



# Air Cargo



- 40% of world exports by value now move by air
- One tonne of air cargo supports 11 jobs in the community

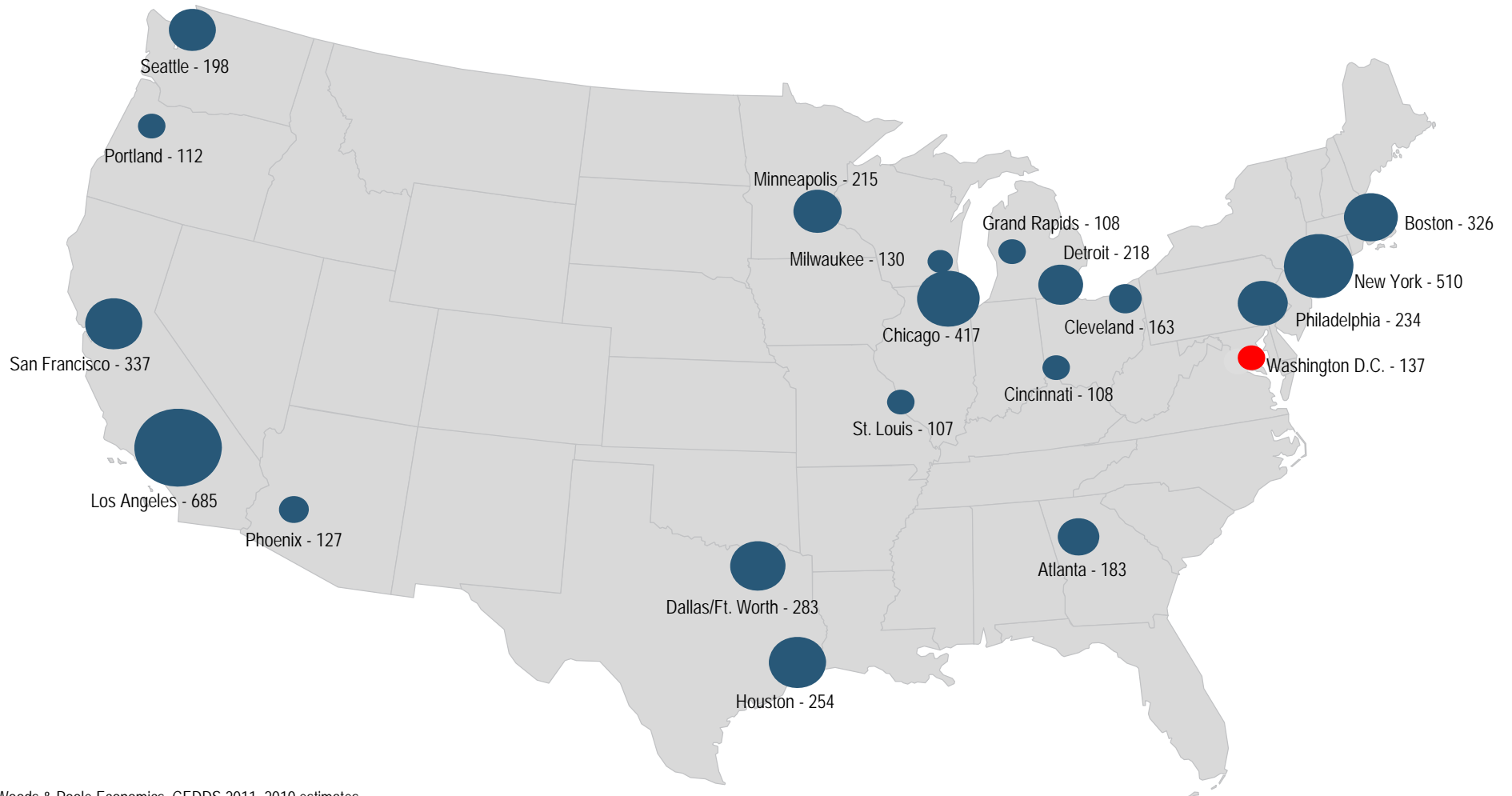
# Air Cargo Market Segmentation

	Primary Air Cargo Demand Drivers				
Characteristic	High Value Density Product	Physically Perishable Product	Production Process Impairment	Service Process Impairment	Marketing Process Impairment
<b>Definition of usage driver</b>	High value products use air cargo minimize inventory carrying costs, risk of damage and theft	Low value products that have limited physical shelf life	Medium or low value component or part that is tied to a larger production process and cost of impairing the process is substantial	Equipment or parts used to deliver a high value service will use air cargo to avoid service disruption and associated economic costs	Products that are sold in very narrow time windows for promotional reasons and final demand is often unknown
<b>Product examples</b>	Cell phones, laptops, semiconductors, pharmaceuticals,	Cut flowers, seafood, fruit, vegetables, certain life science products	Components feeding automotive production plant	Aircraft On Ground (AOG) parts, major infrastructure project, oil & gas exploration platform	Printed materials for advertising campaign, latest designer jeans and footwear, toys , consumer electronics
<b>North America air imports (air weight %)</b>	<b>31%</b>	<b>21%</b>	<b>22%</b>	<b>6%</b>	<b>21%</b>
<b>Europe air imports (air weight %)</b>	<b>27%</b>	<b>25%</b>	<b>26%</b>	<b>4%</b>	<b>18%</b>

