# The U.S. Army Corps of Engineers Navigation Performance Measures

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# Navigation Mission

*"To provide **safe**, **reliable**, **efficient**, and **environmentally sustainable** waterborne transportation systems (channels, harbors, & waterways) for **movement of commerce**, **national security** needs and **recreation**."*

# Nav Performance Measures

Follow up to: the May 6-7, 2004 National Navigation Performance Measures Workshop held in Springfield, VA

- Findings from breakout groups

# Nav Performance Measures

Summary of Low Use Inland Waterways Group Findings:

- Call them Tributaries (not Low Use)
- ID Value of project to community, region & Nation
- Economic Impacts
- Consequences of not maintaining
- ID Who are users & What are uses
- Adopt “Chickamauga Methodology” - capture social & economic impacts: cargo diversions, congestion impacts, air quality, etc.
- Dollar Value of cargo
- Water-dependent cargos: high value, strategic
- Value of multiple uses: recreation, water storage, fish & wildlife, etc.
- Safety issues
- Shifting costs to other agencies

# Nav Performance Measures

Continued summary of Low Use Inland Waterways Group Findings:

- Under reporting by industry
- Define Benefits
- Budget decisions should not be made by drawing an arbitrary line
- Does investment generate a return/profit to the Nation?
- ID savings for projects zeroed out
- What are trends: traffic, investments, etc.
- Authorized versus Current use
- Value to the Nation/what is lost: industry, jobs, capability, alt mode cost, relieve congestion for alt modes
- Need to Capture potential demand, future need
- Traffic Spiral: traffic leaves if waterway unreliable
- Social Costs – European metrics

# Nav Performance Measures

Summary of High Use Inland Waterways Group Findings:

- Effect of wage creep on O&M – diminish actual maint $
- Better measuring benefits
- Need long(er)-term driven budgets
- Not enough dollars for too many missions/projects
- Corps reputation/public image
- Laws, technology, regulations
- Improve data collection/dissemination, will lead to increased funding
- Yardsticks
- Can’t move any other way
- Opportunity Cost for not using waterway(s)
- Project prioritization mechanism
- Watershed, Systemic analysis

# Nav Performance Measures

Continued summary of High Use Inland Waterways Group Findings:

- Missed/non-traditional benefits
- Analytical framework – discrete or comprehensive?
- Multi-purpose preference
- Value to the Nation, regardless of funding level
- Increment-by-Increment return on investment
- Long-term program goals
- IWTF funding
- Match growth & investment
- Manage Risk
- RB/RC Ratio – economic, environmental (mitigation), recognize water-compelled rates
- Percent reduction in IWTF balance
- Schedule Adherence Ratio = Original Time/Current Time

# Nav Performance Measures

Continued summary of High Use Inland Waterways Group Findings:

- Metric – RB/RC Ratio
- Metric – Percent Reduction in IWTF balance
- Metric – Cost Delivery Ration = Original Estimated Cost/Current Estimated Cost
- Metric – Schedule Adherence Ratio = Original Time/Current Time
- Metric – Unscheduled Downtime/Unavailability = Actual Available Days/Scheduled Available Days

# Nav Performance Measures

Summary of Low Use/Coastal/Shallow Draft Group Findings:

- Jobs impacted
- Value of the Waterway
- Commercial Value
- Recreation Value
- Property value – Fed tax dollars
- Systemic impacts – waterway impacts harbor, tributaries, etc.
- Intra/interstate mode of transportation
- Safety – Harbor of Refuge
- Role in Homeland Security
- Port linkages/facilities, related support
- Desirable alternate mode to highways: traffic congestion, Short Sea concept, environmental, accident reduction, pollution prevention
- Quality of Life/Value to the Nation

# Nav Performance Measures

Continued summary of Low Use/Coastal/Shallow Draft Group Findings:

- Lower Transportation costs
- Multi-purpose effects: hydropower, water supply, flood control
- Energy – inexpensive means to transport coal, gas, fuel oil
- Regional waterways system: jobs, property value, security, safety, port linkages, viable alt transpo mode
- Return on investment
- B/C and RB/RC Ratios

# Nav Performance Measures

Summary of Deep Draft Coastal Group Findings:

- B/C Ratio
- Tonnage
- Value of cargo
- Strategic value – economic & national defense
- Value: reliably reported, passenger vessels, multi-port, employment
- Total return
- Partial funding
- Unit cost per ton throughput
- Economic Impacts: direct, indirect, induced
- Tax generation: Federal & non-Fed (local & state)
- Jobs – primary, secondary, tertiary
- Regional economic impacts

# Nav Performance Measures

Continued summary of Deep Draft Coastal Group Findings:

- Capital Investment – Fed investment & return
- Customs revenue – HMTF contributions
- Air Quality
- Channel versus Port centric
- Regional equity/basin equity?
- Watershed versus project approach
- Align with environmental approach
- Realize landside benefits