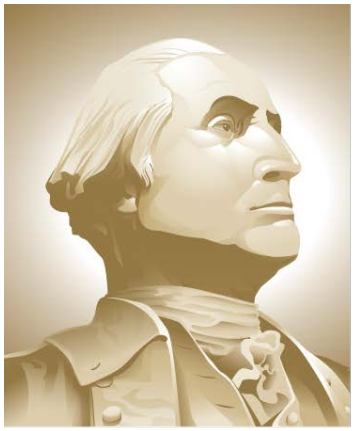
Summary of VTRA 2015 What-If Case Descriptions



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Jason R.W. Merrick (VCU) and J. Rene van Dorp (GW)

July, 2016

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VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2015

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CASE : US 230

ANACORTES TO VANCOUVER	TOTAL
Tankers (VAFC)	12
ATB (VAFC)	36
OIL BARGE Bunkering Support	0
BUOY J TO ANACORTES	**TOTAL**
Tankers (TAU Xylene)	18
ATB (TAU Xylene)	42
OIL BARGE Bunkering Support (ANAC - PORT ANGELES)	2
OIL BARGE Bunkering Support (SEATTLE TO ANAC)	6
BUOY J TO ANACORTES	**TOTAL**
ATB (WW) - BUOY J to BP	42
ATB (WW) - BUOY J to FERNDALE	19
ATB (WW) - BUOY J to ANACORTES	50
ATB (WW) - BUOY J to TACOMA	8
OIL BARGE Bunkering Support (SEATTLE TO ANAC)	37
OIL BARGE Bunkering Support (SEATTLE to TACOMA)	3
BUOY J TO PORT ANGELES	**TOTAL**
Bulk Carriers (CRB)	3
OIL BARGE Bunkering Support (ANAC to PORT ANGELES)	1
	VTRA 2015
TOTAL WHATIF - US PROJECTS (without Bunkering)	230
TOTAL BUNKERING SUPPORT - US PROJECTS	49
TOTAL WHAT-IF FOCUS VESSELS	279

Deep Draft Vessels in What-If Case

VAPFC = Vancouver Airport Fuel Consortium

TAU = Tacoma Anacortes Upgrade

WW = West Way

CRB = Columbia River Bunkering

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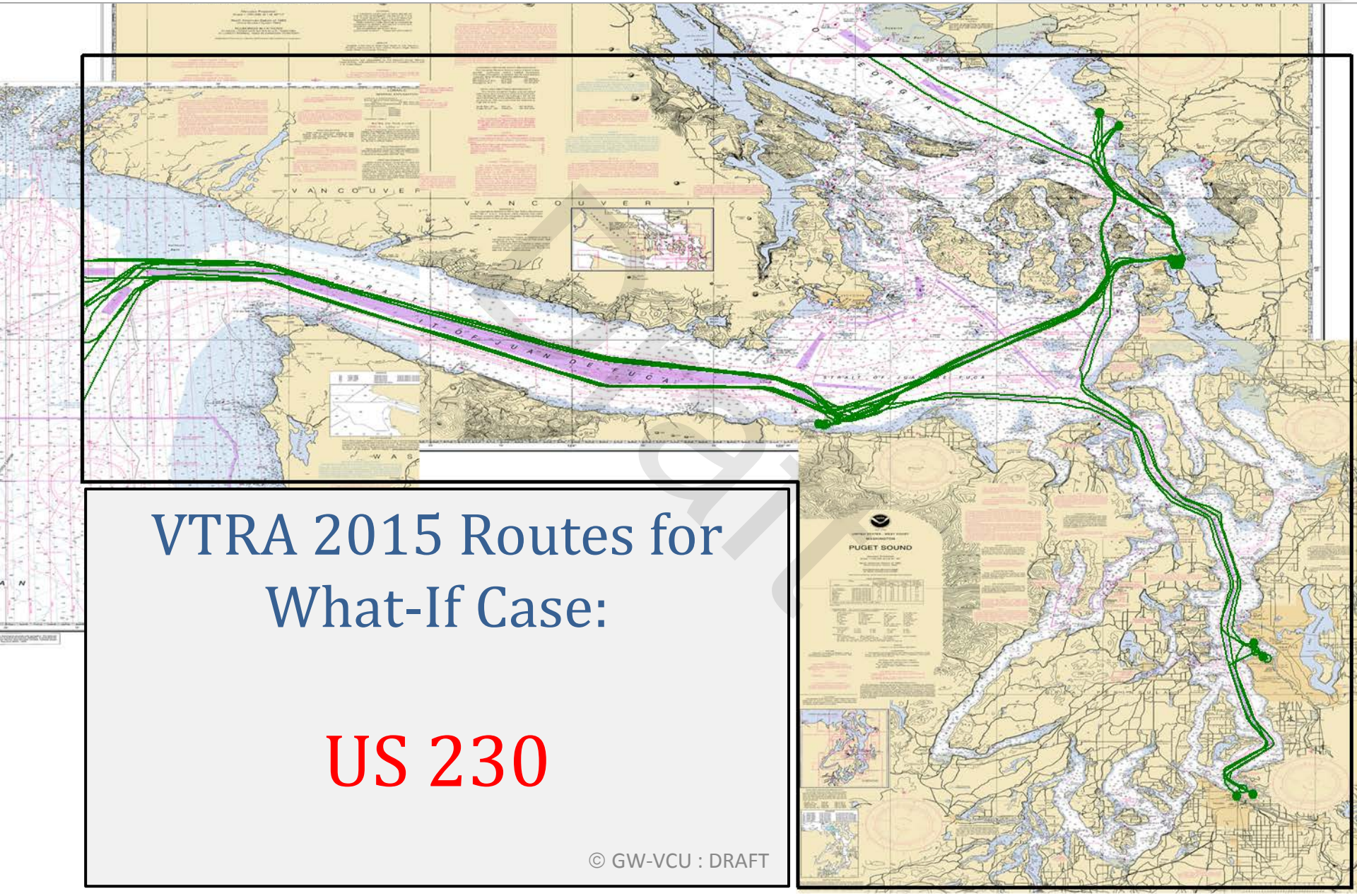