Source: Logistics Capital & Strategy primary research



## Top 20 U.S. Metropolitan Areas Ranked by Manufacturing Employment (000)

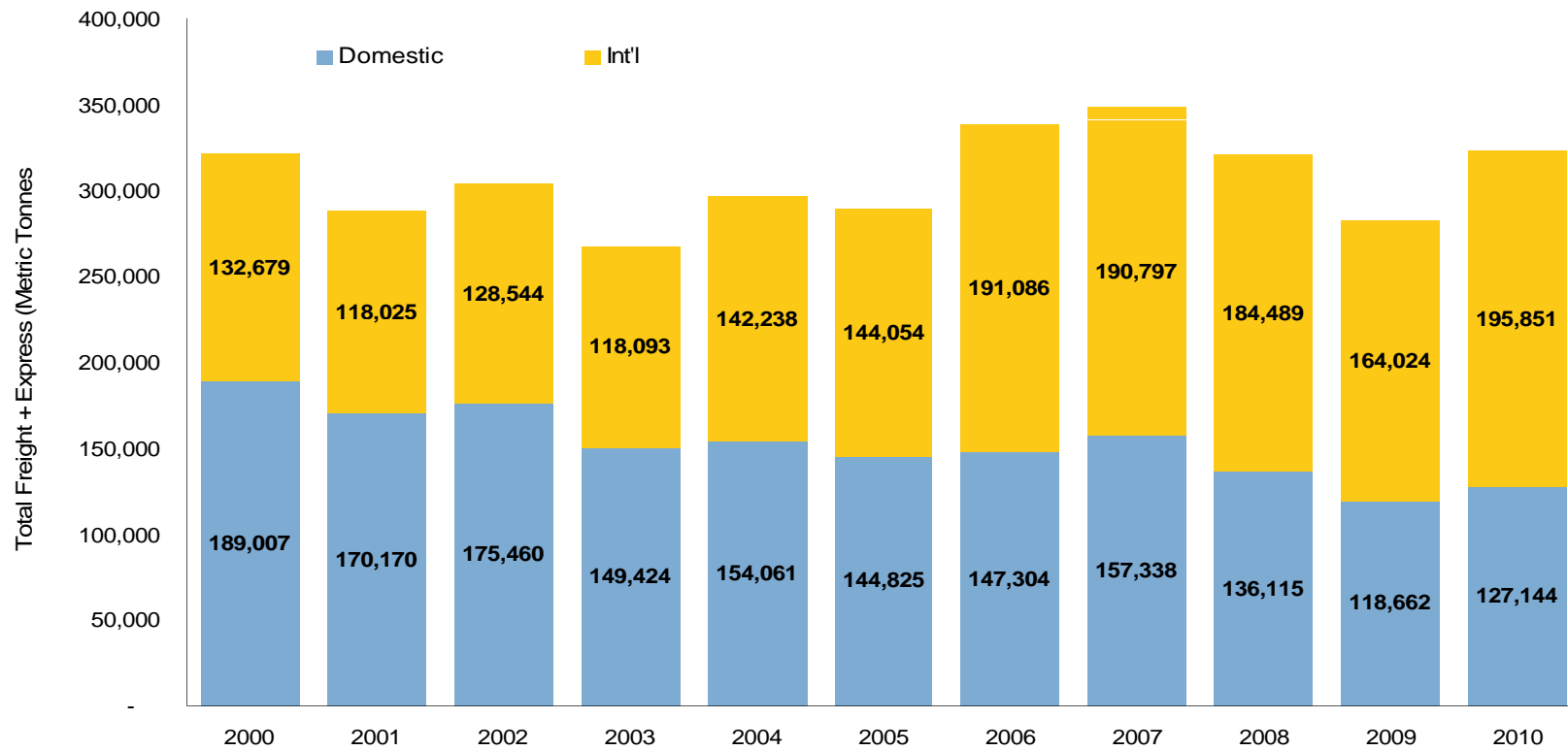


