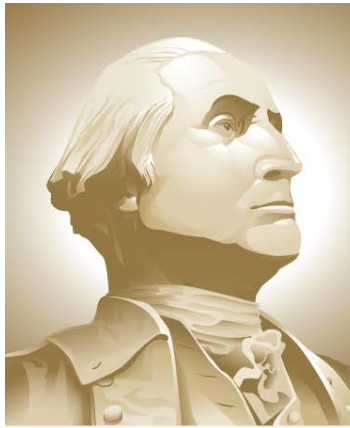


# **CURRENT STATUS VTRA 2010 ROUTES AND TRAFFIC DENSITIES**

Presentation by: J. Rene van Dorp



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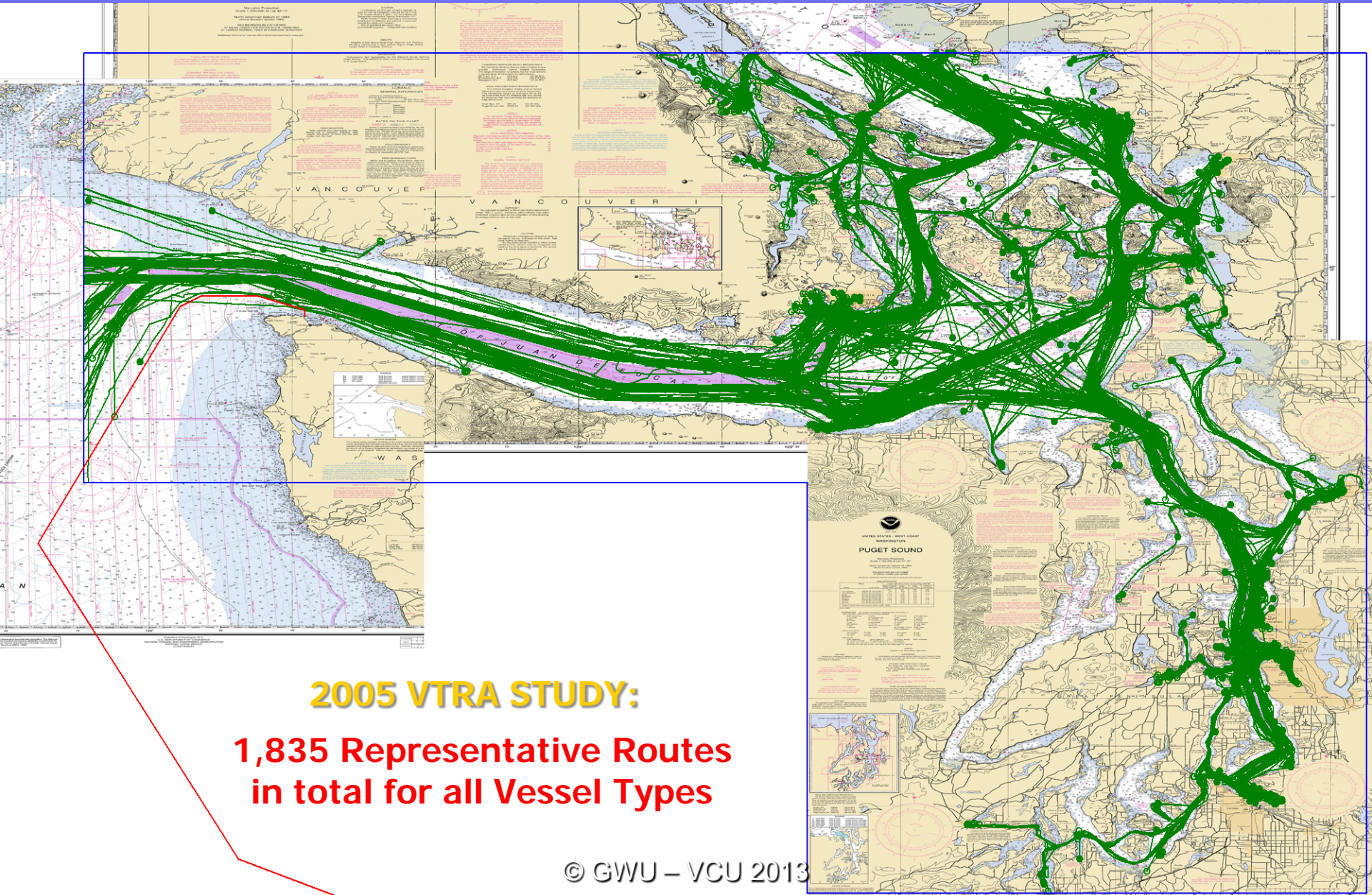
**VCU**

**GWU Personnel:** Dr. J. Rene van Dorp

**VCU Personnel:** Dr. Jason R. W. Merrick

**FEBRUARY 6, 2012**

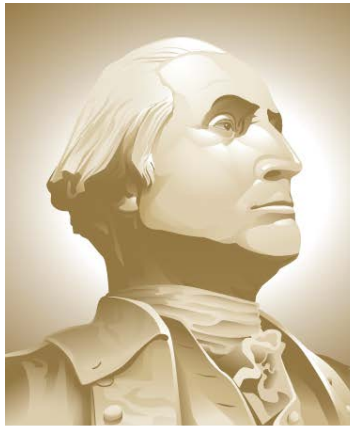
# 2005 VTRA STUDY – USES REPRESENTATIVE ROUTES





# **CURRENT STATUS - TANKER 2010 ROUTES**

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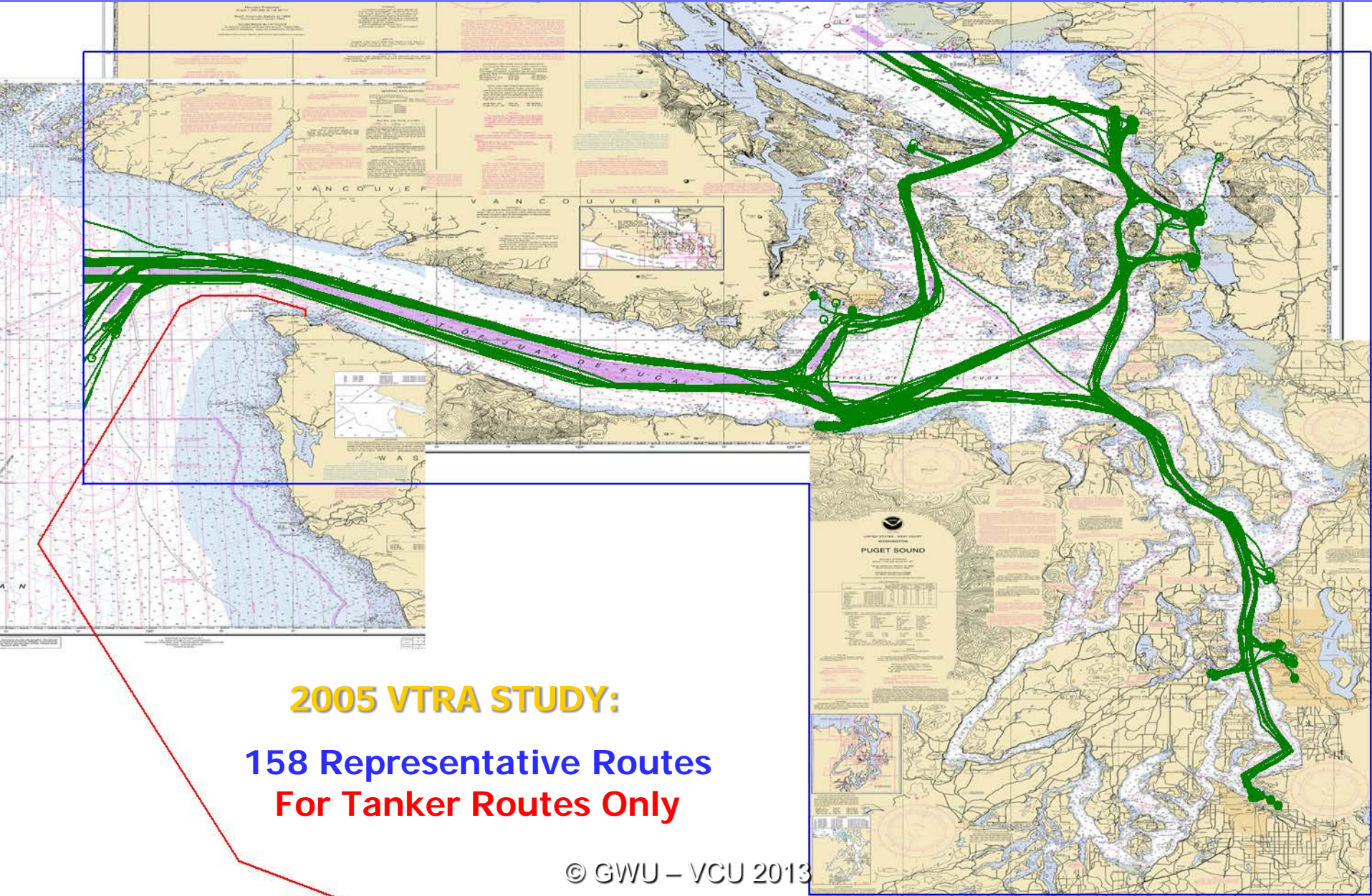
**GWU Personnel:** Dr. J. Rene van Dorp