VTRA 2015 Routes for What-If Case:

US 230

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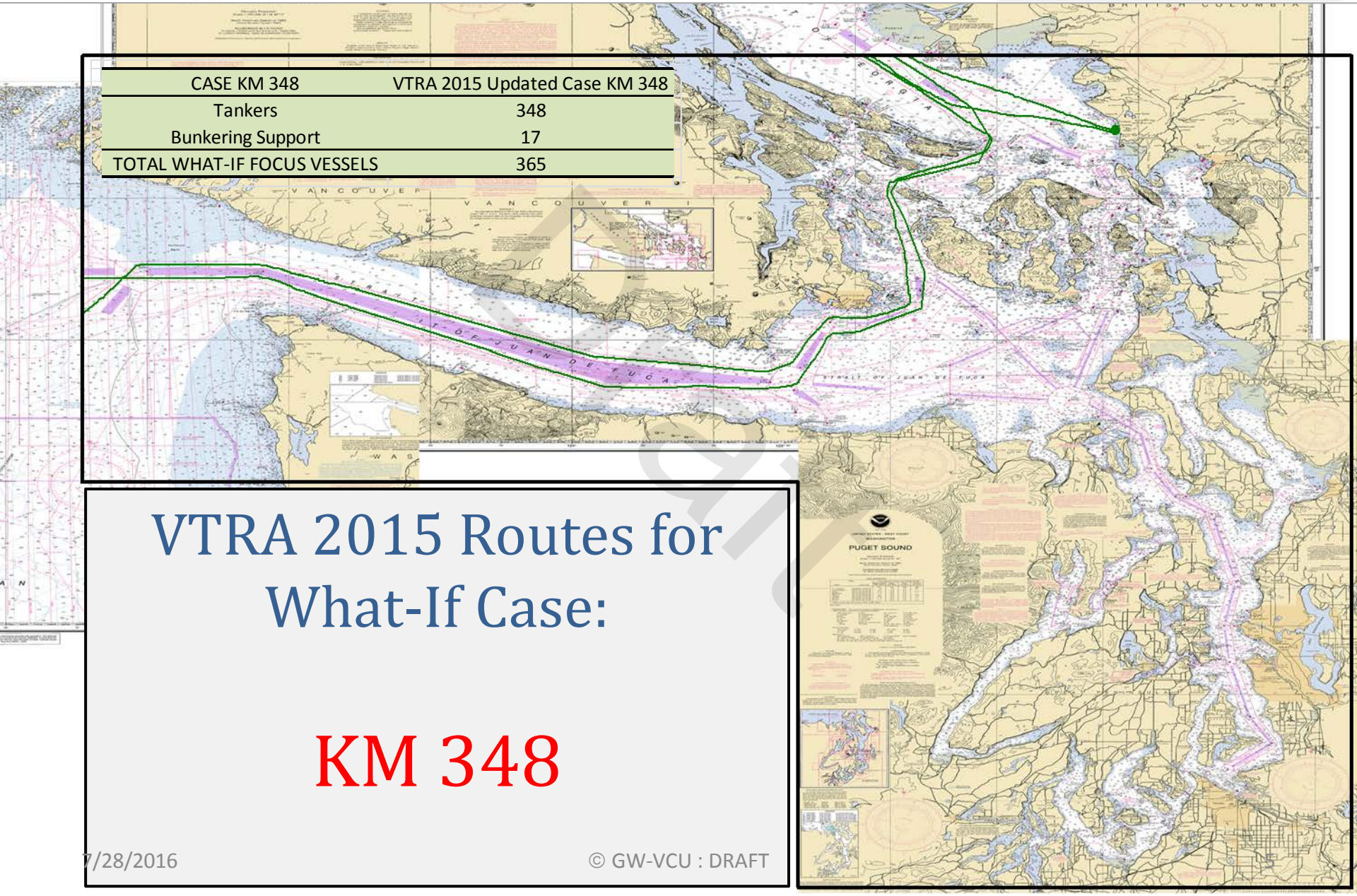
CASE KM 348	VTRA 2015 Updated Case KM 348
Tankers	348
Bunkering Support	17
TOTAL WHAT-IF FOCUS VESSELS	365