Source: Woods & Poole Economics, CEDDS 2011, 2010 estimates



# Total Freight Transiting Dulles International Airport

## Annual Tonnage 2000 - 2010

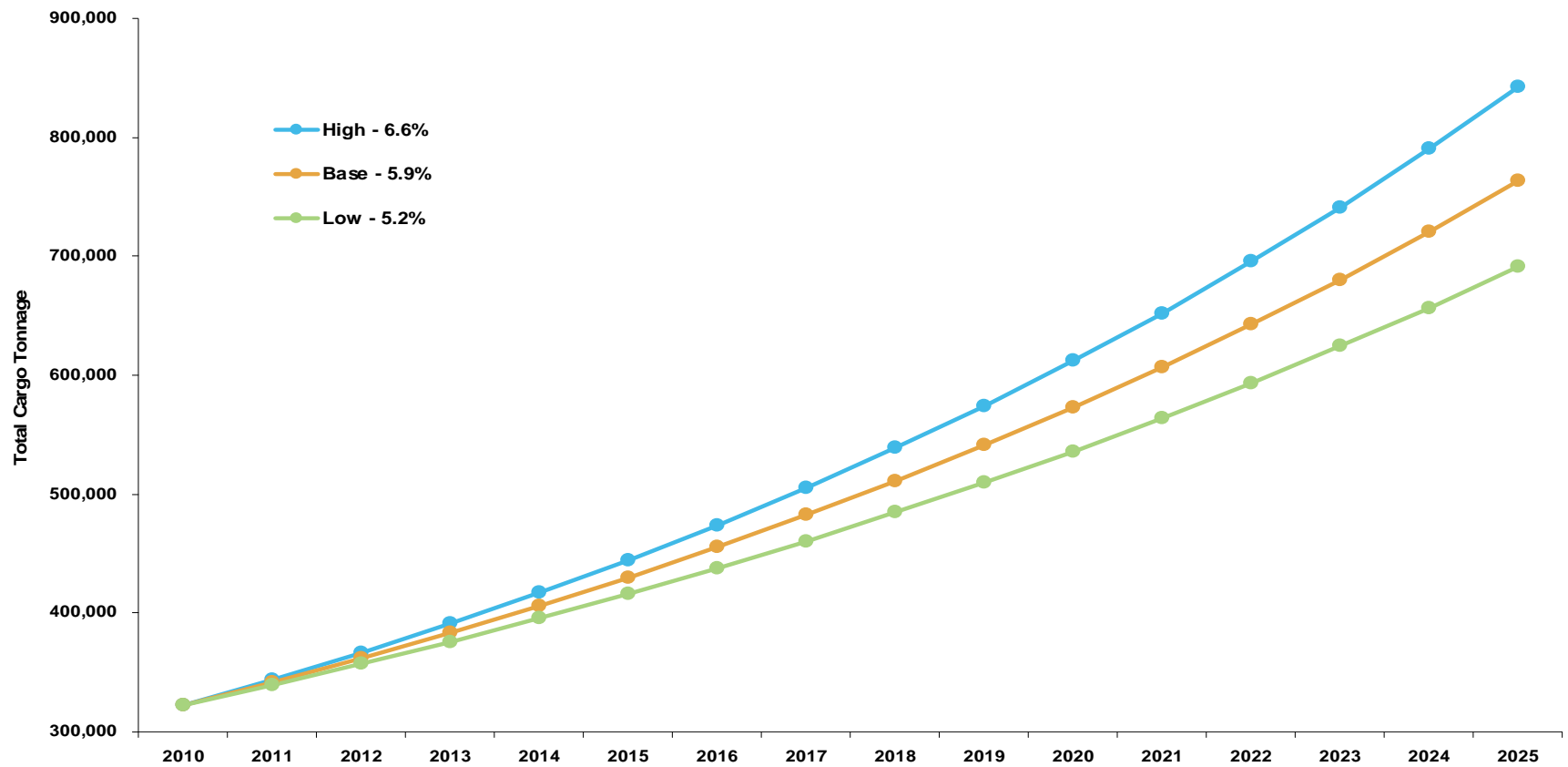


Source: MWA website.



# Forecast Growth of Cargo Business at IAD

Based on World Average Annual Growth Rate Projected By Boeing 2009 - 2029



Source: Boeing World Air Cargo Forecast 2010 - 2011



# *Air Transportation is Multi-Modal*

## Air Cargo:

Plane + Truck

## Passenger:

Plane + Auto

Plane + Transit

Plane + Plane





## *Return Flight*

*Passengers travel **both** ways.*

*Goods move **one** way.*







# *The Region's Air Cargo Opportunity*

- Short-term: Consolidation
- Longer-term: Airport dependent manufacture

**Economic Development Challenge**







## *Barriers*

- High Land Side Costs
- *Congested Access*
- Lack of Flight Redundancy
- Image





## *Traffic Congestion Fallout*

- Congestion caused FedEx to launch DCA service.
- Will much of our future road system bear commercial traffic – hot lanes, parkways, etc?
- Does Metrorail's airport access have a role in future express package distribution?



# *Regional Assets*

- Geographic Location
- Low Airport Costs
- West Side of the Urban Area
- Inland Port?





# Washington Dulles - Results

	1982	Today
International Markets/ Weekly Departures	2 7	43 392
Domestic Markets/ Daily Departures	18 51	81 399
Airlines	13	32
Employees on Airport	3,526	19,414

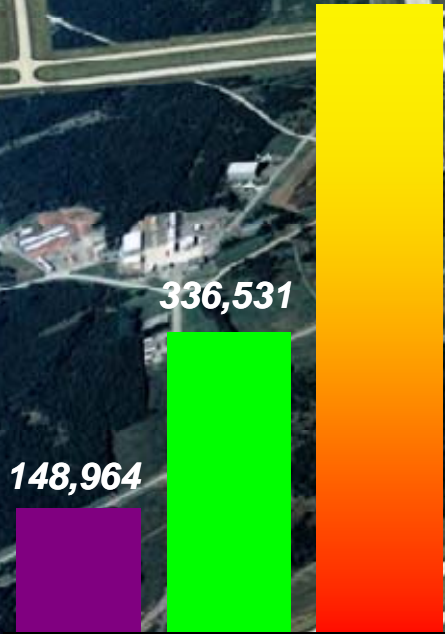




# Capacity for Tomorrow

## Flight Operations

750,000



1982 2010 DESIGN CAPACITY

## Passengers IN MILLIONS

55.0M



1982 2010 DESIGN CAPACITY

## Cargo IN TONNES

8,000,000\*\*



1982 2010 CARGO POTENTIAL

\*\* WATF Estimate

Source: MWA Records through December 2010

Based on a picture by Air Survey Corporation

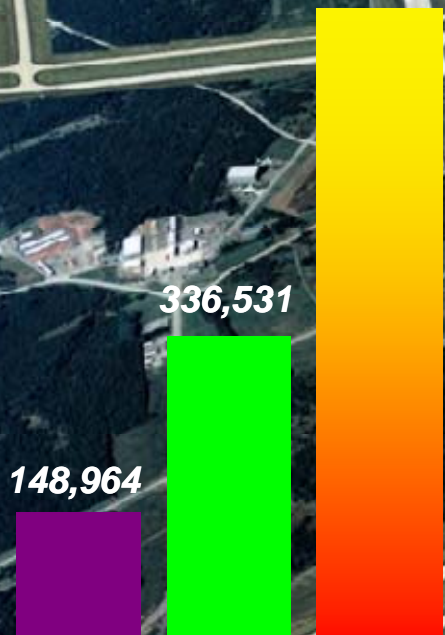




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# *Airport Dependent Manufacture*

- Very High Value
- Time Sensitive

## For Washington MSA in 2009

- \$5.8B in air cargo exports
- \$6.6B in domestic shipments
- 40% produced in VA/MD/DC

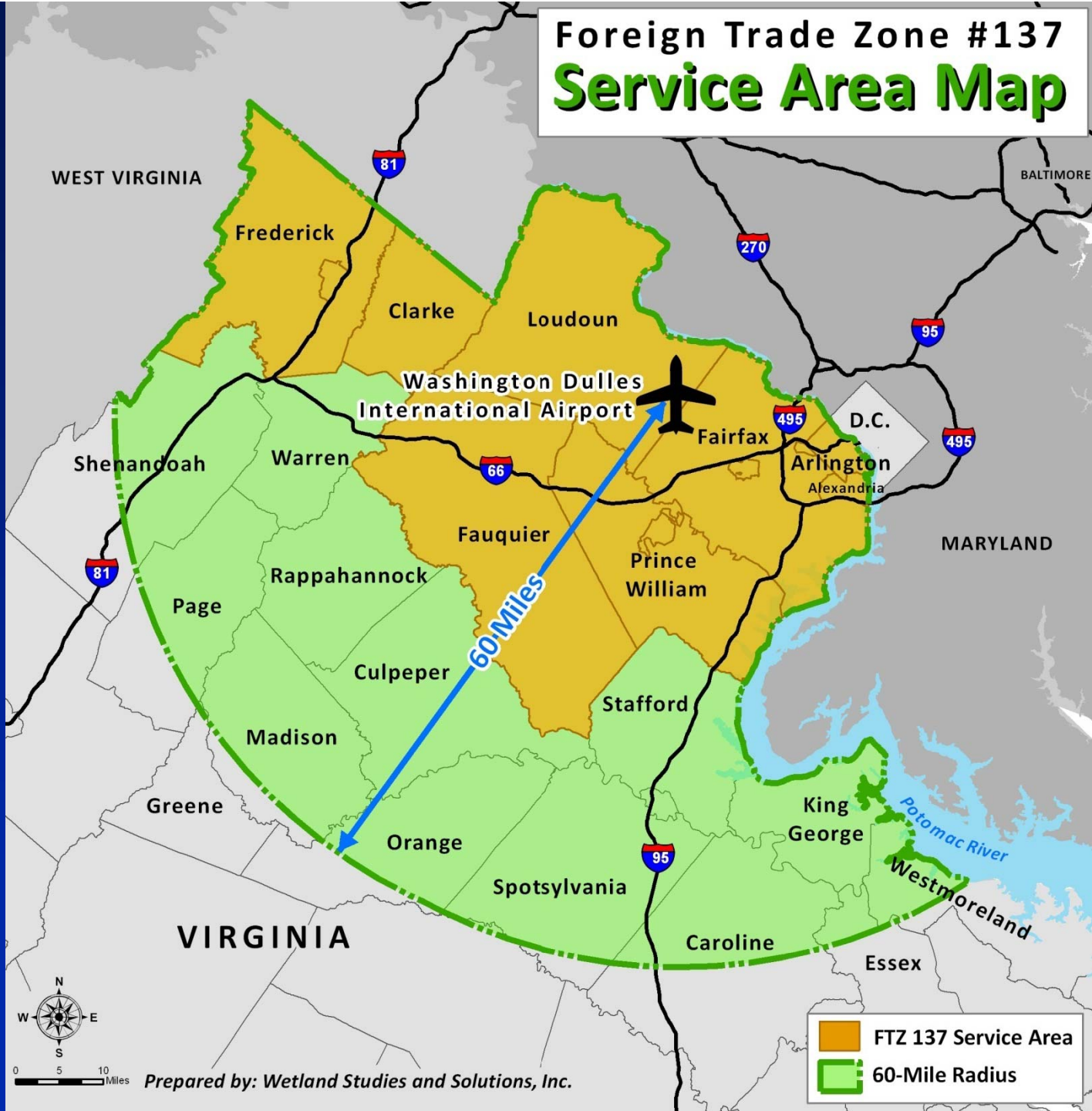


# *What is a Foreign Trade Zone?*

- Treated as being outside US Customs territory for purposes of tariff laws and duties.
- Duties may be:
  - Deferred
  - Reduced
  - Eliminated



# Foreign Trade Zone #137 Service Area Map



Prepared by: Wetland Studies and Solutions, Inc.

- FTZ 137 Service Area
- 60-Mile Radius



# *The Air Cargo Component*

*[www.washingtonairports.com](http://www.washingtonairports.com)*

# Relatively few product segments make up 85% of air cargo demand

Rank	Product Segment	% of TTL	Cum%
1	Apparel, Household Goods - Cotton	7.1%	7.1%
2	Fish And Shellfish	7.1%	14.1%
3	Computer Accessories	6.5%	20.7%
4	Computers	6.5%	27.1%
5	Nursery Stock, Etc.	6.4%	33.5%
6	Industrial Machines, Other	4.8%	38.3%
7	Vegetables	4.4%	42.7%
8	Other Household Goods	4.3%	46.9%
9	Telecommunications Equipment	3.9%	50.9%
10	Electric Apparatus	3.5%	54.4%
11	Apparel, Textiles, Non-wool Or Cotton	3.5%	57.8%
12	Other Parts And Accessories Of Vehicles	3.0%	60.9%
13	Medicinal Equipment	2.8%	63.6%
14	Pharmaceutical Preparations	2.3%	65.9%
15	U.S. Goods Returned, And Re-imports	2.2%	68.1%
16	Industrial Supplies, Other	2.0%	70.1%
17	TV's, VCR's, Etc.	1.6%	71.7%
18	Toys, Games, And Sporting Goods	1.5%	73.2%
19	Industrial Engines	1.4%	74.6%
20	Fruits, Frozen Juices	1.4%	76.0%
21	Semiconductors	1.3%	77.3%
22	Footwear	1.3%	78.6%
23	Generators, Accessories	1.1%	79.7%
24	Photo Equipment	1.0%	80.7%
25	Measuring, Testing, Control Instruments	0.9%	81.6%
26	Gem Stones, Other	0.9%	82.5%
27	Apparel, Household Goods-Nontextile	0.9%	83.4%
28	Other Military Equipment	0.8%	84.2%
29	Engines And Engine Parts	0.8%	85.0%

Source: Logistics Capital & Strategy primary research

# Macro trend impact on long term air cargo use propensity and O&D matrix

	Primary Air Cargo Demand Drivers				
Macro Trend	High Value Density Product	Physically Perishable Product	Production Process Impairment	Service Process Impairment	Marketing Process Impairment
Long term slow down in consumer spending – “trading down”	Yes				Yes
Maturing product life cycles resulting in slow demand and low prices	Yes			Limited	Yes
Technology improvements reduce need for air cargo		Yes	Yes	Limited	Yes
Rising episodic product supply shocks due to nature		Yes			
Threat of production location shift due to rising wage rates and high oil prices	Yes		Yes		Yes





# Strategic Domestic Location



60% of U.S. and Canadian populations within  
a two-hour flight or a day's drive

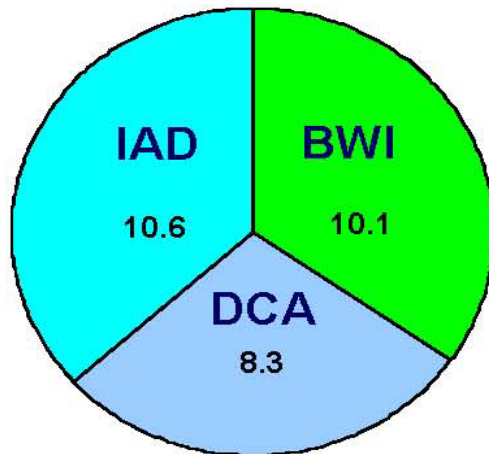


## *Exports via Dulles Today*

	% by Value	% by Weight
Biomedical	41.4%	12.8%
Aerospace	15.5%	3.9%
Electronics and Telecoms	9.5%	4.9%
Instruments/Controls	6.5%	2.3%
Share of Total	72.9%	23.9%

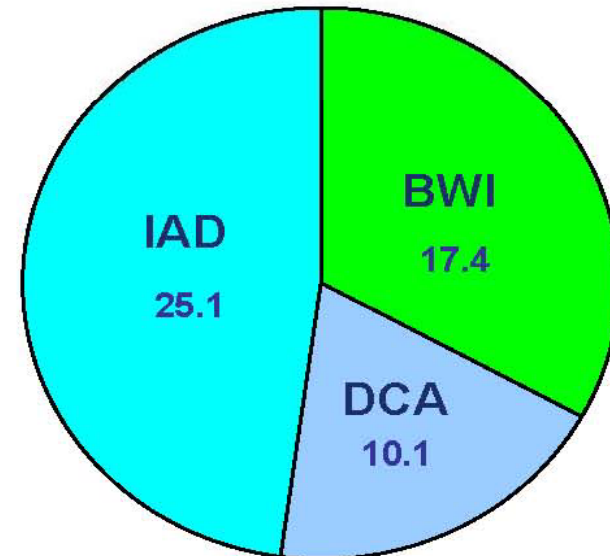
# Washington Airport Passengers Forecast to increase 82% by 2030

2009



28.9  
million

2030



52.6  
million