A photograph of a boat's wake on a body of water, with the text overlaid. The water is a deep blue-grey color, and the wake is a white, frothy trail of water. The boat's hull and tires are visible on the left side of the frame.

# Thoughts on the Future of the Inland Waterway System

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Presentation to USACE Inland Navigation CoP  
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# Objectives

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- Future Freight Shipments in the U.S.?
- A Future for Freight Planning/Policy?
- Can Inland Navigation Increase Its Relevance to the National Freight Dialogue

A photograph showing the wake of a boat moving through the ocean. The water is dark blue-grey, and the wake is a large, white, foamy area. The text "Future Freight Shipments in the U.S.?" is overlaid in a bold, blue, sans-serif font. The text is centered horizontally and vertically within the white wake area. The background shows the dark water of the ocean extending to the horizon.

**Future Freight Shipments in  
the U.S.?**

# A Shipper Perspective on Infrastructure/Logistics?

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- Demands low-cost, reliable service
- Modally and geographically neutral
- Wants just in time services – does not want or care about your “problems” (carrier or infrastructure)
- Just in time services – paradox of being more robust and fragile regarding freight productivity
- Intermodal capacity and operability – not as smooth as promised
- Firms outsourcing the “Headaches” of logistics
- No one believes congestion will go away
- Often ignore primarily “freight” infrastructure

# Carriers are driven by:

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- Economics of Scale
- Managing variable costs
- Land use and dedicate facilities – integrating into supply chains or transportation centers

# Shocks to Freight Transportation in last ten years

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- Port Strikes (longshoremen, drivers)
- Labor – Manpower
- Lock Shutdowns
- Rail meltdowns
- Larger, heavier vessels and equipment
- Shifts in trade patterns
- Increased, inconsistent security policies
- Fuel-insurance costs
- Natural Disasters

# Dramatic increases in projected international container traffic



Forecast figures based on a 10-year linear regression

# Current and Forecasts of Total Freight Shipments - FHWA FAF<sup>2</sup>

**Table 2-1. Shipments by Mode and Weight: 2002 and 2035 (Millions of Tons)**

	2002			
	Total	Domestic	Exports <sup>3</sup>	Imports <sup>3</sup>
<b>Total</b>	(P) 19,326	17,670	(P) 524	(P) 1,133
<b>Truck</b>	11,539	11,336	106	97
<b>Rail</b>	1,879	1,769	32	78
<b>Water</b>	701	595	62	44
<b>Air, air &amp; truck</b>	(P) 10	3	(P) 3	(P) 4
<b>Intermodal<sup>1</sup></b>	1,292	196	317	780
<b>Pipeline &amp; unknown<sup>2</sup></b>	3,905	3,772	4	130
	2035			
<b>Total</b>	(P) 37,178	33,668	(P) 1,105	(P) 2,404
<b>Truck</b>	22,814	22,231	262	320
<b>Rail</b>	3,525	3,292	57	176
<b>Water</b>	1,041	874	114	54
<b>Air, air &amp; truck</b>	(P) 27	10	(P) 7	(P) 10
<b>Intermodal<sup>1</sup></b>	2,598	334	660	1,604
<b>Pipeline &amp; unknown<sup>2</sup></b>	7,172	6,926	5	240
	% Change 2002-2035			
<b>Total</b>	92%	91%	111%	112%
<b>Truck</b>	98%	96%	148%	230%
<b>Rail</b>	88%	86%	78%	126%
<b>Water</b>	49%	47%	83%	23%
<b>Air, air &amp; truck</b>	170%	233%	133%	150%
<b>Intermodal<sup>1</sup></b>	101%	70%	109%	106%
<b>Pipeline &amp; unknown<sup>2</sup></b>	84%	84%	23%	85%

**Key:** P = preliminary

# History of LATTTS

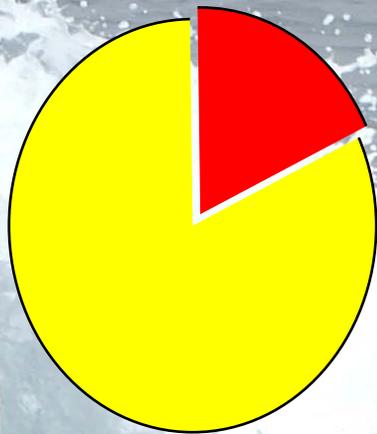
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- LATTTS was initiated in 1997 by Southeastern Transportation Alliance
- Study Objectives
  - ❖ Forecast the growth in trade volume with Latin America
  - ❖ Identify trade opportunities of Alliance states
  - ❖ Estimate the capacity of the existing transportation infrastructure
  - ❖ Determine transportation investments required to support the trade growth

# 20 Year Needs Estimates

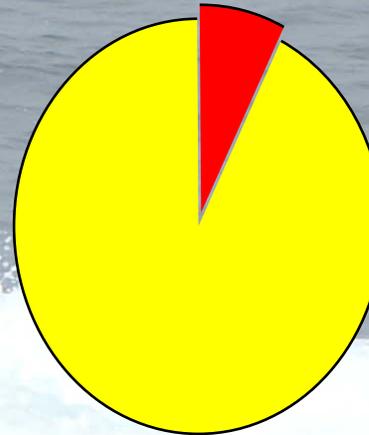
## LATTS Strategic System

TOTAL 20-YR NEEDS ESTIMATE



\$92 Billion

20-YR HIGHWAY NEEDS ESTIMATE



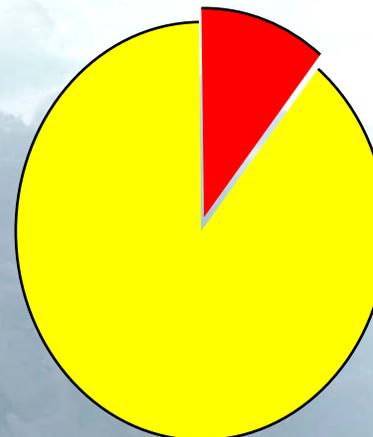
\$67 Billion

20-YR PORT NEEDS ESTIMATE



\$22 Billion

20-YR AIR CARGO NEEDS ESTIMATE



\$3.3 Billion

■ Latin America  
■ Other

# Future Trends?

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## International Trade will continue

- ❖ Key to prosperity-competition
- ❖ US Sees trade agreements as key for regional economics, but not tied to transportation needs
- ❖ Panama Canal expansion
- Cascading of port gateways to provide redundancy/new market access
- Domestic Trade will continue, compete in same corridors
- Cargo Growth will occur despite what is or is not done

A photograph taken from the perspective of someone on a boat, looking back at the churning water and white wake. The water is a deep blue-grey color, and the wake is a bright white foam. The text "A Future of Freight Policy/Planning?" is overlaid in the center of the image in a bold, blue, sans-serif font.

# A Future of Freight Policy/Planning?

# What kind of transportation system do we (nationally) want?

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- Safe, Secure, Environmental Responsible, Efficient/Reliable
  - ❖ Common theme across Corps, US DoT, State DoT's, etc.
- Customers (Shippers/Carriers/Public) assume this plus
  - ❖ cost effectiveness and accessibility

A Current Opinion? - Transportation is a “Free Lunch”. Don't make me pay again to use it.

# Infrastructure development complicated by several factors

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- Equity: Can't build everything everyone wants everywhere.
- Project Determination: Balance project needs with relevant policy goals.
- Communication: Failure to communicate needs, especially to non-technical decision makers
- Uncertain Policy Demands
  - ❖ energy use, environment, unintended consequences
- Financing
  - ❖ More costly new projects chasing less federal/state funds
  - ❖ Maintenance costs continue consuming larger share of available funds

# How much will an improved freight system cost?

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- ASCE 2005 (first issued in 1988)
- AASTHO Freight Bottom Line
- Chamber of Commerce on Port Needs
- FHWA – Condition and Needs for Highways
- USACE – IWR – Dredging Needs Studies
  
- No consistent National Investment Model
  - ❖ Various numbers, forecasts, etc., distort message
  - ❖ Gunfighter syndrome – the one who blinks first “gets it in the eye”
  - ❖ National Planning coordination – data, models, forecasts

# USDOT Congestion Initiative – A Six Point Plan

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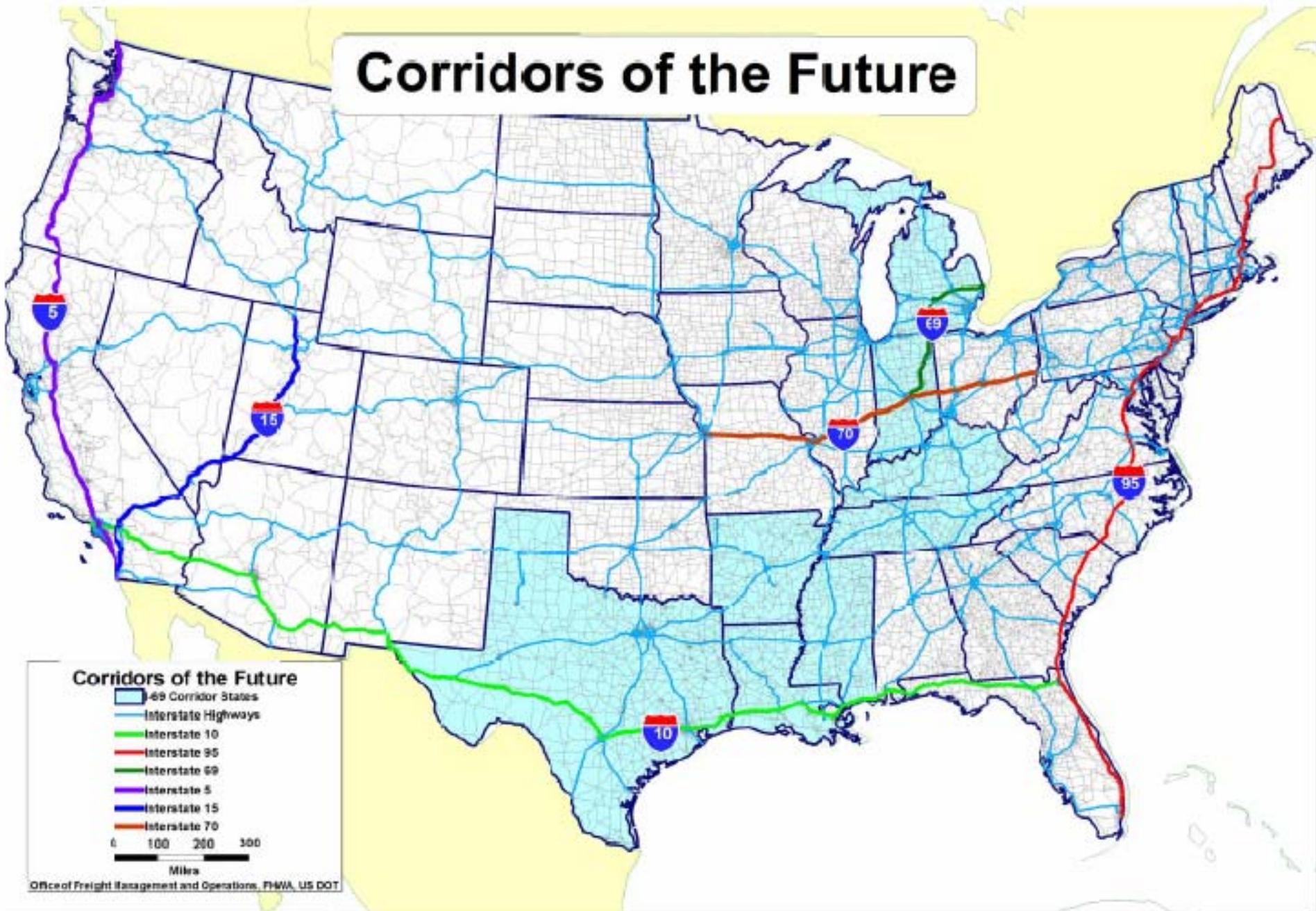
- Relieve urban congestion
- Unleash private sector investment resources
- Promote operational and technological improvements
- Establish a “Corridors of the Future” competition
- Target major freight bottlenecks and expand freight policy outreach
- Accelerate major aviation capacity projects and provide a future funding framework

# USDOT Freight Policy Objectives

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- Improve the operations of the existing freight transportation system
- Add physical capacity to the freight transportation system in places where investment makes economic sense
- Use pricing to better align all costs and benefits between users and owners of the freight system and to encourage deployment of productivity-enhancing technologies
- Reduce or remove statutory, regulatory, & institutional barriers to improved freight transportation performance.
- Proactively identify and address emerging transportation needs
- Maximize the safety and security of the freight transportation system
- Mitigate and better manage the environmental, health, and community impacts of freight transportation

# Corridors of the Future





**Can Inland Navigation Increase  
Its Relevance to the National  
Freight Dialogue?**

# Limited Growth in New Infrastructure?

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- Highway Capacity
  - ❖ growing less than 1% a year since 1980
  - ❖ NHS Connectors
- Rail line system miles –
  - ❖ Rail abandonment in 1980's
  - ❖ Some capacity added on mainline tracks
- Waterway network is fixed
  - ❖ River system is geologically fixed
  - ❖ Limited development of new locks and dams
- All see technology as way to increase operational efficiencies
- City-Freight Planning Conflicts

# Who benefits from inland transportation improvements?

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- Carriers – reduction in operating expenses, improved reliability, profits
- Ports – additional revenues, prestige, local employment
- Governments and other local industries – additional revenues, employment
- Shippers – minimized disruption, reduced out of pocket costs, valuation of time
- Who does not benefit?

# Challenges Linking Inland Navigation to Coastal Ports

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- Different datasets, with resulting data fusion problems, etc. to understand and study markets
- Competitive modal/port competition
- Inconsistent policies stymie evolution of new maritime linkages
- Geography limits market access
- Understanding proper valuation of time variability by shipper
- Industry Inertia (economies of scale)

# Options for Domestic Operations Improvement

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- Traditional approach – build (improve) capacity
- Privatization or public private partnerships
- Monitor system use to ensure reliability
- New transportation options
- Develop Multimodal Corridor operation and planning tools
- Improved Communications

# Can/Will Inland Shipping Remain Relevant?

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- Alleviate congestion in other modes
- “Endless Capacity”?
- Integration with other modes, including deep-sea ports
- Environmental advantages
- Multiuse planning and development strategies for inland ports

*Must promote to shippers, governments,  
and non-technical audiences*

# Waterways Can Be part of Solution

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- Balance with existing international/ coastal flows
- Determine ways to encourage private sector investment in equipment, services
- Guarantee service on mainstreams
- Work with states/cities for truck congestion
- Modify Hours of Service Rules if driver accompanies truck (ferries)
- Federal and State Multiagency planning, data, analysis

# Conclusions?

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- International Trade will grow, but so will domestic volumes, straining an already mature system
- We cannot simply build our way out of congestion
- No consistent national/regional policies (methodologies) to incentivize desired or expected outcomes across different geography and modes
- Improving navigation different from past – more partnerships emerging, but message remains diluted...