VTRA 2015 Routes for What-If Case:

KM 348

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CASE : US + KM + CA 1598

BUOY J TO VANCOUVER VIA HARO/BOUNDARY PASS	TOTAL
Tankers (PCT - Canola)	23
Bulk Carriers (G3 + PCT + VPE)	586
Container Ships (Centerm)	65
OIL BARGE Bunkering Support (CHPT To Vancouver)	54
BUOY J TO DELTA PORT VIA HARO/BOUNDARY PASS	**TOTAL**
Bulk Carriers (Case DP)	43
Container Ships (Case DP)	303
OIL BARGE Bunkering Support (CHPT To Vancouver)	57
	VTRA 2015
TOTAL WHATIF - CA PROJECTS (without Bunkering)	1020
TOTAL WHATIF - KM (without Bunkering)	348
TOTAL WHATIF - US PROJECTS (without Bunkering)	230
SUBTOTAL WHAT-IF (without Bunkering)	1598
TOTAL BUNKERING SUPPORT - CA PROJECTS	111
TOTAL BUNKERING SUPPORT - KM	17
TOTAL BUNKERING SUPPORT - US PROJECTS	49
SUBTOTAL Bunkering Support	177
TOTAL WHAT-IF FOCUS VESSELS	1775

Deep Draft Vessels in What-If Case

PCT = Pacific Coast Terminal

G3 = Global Holdings Grain Export

VPE = Vitara Pacific Elevators

DP = Delta Port

See Slide 5

See Slide 3

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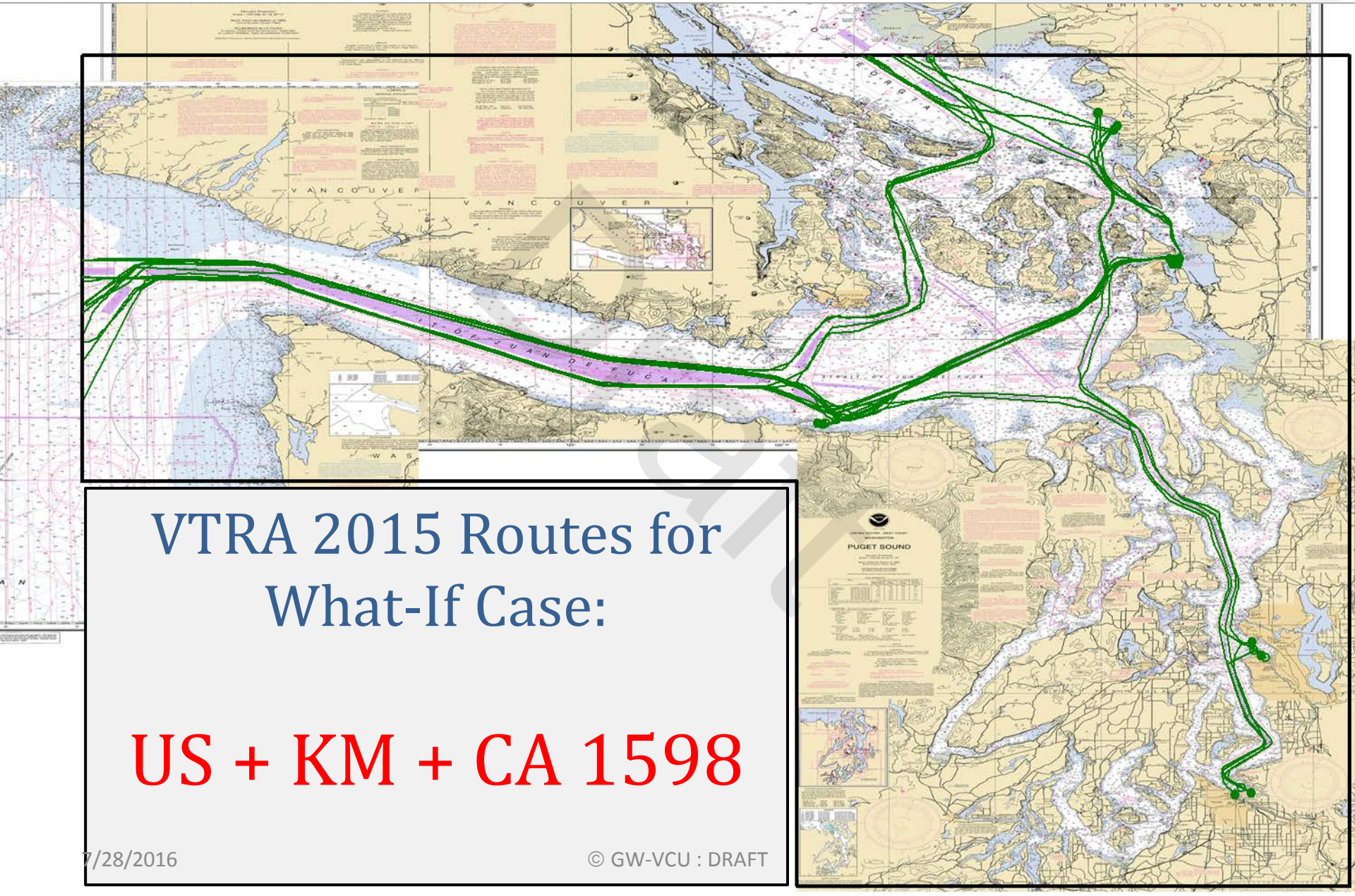

VTRA 2015 Routes for What-If Case:

US + KM + CA 1598

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DISCLAIMER:

1. The VTRA 2015 Model **does not** contain a model for the Potential Consequences of an Accident with an LNG Tanker.

2. LNG Tankers for the purposes of the VTRA 2015 study are minimally modeled for traffic impact **as Cargo Focus Vessels only**.

3. Hence, risk metrics evaluated for any of the VTRA 2015 Cases that include LNG tankers **ought to be considered lower bounds** of those risk metrics.

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VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2015

CASE : US + KM + CA +LNG 2248

Deep Draft Vessels in What-If Case

BUOY J TO VANCOUVER VIA HARO/BOUNDARY PASS	TOTAL
LNG (Discovery) - Modeled as Cargo FV	366
LNG (Island Gas) - Modeled as Cargo FV	122
LNG (WestPac) - Modeled as Cargo FV	122
LNG (WoodFibre) - Modeled as Cargo FV	40
OIL BARGE Bunkering Support (CHPT To Vancouver)	29
	VTRA 2015
TOTAL WHATIF - LNG PROJECTS (without Bunkering)	650
TOTAL WHATIF - CA PROJECTS (without Bunkering)	1020
TOTAL WHATIF - KM (without Bunkering)	348
TOTAL WHATIF - US PROJECTS (without Bunkering)	230
SUBTOTAL WHAT-IF (without Bunkering)	2248
TOTAL BUNKERING SUPPORT - LNG PROJECTS	29
TOTAL BUNKERING SUPPORT - CA PROJECTS	111
TOTAL BUNKERING SUPPORT - KM	17
TOTAL BUNKERING SUPPORT - US PROJECTS	49
SUBTOTAL Bunkering Support	206
TOTAL WHAT-IF FOCUS VESSELS	2454

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See Slide 6
See Slide 5
See Slide 3

VESSEL TRAFFIC RISK ASSESSMENT (VTRA) 2015

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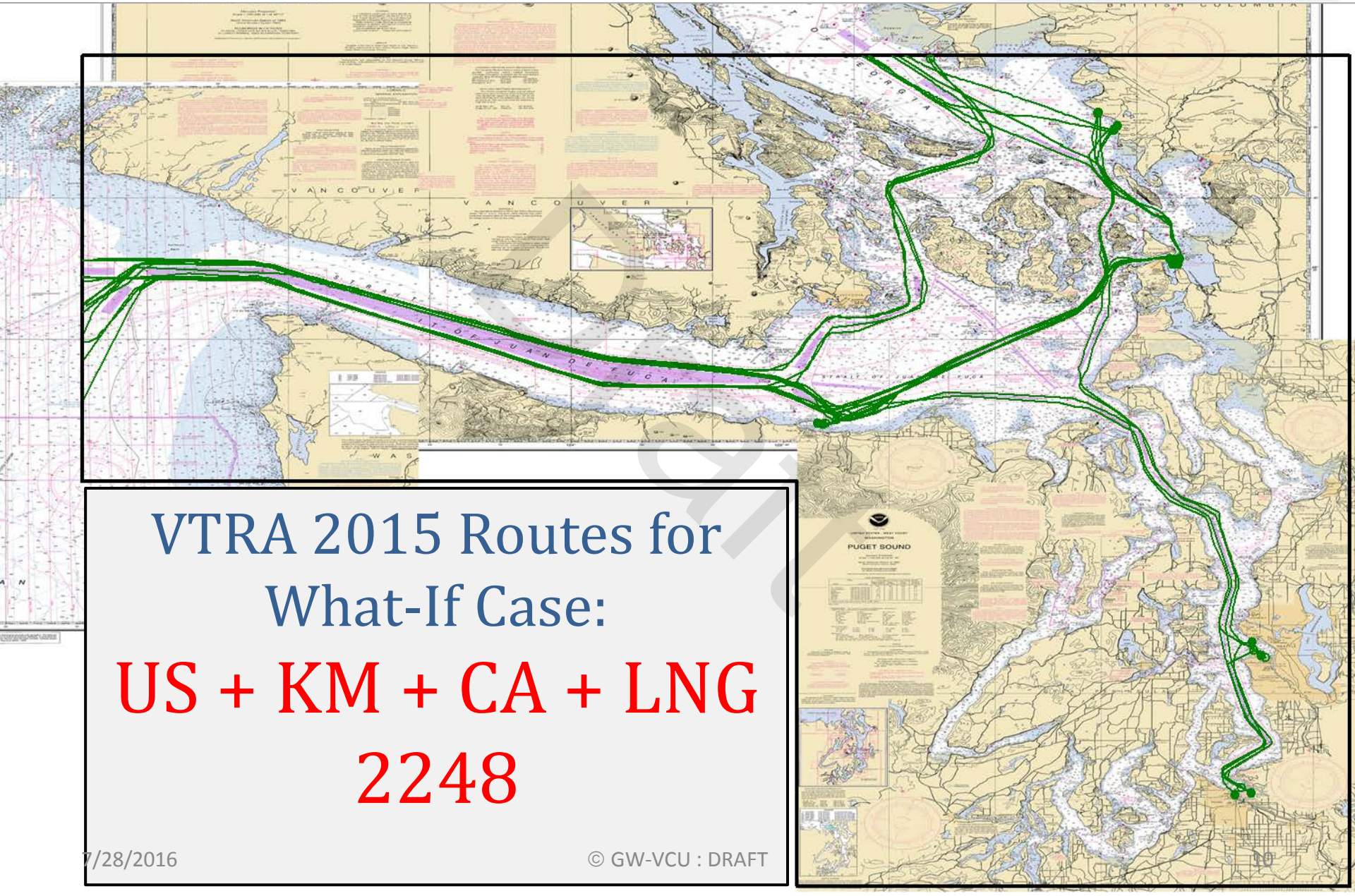

VTRA 2015 Routes for What-If Case:

US + KM + CA + LNG

2248

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