**VCU Personnel:** Dr. Jason R. W. Merrick

**FEBRUARY 6, 2012**



# 2005 VTRA STUDY – TANKER ROUTES

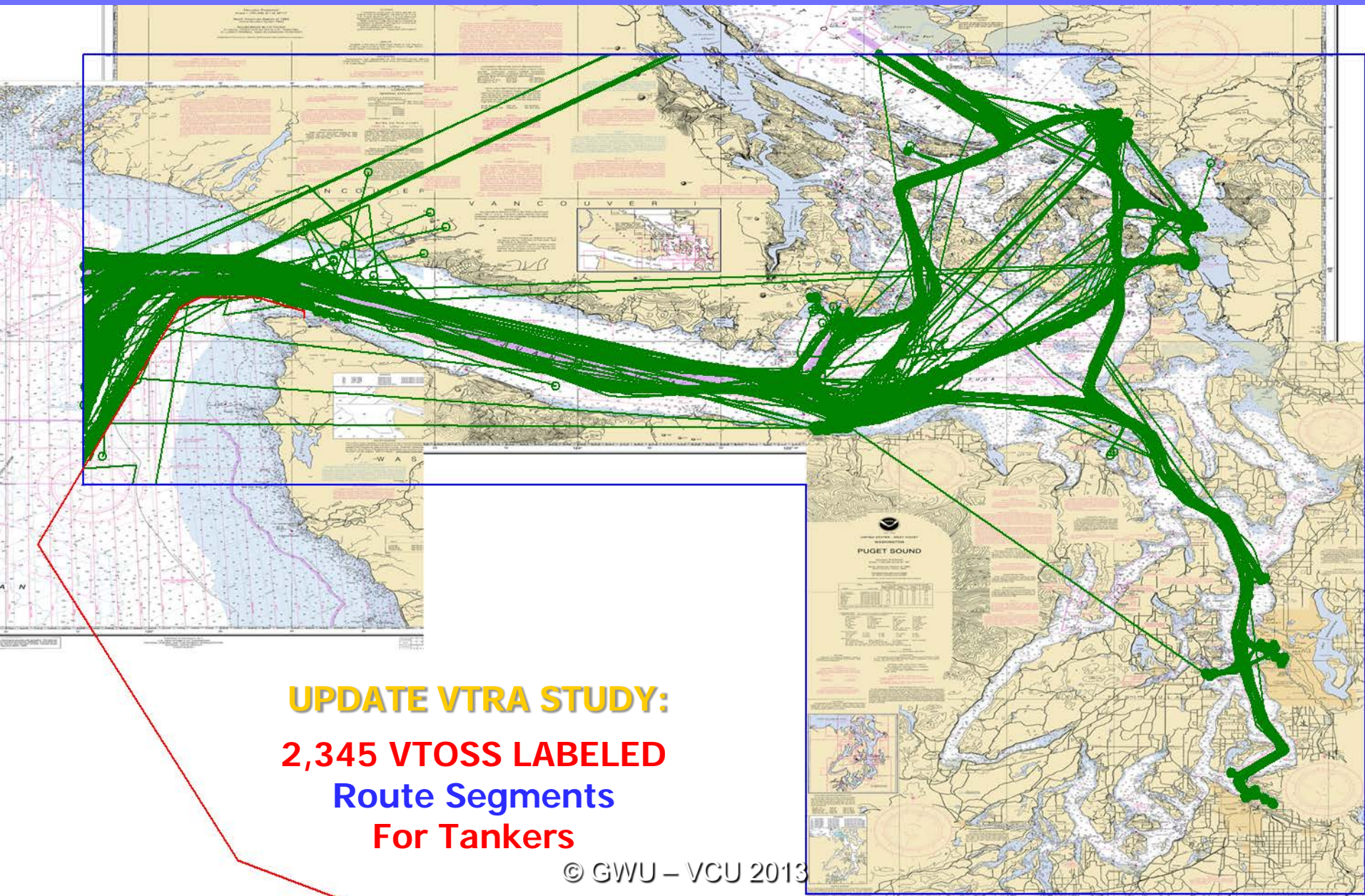


**2005 VTRA STUDY:**

**158 Representative Routes  
For Tanker Routes Only**

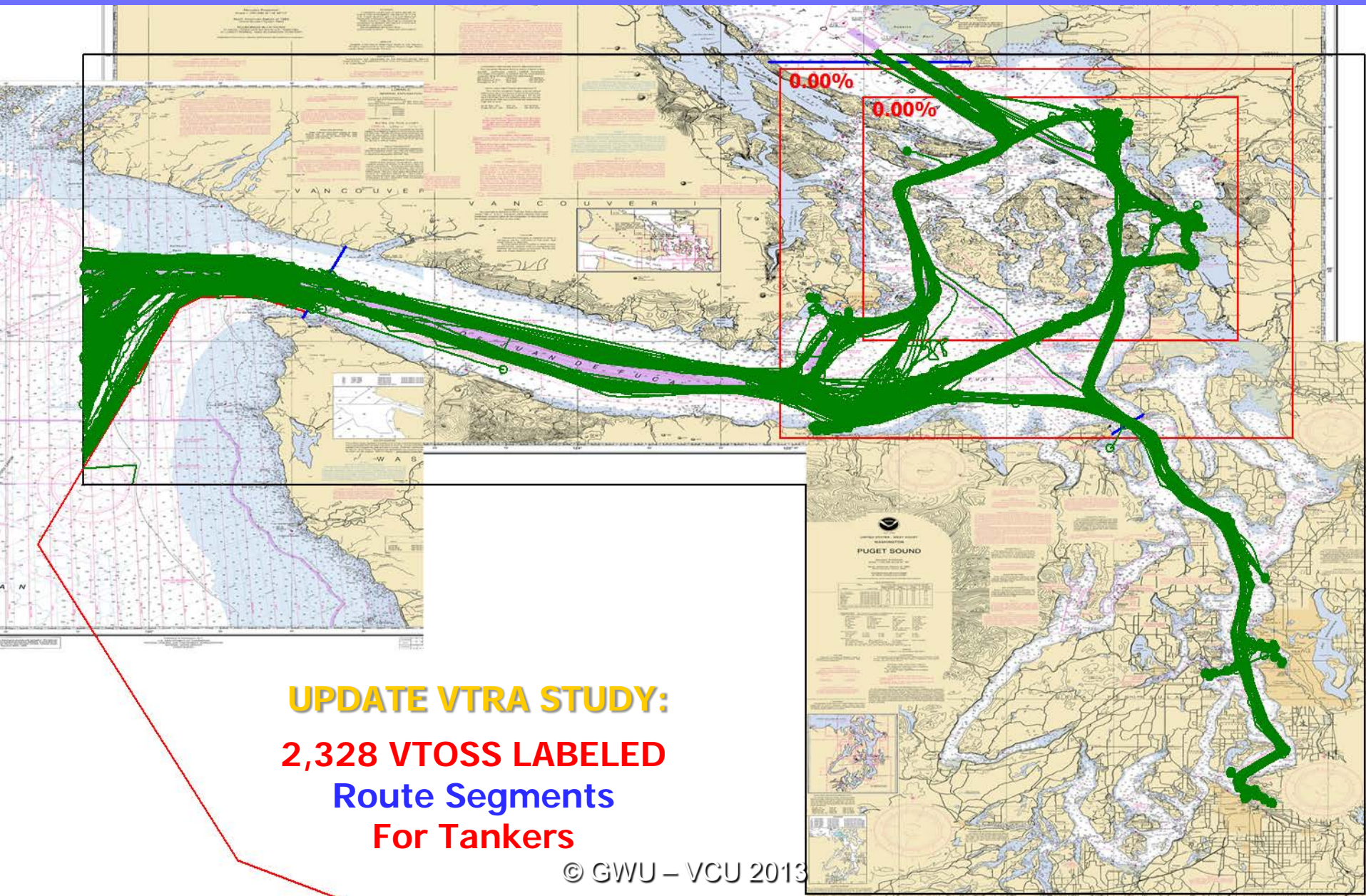


# 2010 VTRA STUDY – JAN'13 STATUS TANKER ROUTES





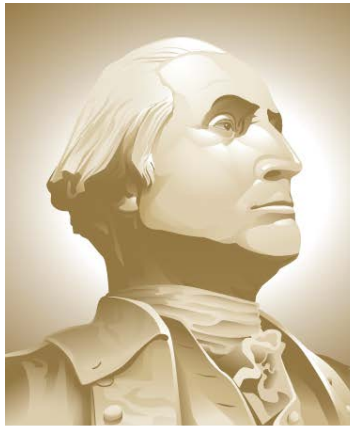
# 2010 VTRA STUDY – FEB'13 STATUS TANKER ROUTES





# **CURRENT STATUS - CONTAINER VESSEL 2010 ROUTES**

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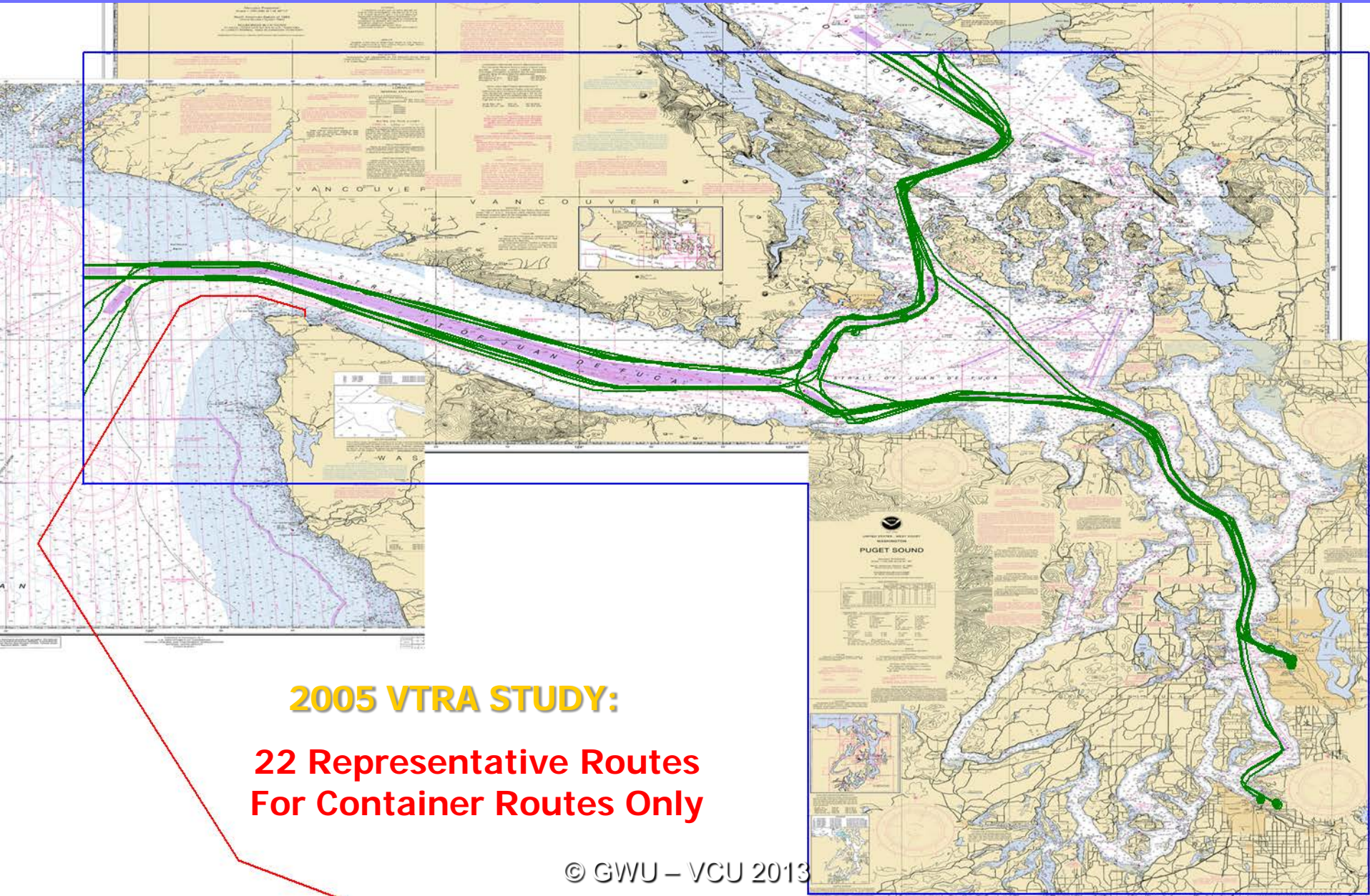
**GWU Personnel:** Dr. J. Rene van Dorp

**VCU Personnel:** Dr. Jason R. W. Merrick

**FEBRUARY 6, 2012**



# 2005 VTRA STUDY – CONTAINER ROUTES

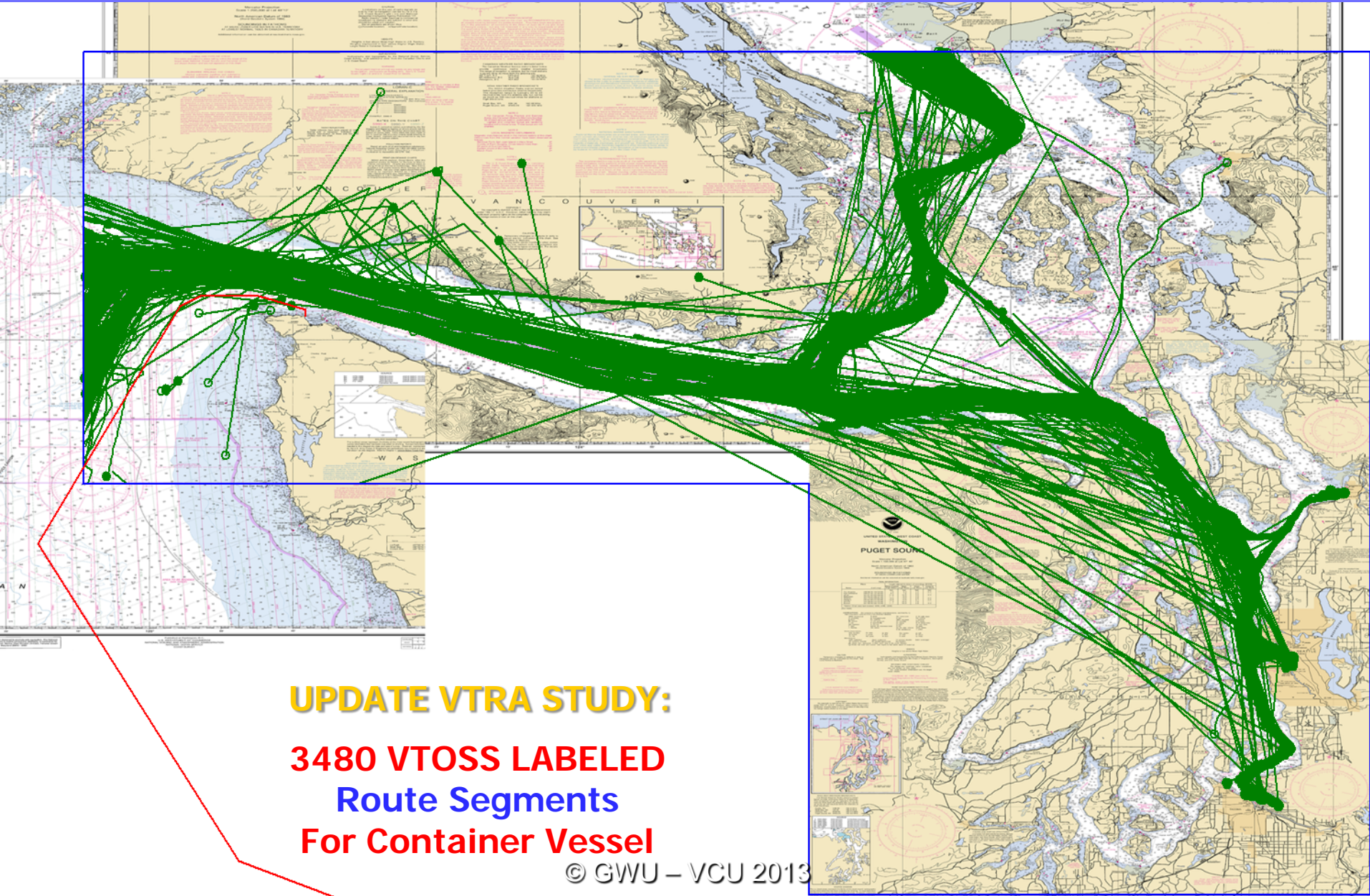


**2005 VTRA STUDY:**

**22 Representative Routes  
For Container Routes Only**



# 2010 VTRA STUDY – JAN'13 STATUS CONTAINER ROUTES

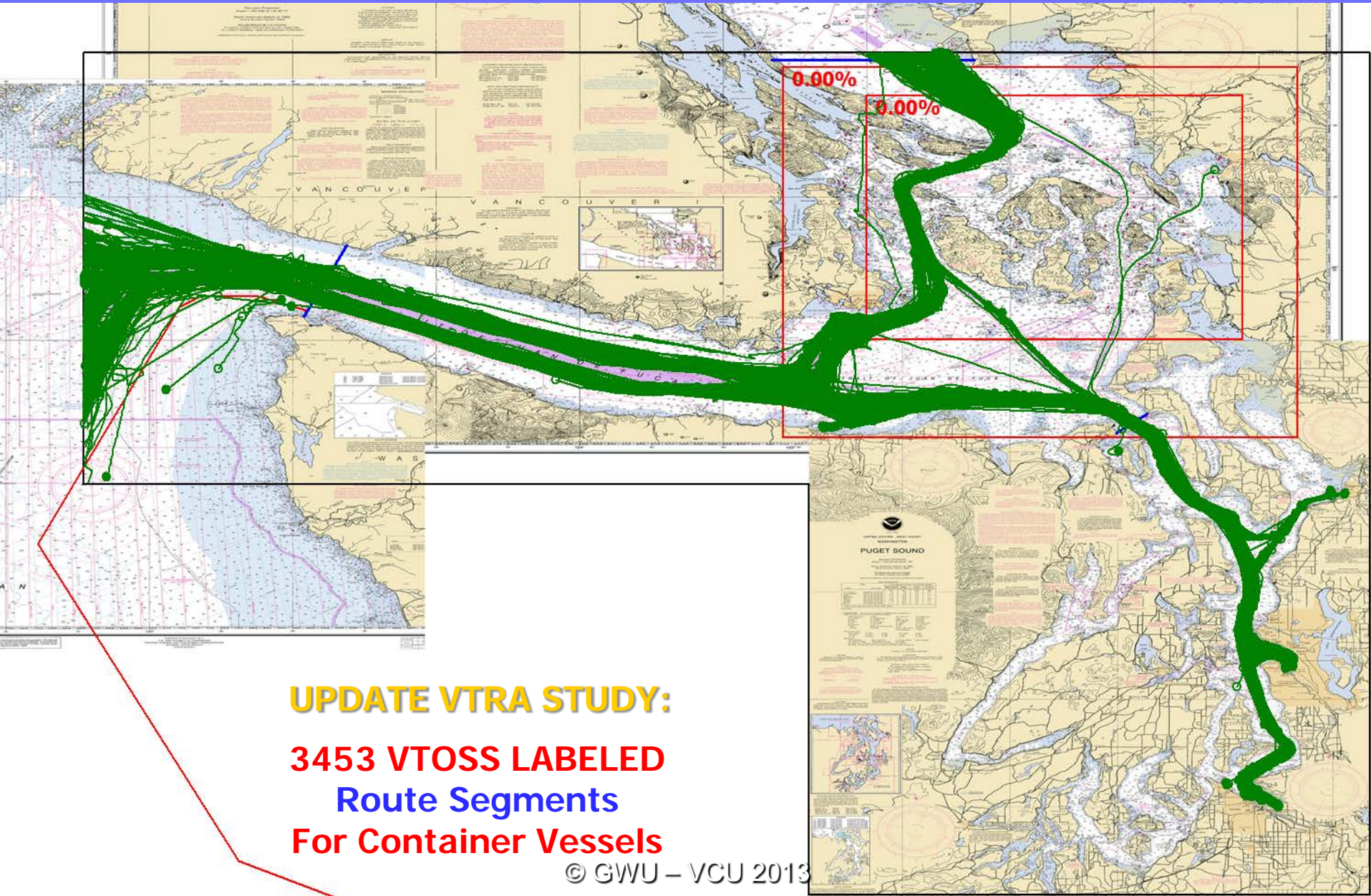


**UPDATE VTRA STUDY:**

**3480 VTOSS LABELED  
Route Segments  
For Container Vessel**



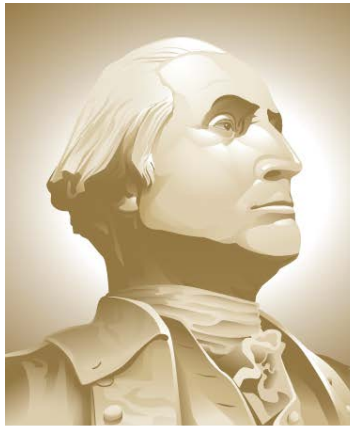
# 2010 VTRA STUDY – FEB' 13 STATUS CONTAINER ROUTES





# **CURRENT STATUS BULK CARRIER 2010 ROUTES**

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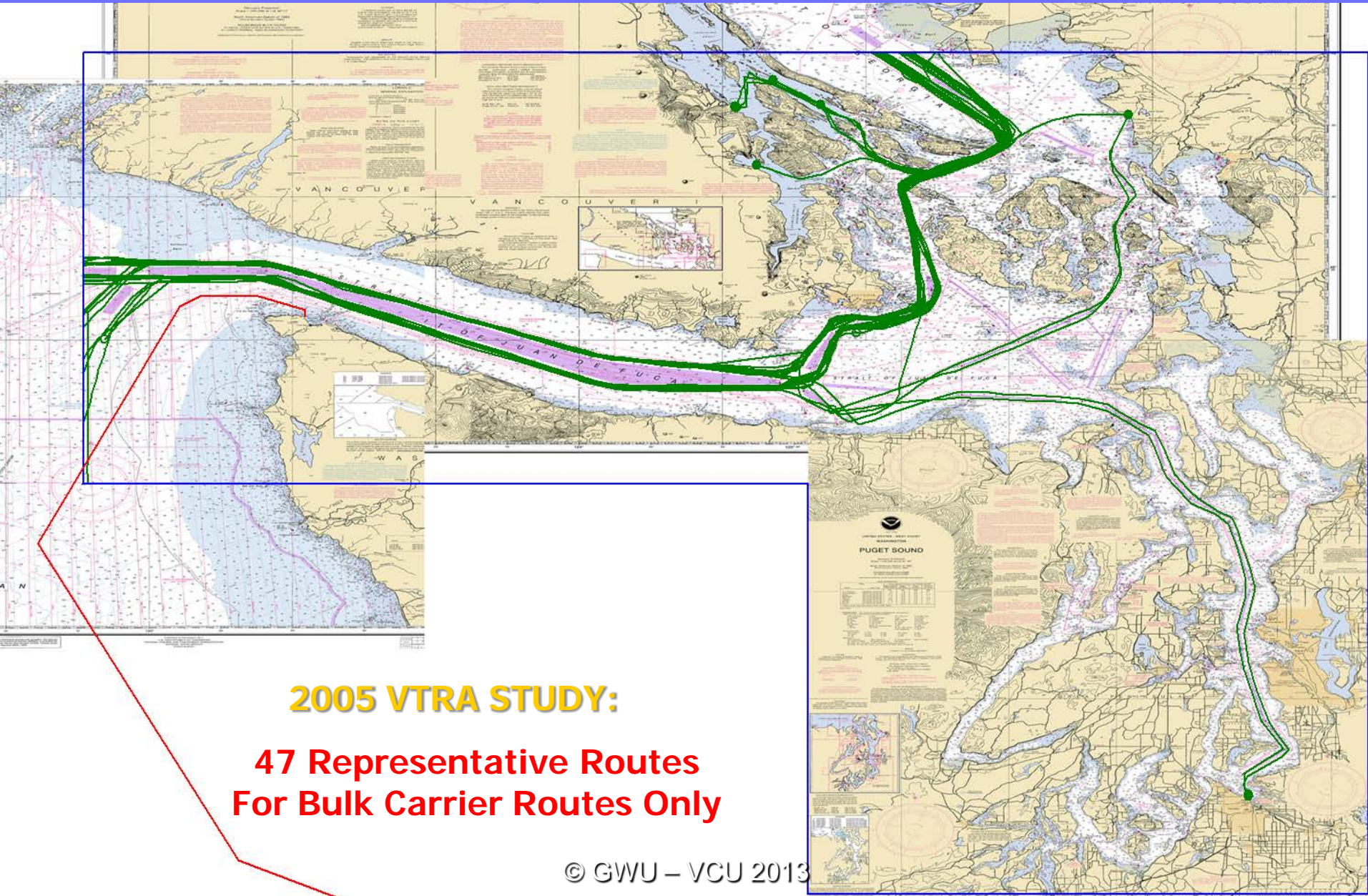
**GWU Personnel:** Dr. J. Rene van Dorp

**VCU Personnel:** Dr. Jason R. W. Merrick

**FEBRUARY 6, 2012**

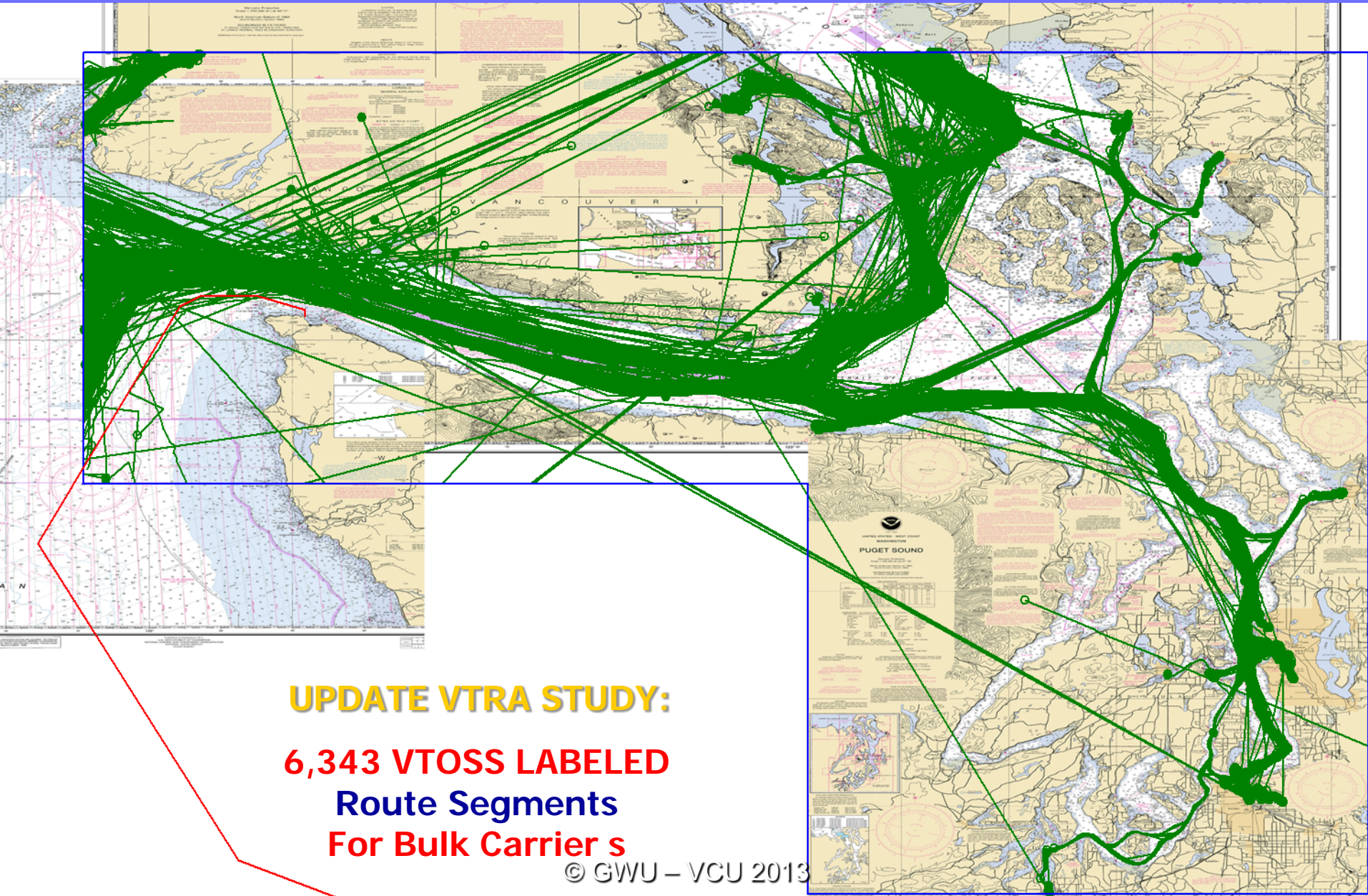


# 2005 VTRA STUDY – BULK CARRIER ROUTES





# 2010 VTRA STUDY – JAN'13 BULK CARRIER ROUTES

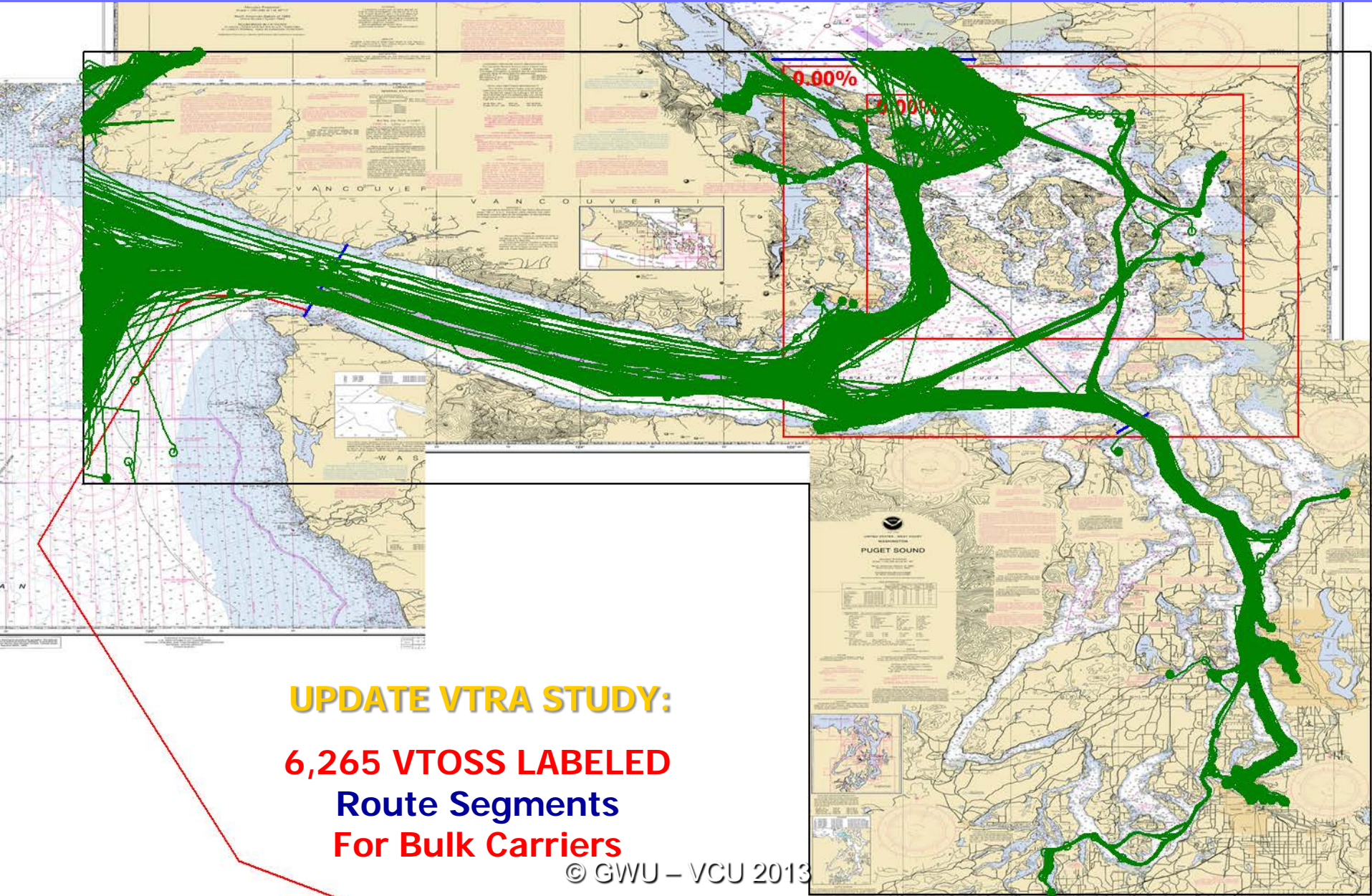


**UPDATE VTRA STUDY:**

**6,343 VTOSS LABELED  
Route Segments  
For Bulk Carrier s**



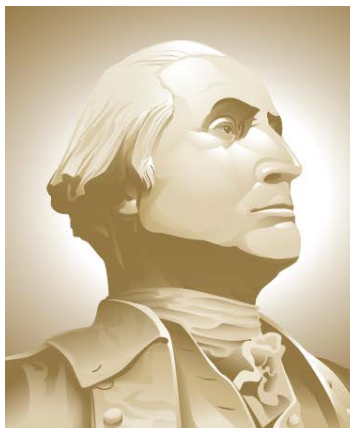
# 2010 VTRA STUDY – FEB'13 BULK CARRIER ROUTES





# **CURRENT STATUS – TANKER 2010 DENSITY**

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**VCU Personnel:** Dr. Jason R. W. Merrick

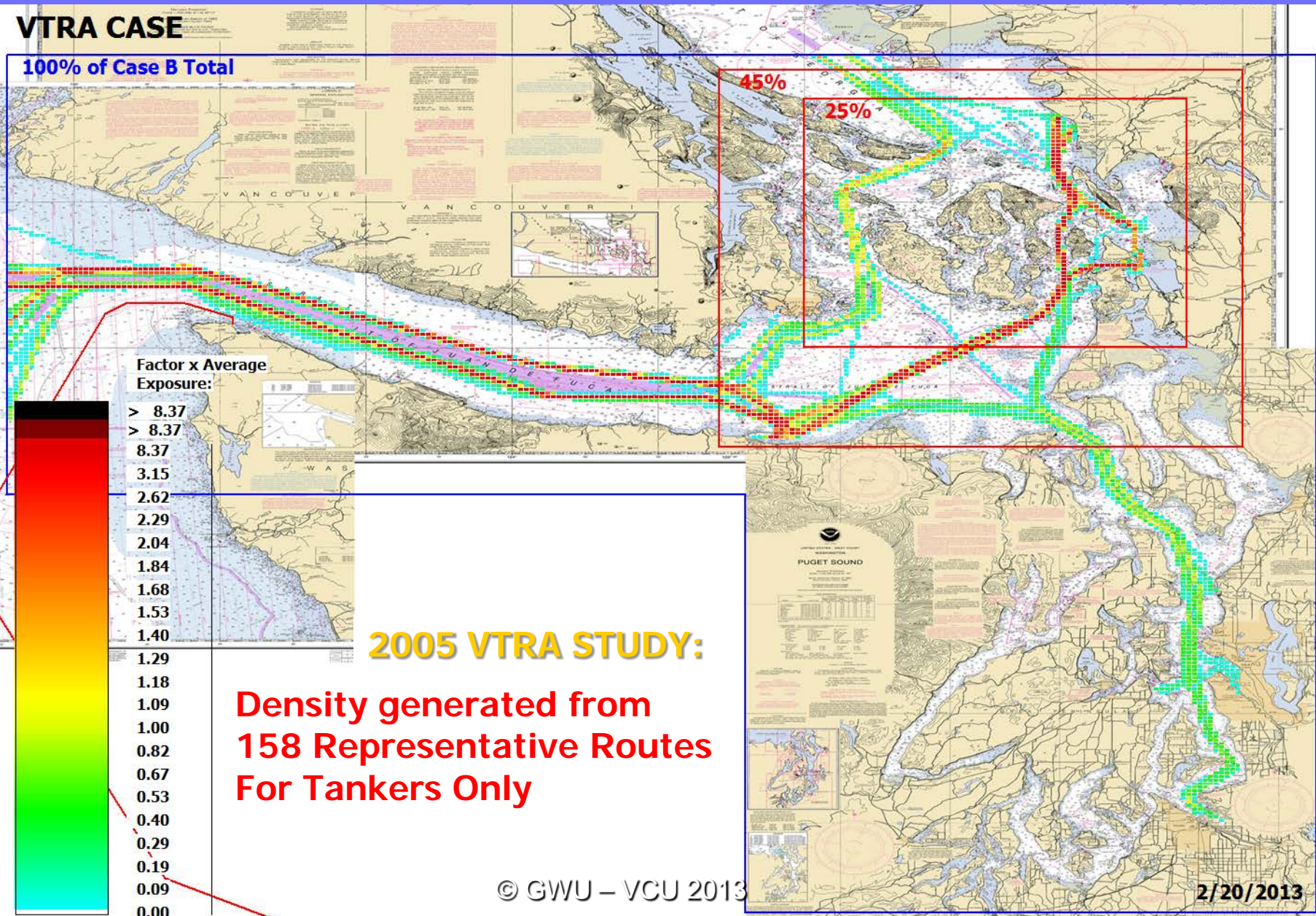
**FEBRUARY 6, 2012**



# 2005 VTRA STUDY – TANKER TRAFFIC DENSITY

## VTRA CASE

100% of Case B Total



## 2005 VTRA STUDY:

Density generated from  
158 Representative Routes  
For Tankers Only



# 2010 VTRA STUDY – PRELIMINARY TANKER TRAFFIC DENSITY

## VTRA CASE

82% of Case B Total

35%

19%

Factor x Average Exposure:

> 8.37

> 8.37

8.37

3.15

2.62

2.29

2.04

1.84

1.68

1.53

1.40

1.29

1.18

1.09

1.00

0.82

0.67

0.53

0.40

0.29

0.19

0.09

0.09

0.09

0.09

0.09

0.09

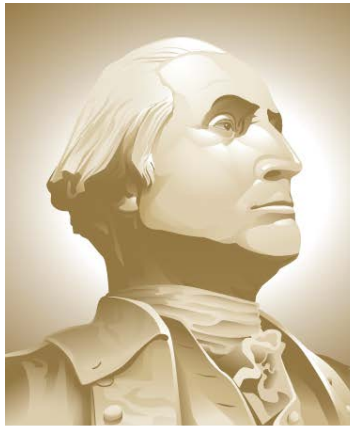
2010 VTRA STUDY:

Density generated from  
2,328 Route Segments For  
Tankers Only



# **CURRENT STATUS – ATB 2010 DENSITY**

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**GWU Personnel:** Dr. J. Rene van Dorp

**VCU Personnel:** Dr. Jason R. W. Merrick

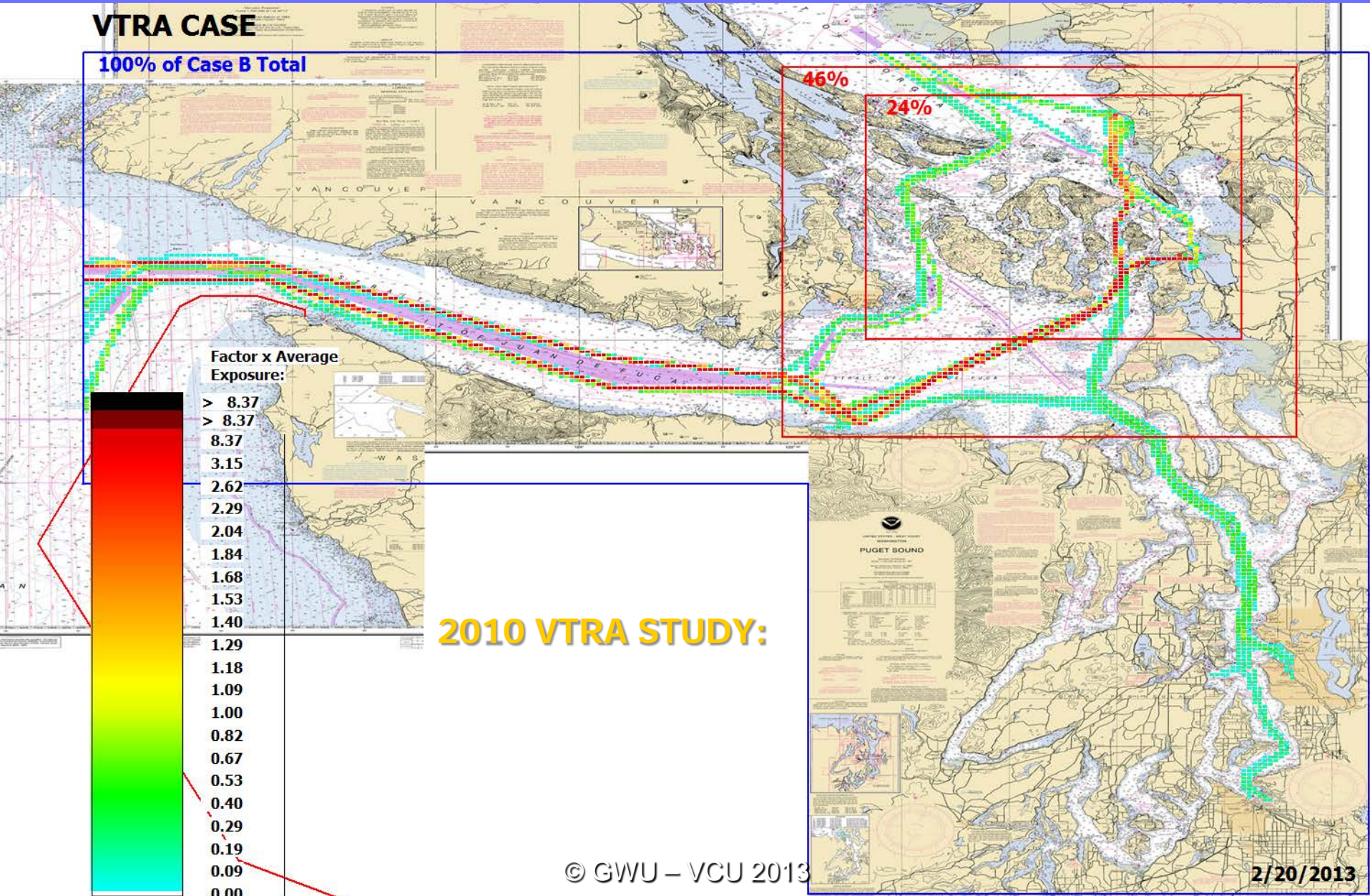
**FEBRUARY 6, 2012**



# 2005 VTRA STUDY – ATB TRAFFIC DENSITY

## VTRA CASE

100% of Case B Total



2010 VTRA STUDY:



# 2010 VTRA STUDY – ATB TRAFFIC DENSITY

## VTRA CASE

137% of Case B Total

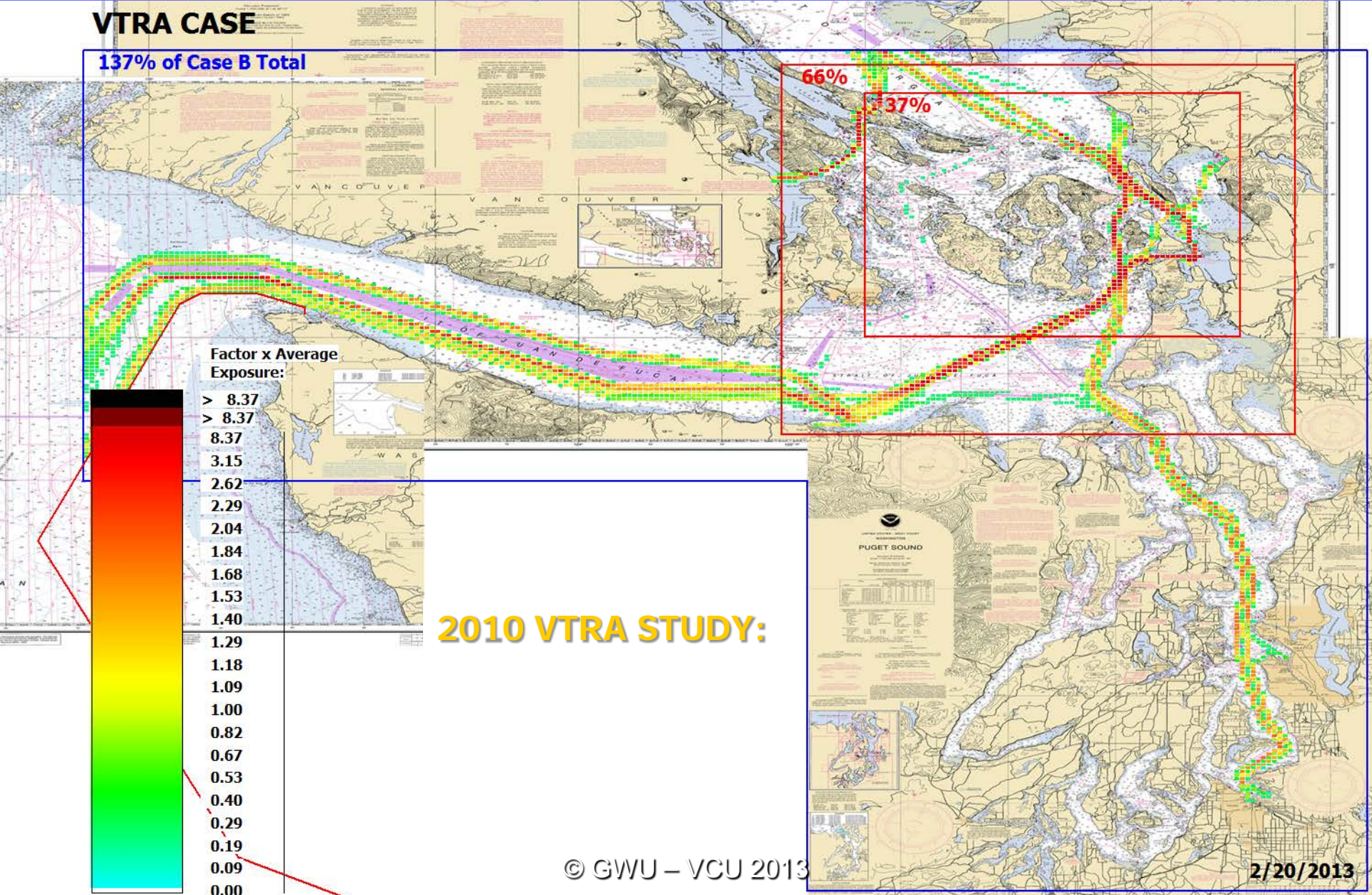
66%

37%

Factor x Average Exposure:

- > 8.37
- 8.37
- 3.15
- 2.62
- 2.29
- 2.04
- 1.84
- 1.68
- 1.53
- 1.40
- 1.29
- 1.18
- 1.09
- 1.00
- 0.82
- 0.67
- 0.53
- 0.40
- 0.29
- 0.19
- 0.09
- 0.00

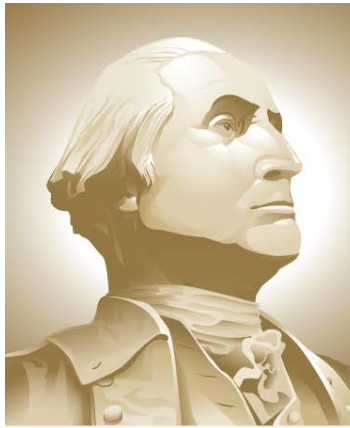
2010 VTRA STUDY:





# **CURRENT STATUS - ITB 2010 DENSITY**

Presentation by: J. Rene van Dorp



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**VCU**

**GWU Personnel:** Dr. J. Rene van Dorp

**VCU Personnel:** Dr. Jason R. W. Merrick

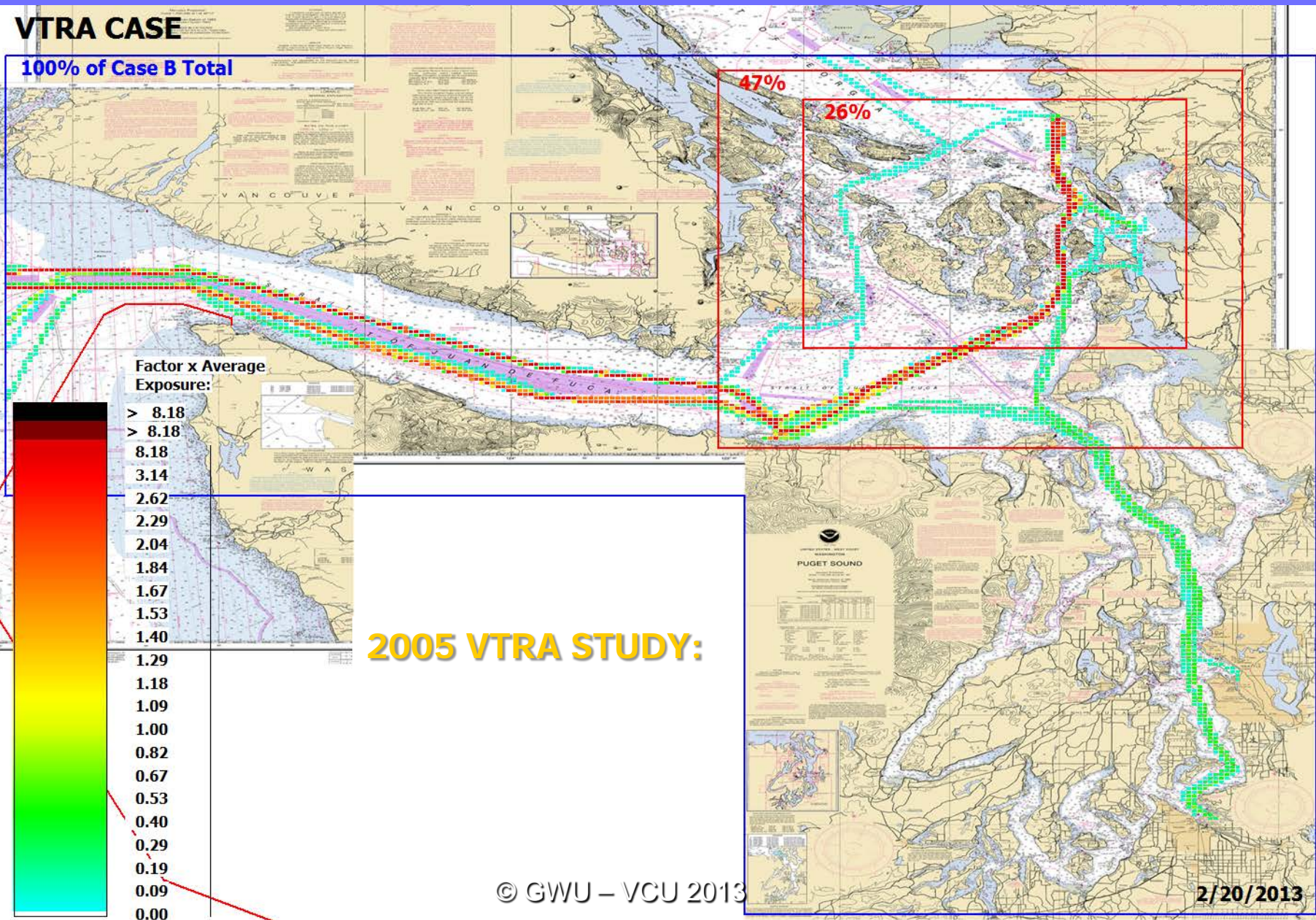
**FEBRUARY 6, 2012**



# 2005 VTRA STUDY – ITB TRAFFIC DENSITY

## VTRA CASE

100% of Case B Total





# 2010 VTRA STUDY – ITB TRAFFIC DENSITY

## VTRA CASE

0% of Case B Total

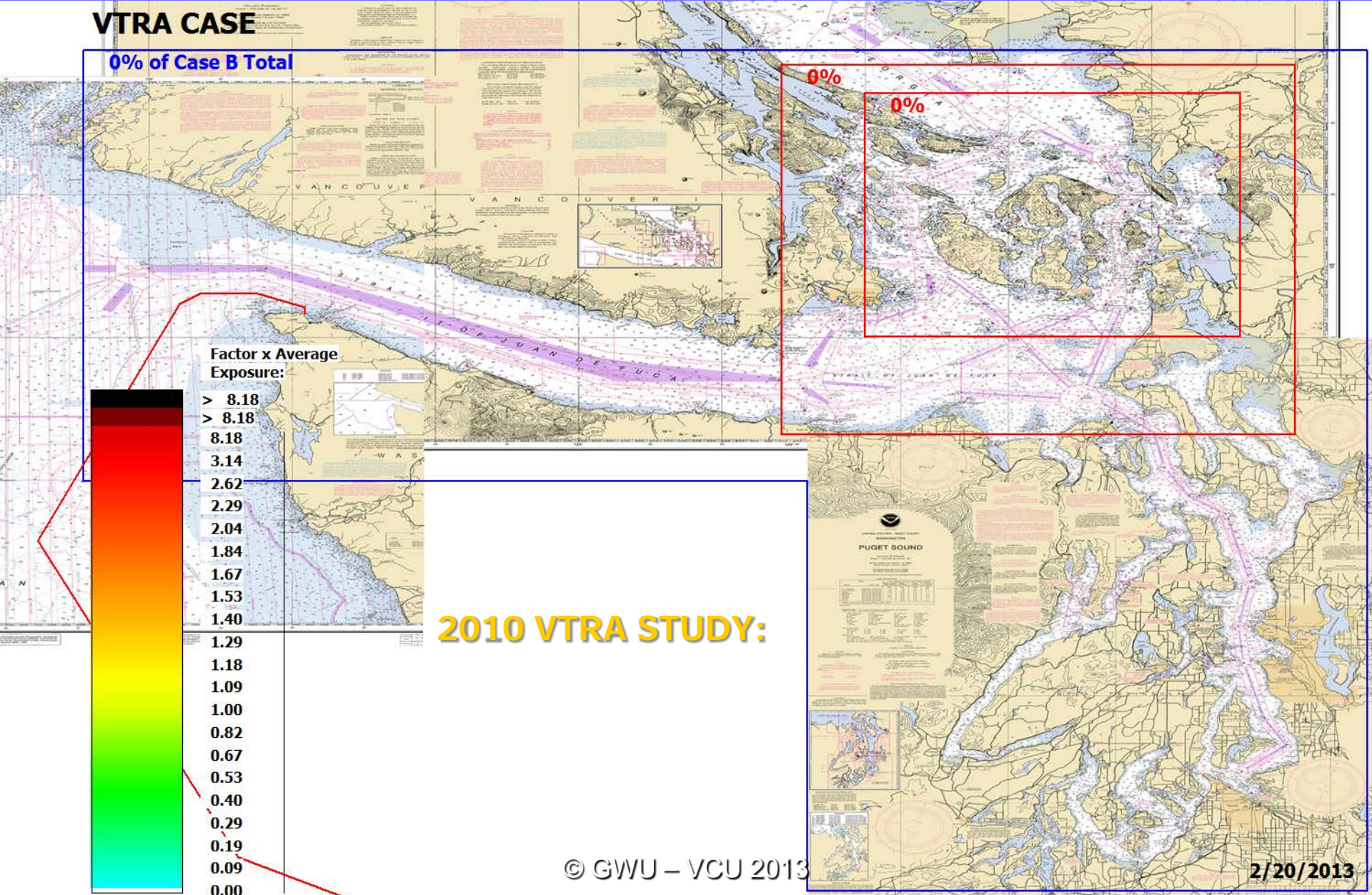
0%

0%

Factor x Average Exposure:

- > 8.18
- 8.18
- 3.14
- 2.62
- 2.29
- 2.04
- 1.84
- 1.67
- 1.53
- 1.40
- 1.29
- 1.18
- 1.09
- 1.00
- 0.82
- 0.67
- 0.53
- 0.40
- 0.29
- 0.19
- 0.09
- 0.00

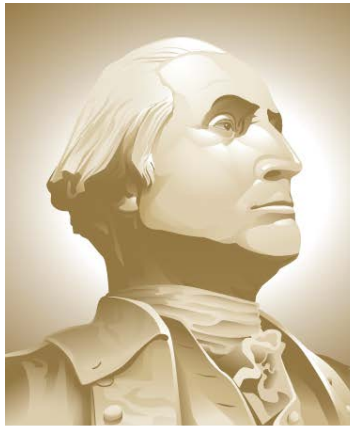
2010 VTRA STUDY:





# **CURRENT STATUS – ITB & ATB 2010 DENSITY**

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# 2010 VTRA STUDY – PRELIMINARY ATB & ITB TRAFFIC DENSITY

## VTRA CASE

98% of Case B Total

47%

26%

Factor x Average Exposure:

- > 22.92
- > 10.00
- 10.00
- 3.50
- 2.83
- 2.43
- 2.14
- 1.91
- 1.73
- 1.57
- 1.43
- 1.30
- 1.19
- 1.09
- 1.00
- 0.82
- 0.66
- 0.52
- 0.39
- 0.28
- 0.18
- 0.09
- 0.00

2010 VTRA STUDY:

