
Potential Grounding Accident Frequency

**CASE P: BASE CASE & CONTAINER 17 KNOTS MAX**

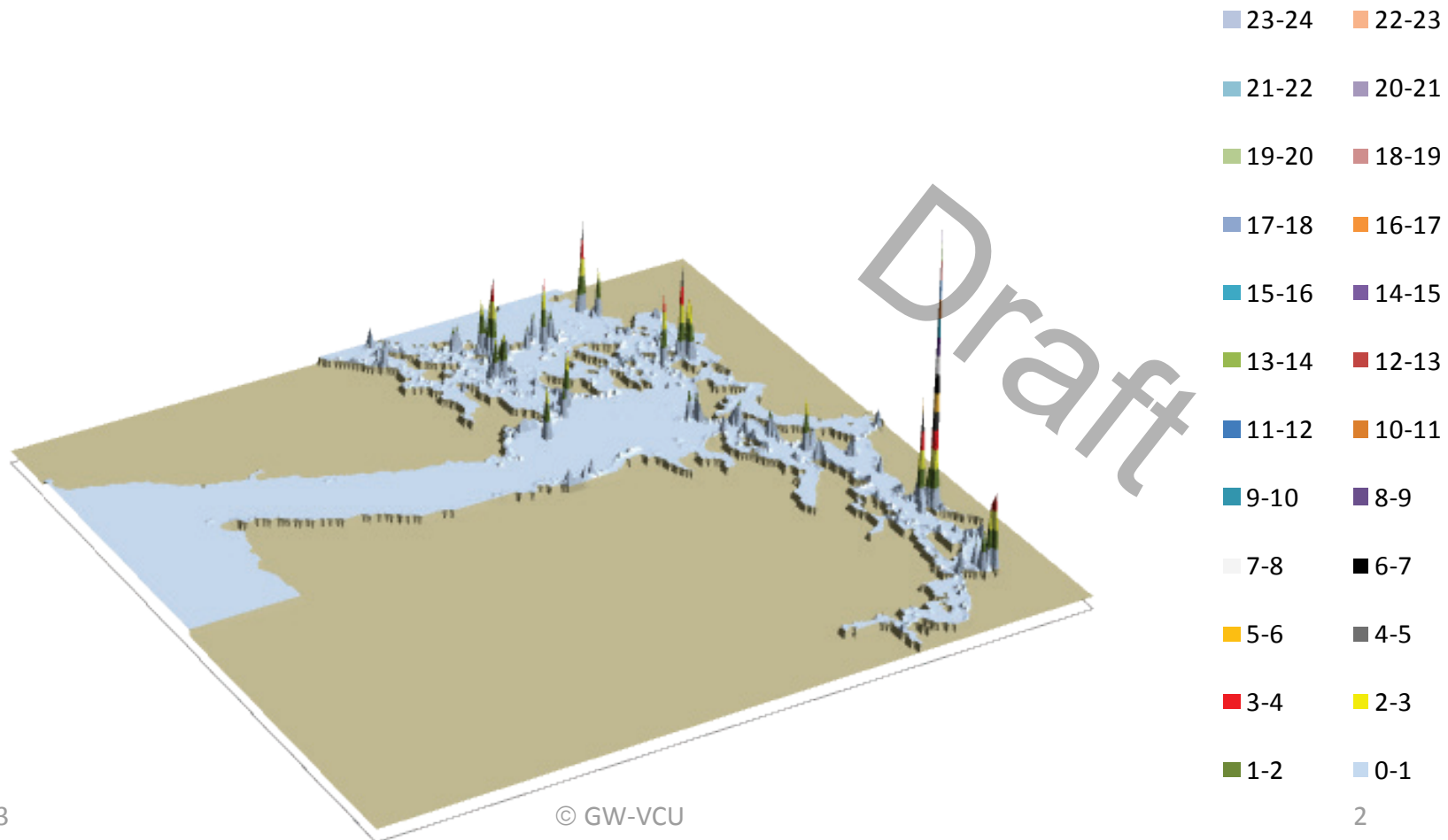
**Dr. J. Rene van Dorp and Dr. Jason R.W Merrick**

**November 2013**



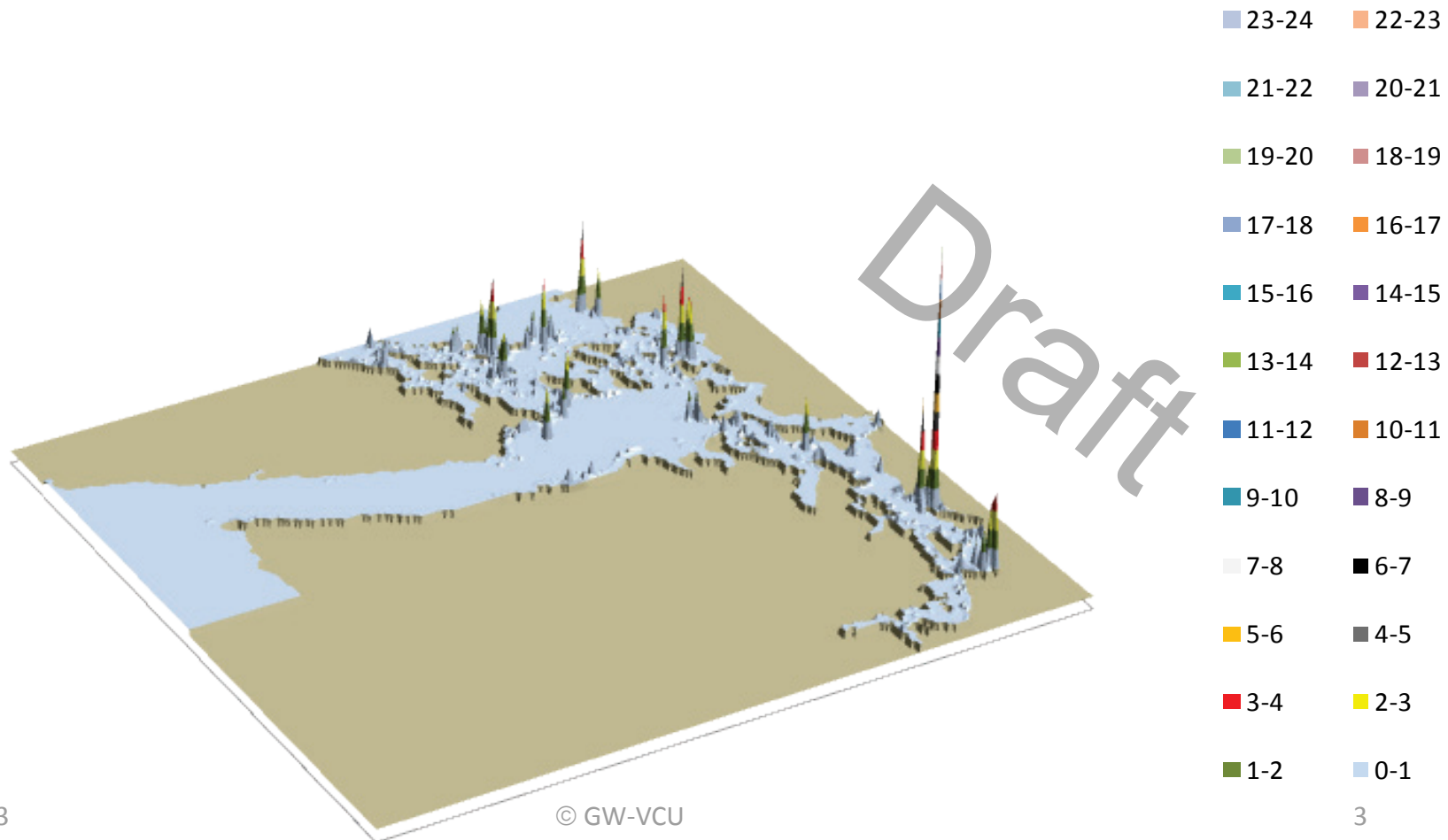
# VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

## P: Base Case 3D Risk Profile All FV - Pot. Ground. Acc. Freq.: 100% of Base Case PGF



# VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

**P: BC & CONT 17KNTS 3D Risk Profile**  
**All FV - Pot. Ground. Acc. Freq.: 92% of Base Case PGF**



# VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

P: VTRA 2010 - BASE CASE

100.0%

0.3%

58.4%

41.1%

Factor x Average  
# of Accidents

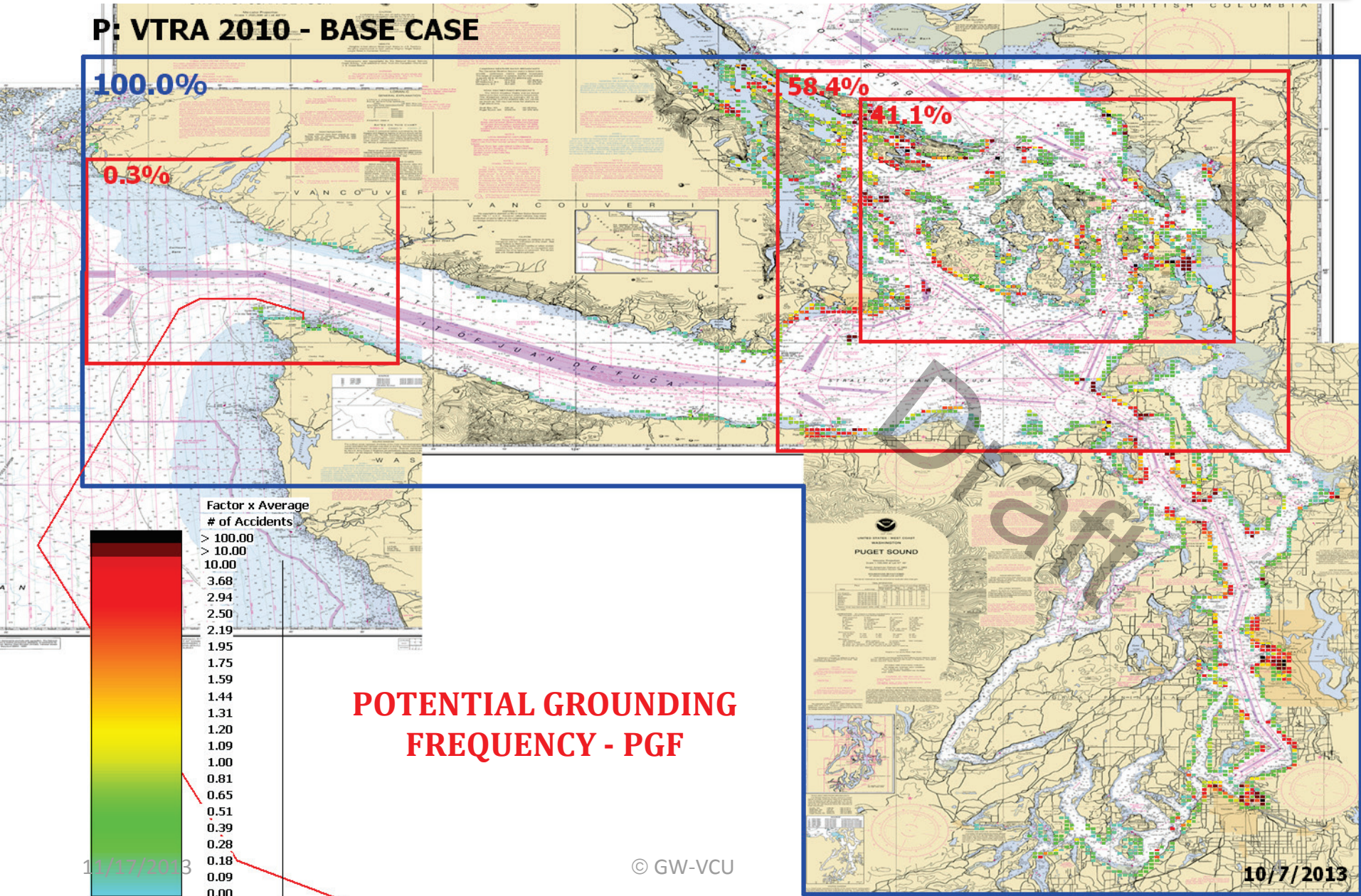
- > 100.00
- > 10.00
- 10.00
- 3.68
- 2.94
- 2.50
- 2.19
- 1.95
- 1.75
- 1.59
- 1.44
- 1.31
- 1.20
- 1.09
- 1.00
- 0.81
- 0.65
- 0.51
- 0.39
- 0.28
- 0.18
- 0.09
- 0.00

POTENTIAL GROUNDING  
FREQUENCY - PGF

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# VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

**P: BC & Slow containers to 17 knots max speed - ALL FV**

92.5%

0.3%

54.9%

39.6%

Factor x Average  
# of Accidents

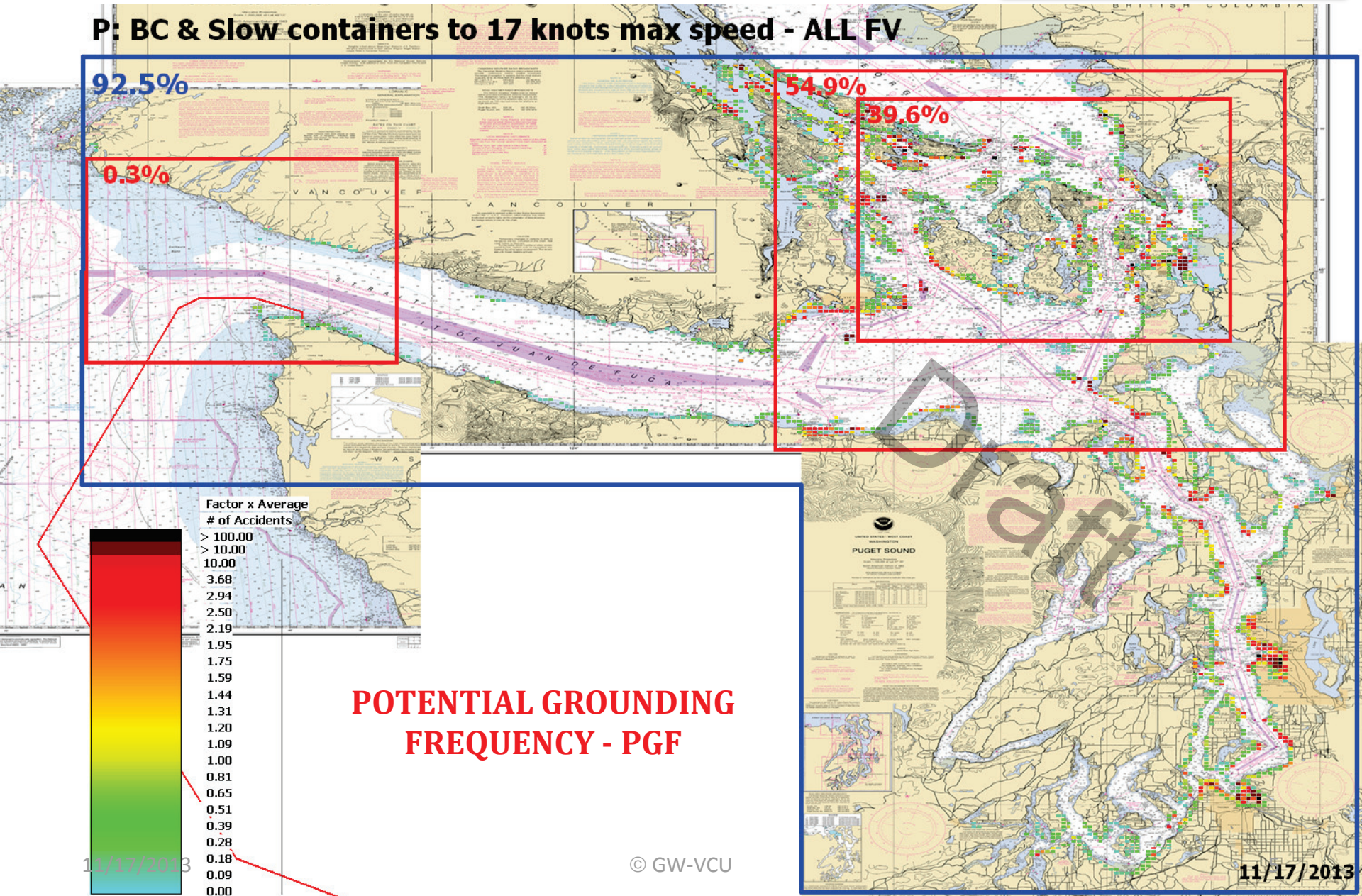
- > 100.00
- > 10.00
- 10.00
- 3.68
- 2.94
- 2.50
- 2.19
- 1.95
- 1.75
- 1.59
- 1.44
- 1.31
- 1.20
- 1.09
- 1.00
- 0.81
- 0.65
- 0.51
- 0.39
- 0.28
- 0.18
- 0.09
- 0.00

**POTENTIAL GROUNDING FREQUENCY - PGF**

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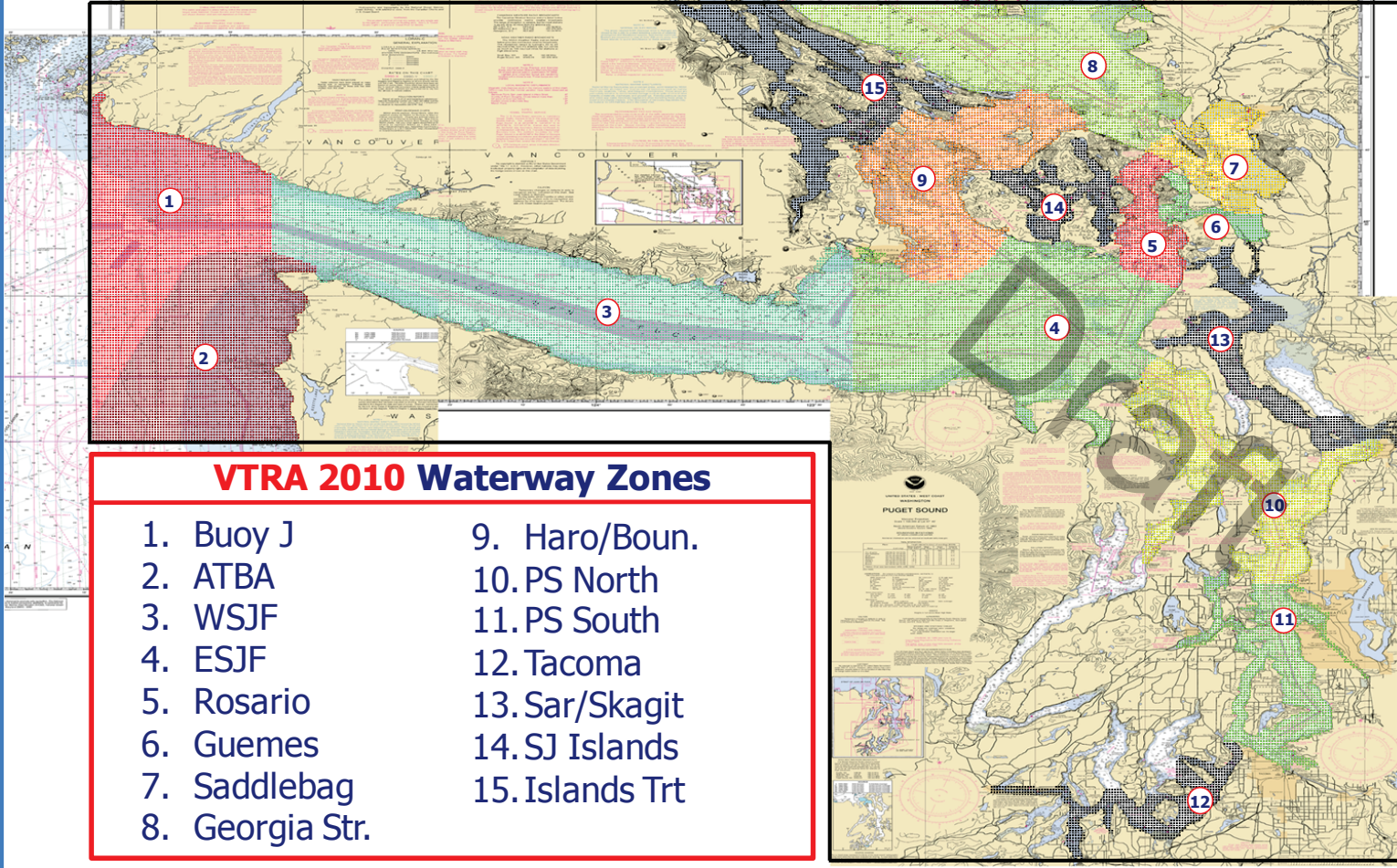
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# VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

## DEFINITION OF 15 WATERWAY ZONES



# VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2010

## % Base Case Grounding Frequency - ALL\_FV

### Waterway Zone:

