



“Observations on Future Infrastructure Needs”

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The World is Changing...

- Operational Changes
 - ◆ Port Strikes
 - ◆ Rail meltdowns
 - ◆ Growing Vessel Capacity
 - ◆ Lock and Dam Closures
- Regulatory Policies
- Shifting trade patterns
- Cost Variability
- Natural Disasters/climate change
- Terrorism and Security
- Economic Downturns
- “Green” Pressures
- Funding Challenges
- Reducing Risks



Current and Forecasts of Total Freight Shipments - FHWA FAF²

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

	2002			
	Total	Domestic	Exports ³	Imports ³
Total	(P) 19,326	17,670	(P) 524	(P) 1,133
Truck	11,539	11,336	106	97
Rail	1,879	1,769	32	78
Water	701	595	62	44
Air, air & truck	(P) 10	3	(P) 3	(P) 4
Intermodal¹	1,292	196	317	780
Pipeline & unknown²	3,905	3,772	4	130
	2035			
Total	(P) 37,178	33,668	(P) 1,105	(P) 2,404
Truck	22,814	22,231	262	320
Rail	3,525	3,292	57	176
Water	1,041	874	114	54
Air, air & truck	(P) 27	10	(P) 7	(P) 10
Intermodal¹	2,598	334	660	1,604
Pipeline & unknown²	7,172	6,926	5	240
	% Change 2002-2035			
Total	92%	91%	111%	112%
Truck	98%	96%	148%	230%
Rail	88%	86%	78%	126%
Water	49%	47%	83%	23%
Air, air & truck	170%	233%	133%	150%
Intermodal¹	101%	70%	109%	106%
Pipeline & unknown²	84%	84%	23%	85%

Key: P = preliminary

Does Inland Navigation Matter?

● Can we say:

- ◆ How did the system evolve?
- ◆ How are users approaching the inland system?

● Considerations regarding future use

- ◆ Alleviate congestion in other modes
 - ◆ “Endless Capacity”?
 - ◆ Integration with other modes, including deep-sea ports
 - ◆ Environmental advantages and exposures
 - ◆ Inconsistent policies stymie evolution-adaptation in maritime sector
 - ◆ Geography constraints do exist
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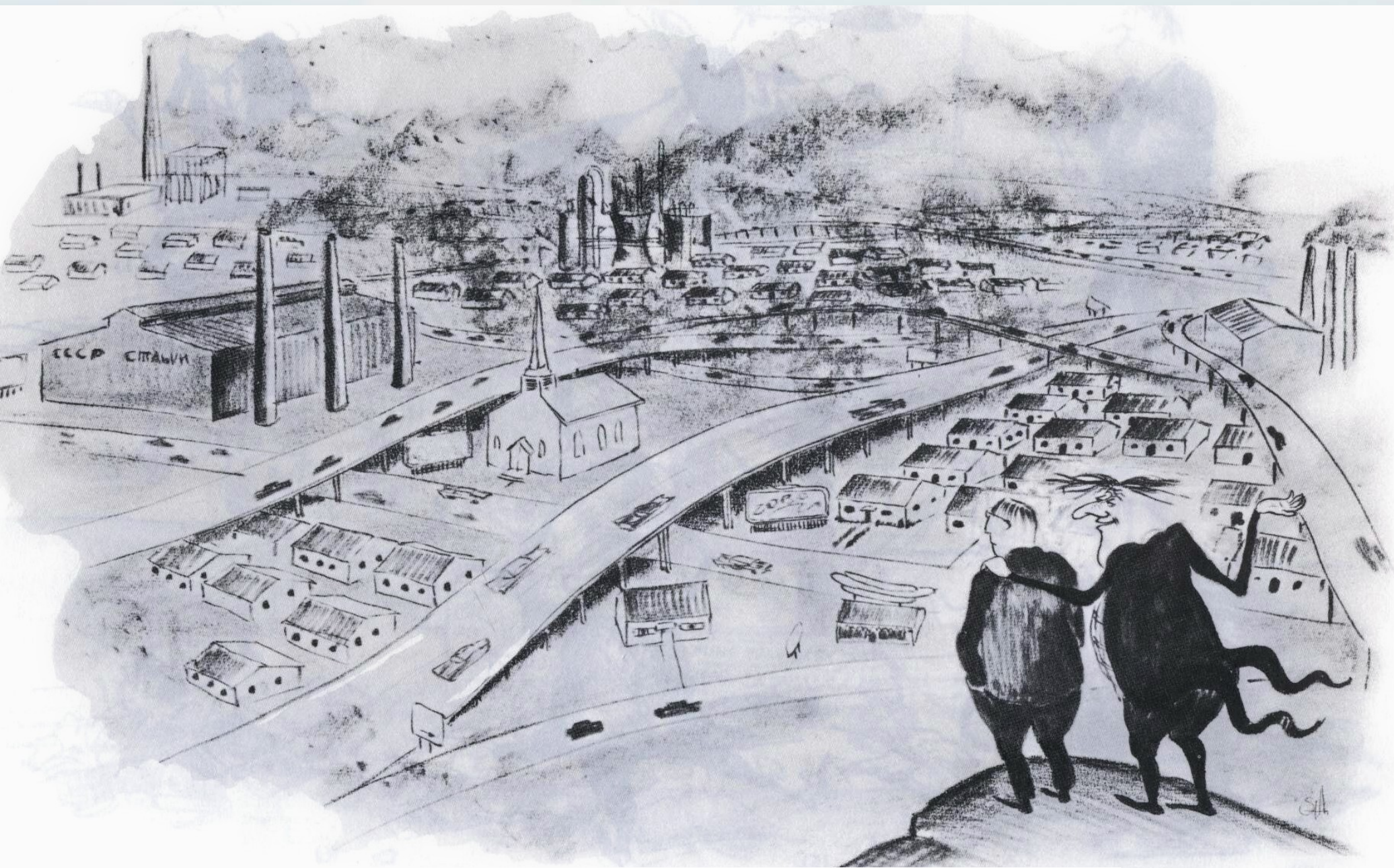
How Can One Look At the Inland Navigation Industry?

- Inventory Functions – physical characteristics, numbers of facilities, labor, equipment, infrastructure
 - Engineering – structural integrity, deterioration
 - Operational Reliability – delay, closures
 - Economical and Financial – Cost/Benefit Analysis, capital and financial resources, jobs and taxes
 - Safety, Security, Regulatory – number of accidents, exposure, fees, taxes, inspections, etc.
 - Markets – hinterlands, multimodal services, shippers, carriers
 - Equipment and Traffic – number of barges, age of fleet, etc.
 - Non Navigational Users – Recreation, flood control, hydropower, Fish and Wildlife, water supply
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Who Gains from Inland Transportation Improvements?

- 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, modal choice
 - Other users – less traffic, etc.

 - Who does not benefit? Externalities and NED benefits?
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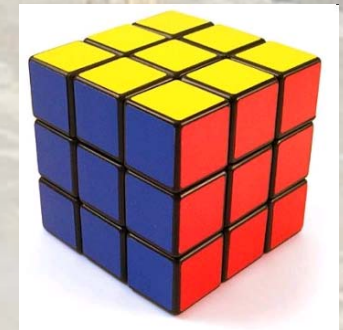
Without Planning This Would Have Been a Mess

What kind of transportation system do we (nationally) want? Now? Or In 30 years?

- 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

Options for Operations Improvement

- Build (improve) system capacity
 - ◆ Privatization
 - ◆ Flexibility
- Increase Operations (system velocity)
 - ◆ Reduce delays, notifications, technologies
- Create or Support emerging transportation options
 - ◆ Marine Highways
 - ◆ Inland ports as Logistics centers



Infrastructure development complicated by several factors

- 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
 - Lack of common analytical models, datasets and guidance
 - Uncertain, dynamic Policy expectations
 - ◆ energy use, environment, unintended consequences
 - Financing
 - ◆ More costly new projects chasing less federal/state funds
 - ◆ Maintenance costs continue consuming larger share of available funds
 - Perception: Transportation is a “Free Lunch”, so don't make me pay again to use it
 - Maintenance verse New Project Funding – Match to previous level.
 - State Laws Regarding Spending Limitations
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How much will an improved Freight system cost?

- ASCE 2005 (first issued in 1988)
 - AASTHO Freight Bottom Line Reports
 - FHWA – Condition and Needs for Highways
 - USACE – IWR – Dredging Needs Studies
 - Estimation of Value of Capital Stock Replacement
 - National Surface Transportation Policy and Revenue Study Commission
 - No consistent National Investment Model
 - ◆ Various numbers, forecasts, etc., distort message
 - ◆ Lack of analytical models and data that match planning and policy needs
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Public Sector Development – Estimating the Real Need



One Consideration – Strengthen Federal Approach to Waterways

- Reestablish the Strong Federal Leadership Role in Market Access and Economic Development
 - ◆ A promise made – a promise kept
 - ◆ Without a “moon shot” perspective, hard to sustain interest.
 - Evolution from Systems to Multimodal Planning
 - Develop multiyear capital budgeting at system level
 - Integrate life cycle costing with appropriate budgets
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Where does the Money come from...

- Federal Sources

- ◆ Indexed Fuel Taxes, User Fees, registrations, Infrastructure Banks, etc.

- State Sources

- ◆ Linking waters and economic development (brownfields, greenfields), developing state champions

- Public Private Partnerships

- If we receive new funds, but authorizations and approvals occur in the same manner, did anything improve?

- Projects must match goals, and demonstrate returns to the Federal Government
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Conclusion

- Improving navigation different from past years
- System's use not fully understood or appreciated
- New institutional approaches needed to “relink” transportation to economic growth
- Economic development = people development

Example - Tenn-Tom

- ◆ Congressional and State members involved
 - ◆ Sees the Region wins if the components win
 - ◆ Benefits are consistent with regional economic development goals in region
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