

Welcome to the Port of Pittsburgh



The Inland Waterway System

334 Mileage Between Cities
3 Number of Locks



What is the Port of Pittsburgh Commission?

Mission

- **Promote:** The commercial use and development of the inland waterway transportation system and
- **Integrate:** That system into the economic, environmental, recreational and intermodal future of southwestern PA.

What we do

- **Economic Development**
 - Transportation Assistance
 - River-Site Location Assistance
 - PPC Loans, bonds, grants
 - Grant management for 3rd Parties
 - Port Security
 - Marine Diesel Repowers
- **Technology Development**
- **Public Education - Lock and Dam Needs**

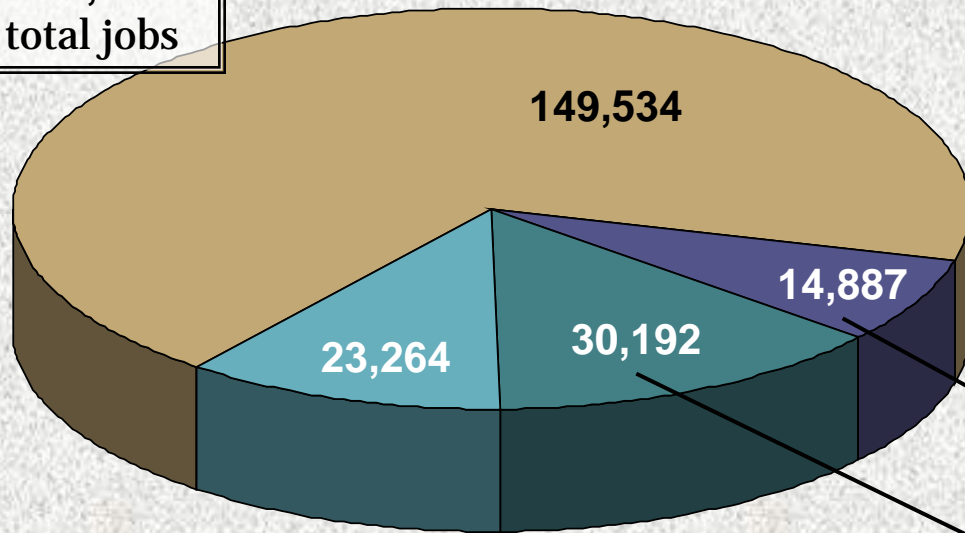
Do not own or operate facilities

PPC Leveraged Federal Funding

	Lock and Dam Modernization	AMSC Port Security Grants for Region	Diesel Emission Reduction Act (DERA)	Congestion Mitigation Air Quality (CMAQ)	Total Leveraged for Region	PSG specifically pending to PPC
2007	\$79.8 M	\$1,236,215			\$81,036,215	
2008	\$42.3 M	\$2,355,790			\$44,655,790	
2009 (incl. stimulus)	\$138.7 M	\$2,522,374 (pending)			\$141,222,374	\$1.3 M
2010	\$29.8 M	\$1,240,056 (pending)	\$1,150,000		\$32,190,056	
2011	\$13.5 M (Pres. budget)	\$950,000 (pending)			\$14,450,000	\$419,415
2012	\$4.0 M (Pres. budget)			\$3,000,000 (in TIP)	\$7,000,000	
2013						
2014				\$4,400,000 (in TIP)	\$4,400,000	
TOTAL	\$308,100,000	\$8,304,435	\$1,150,000	\$7,400,000	\$324,954,435	\$1,719,415

ECONOMIC IMPACTS OF THE PORT OF PITTSBURGH

217,877
total jobs



- **45,000 Direct jobs**
- **218,000 Total jobs**
- **\$10.3B Local wages**
- **\$1.0B State and Local taxes**
- **\$2.2B Federal taxes**

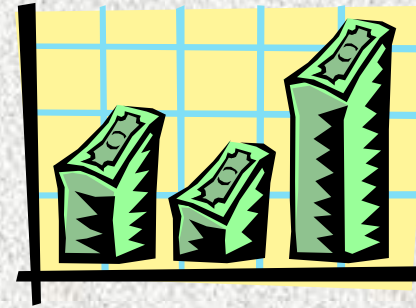
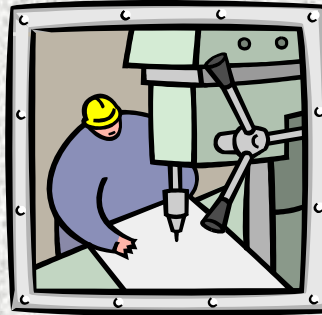
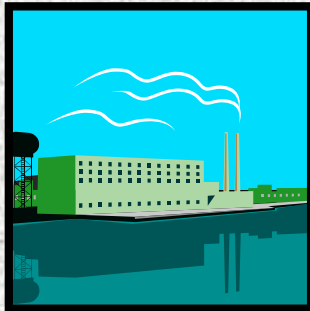
45,079
total direct
jobs

- Direct jobs – transportation services
- Direct jobs – shippers/consignees
- Indirect jobs – generated from purchases by firms
- Induced jobs – generated from purchases by direct employees

Raw materials are brought in by barge . . .



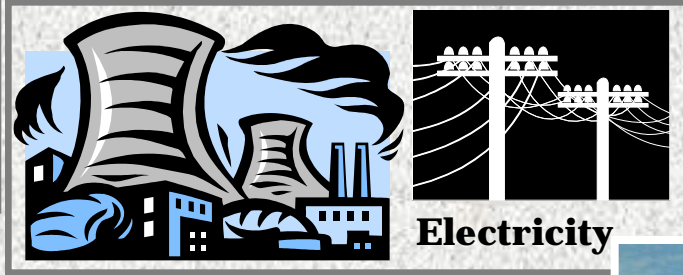
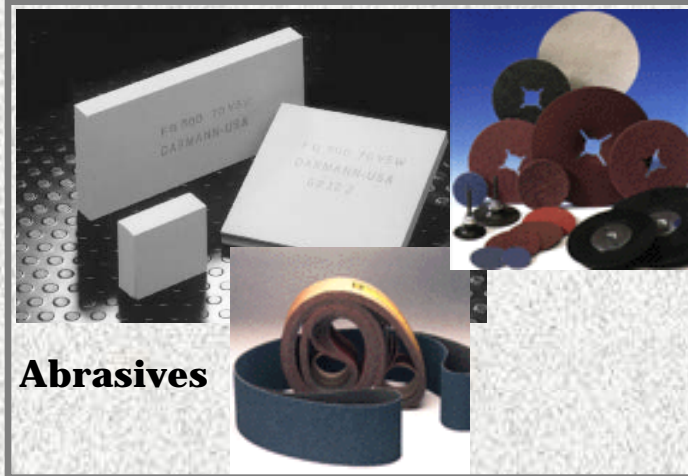
Through manufacturing, value is added . . .



Finished products are shipped out by truck or rail



Primary raw materials are used by industry in SW PA to manufacture a wide range of goods, products and structures



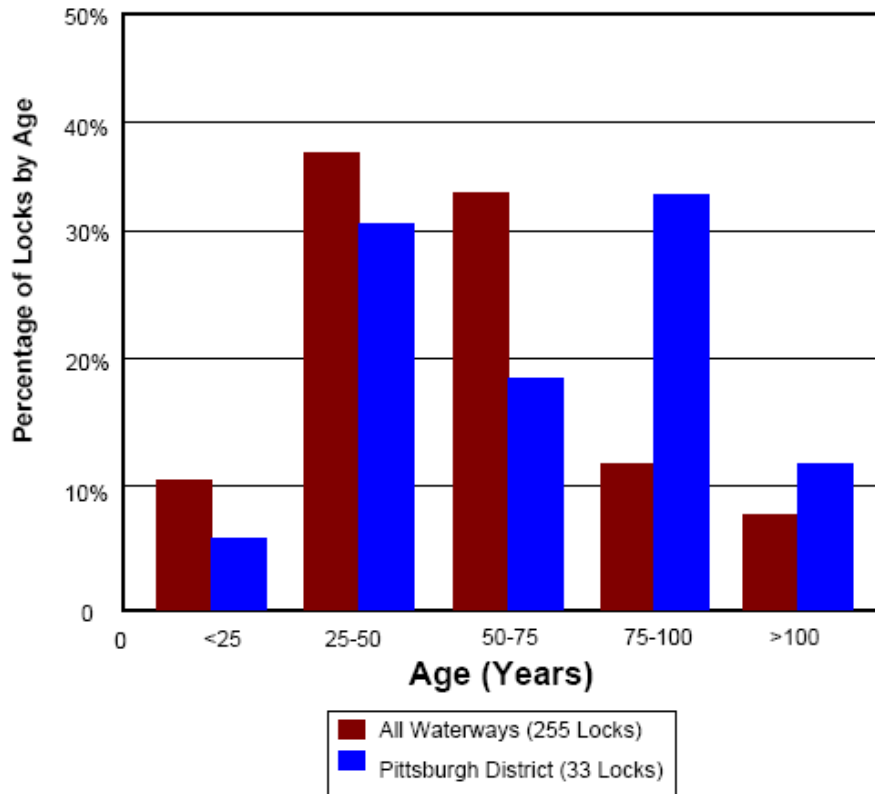
Skyscrapers



But, if it ain't a catastrophe

Is it really a problem?

Age of Navigation Infrastructure



Aging Infrastructure

About 66% of Pittsburgh District's navigation structures have exceeded their economic design life of 50 years and are in need of repair and rehabilitation. As these projects continue to age and deteriorate, failures are becoming more common and impacts to the economy of the region and the nation are increasing. Efficient funding for rehabilitation of these projects is critical so that they can continue to function as the most efficient, cost effective, and environmentally friendly mode of transportation available.

Risk Assessment

The Corps uses a risk-informed assessment to characterize dam safety risk. Projects may be classified as having major problems with a very high risk, significant problems with a moderate risk, or minor problems with a low risk. To date, the Corps has identified 13 projects with major dam safety problems that require urgent action to repair. Three of these projects (about 25%) are located in the Pittsburgh District's inventory of navigation structures.

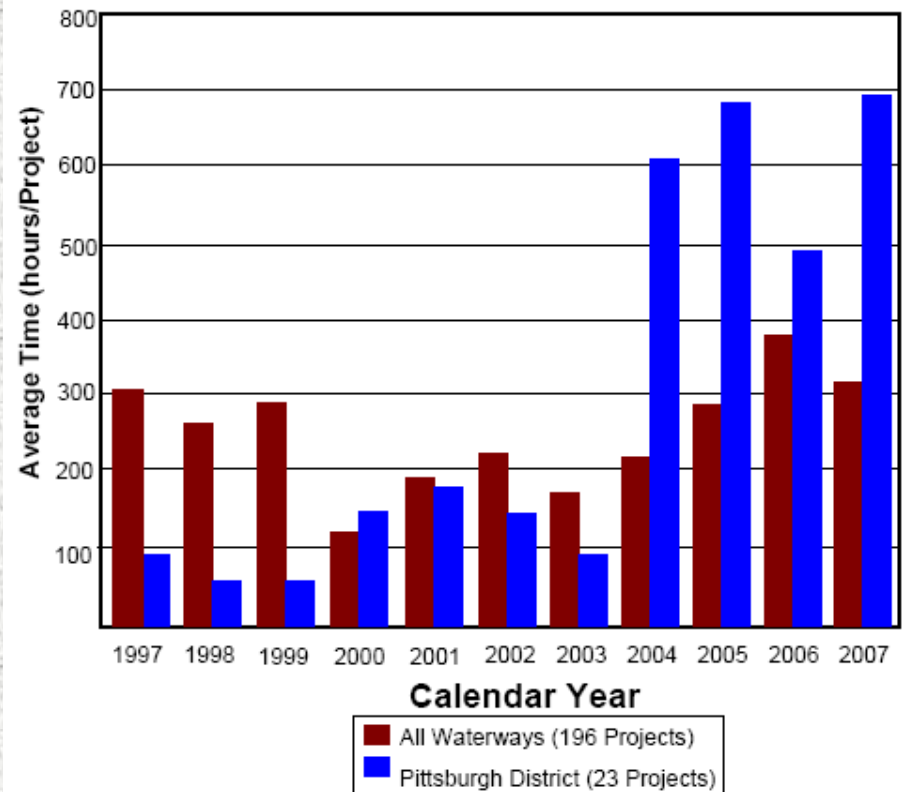
Considering the number, age, and condition of all of the locks in the country (196 Locks with half over 50 years old), it is no surprise that the Corps has an increasing demand to perform major maintenance and repairs on these projects. More maintenance and repair requires an increased in funding over traditional levels.

This is particularly true in the Pittsburgh District with its 23 Locks (approx 10% of the locks in the country). Over the last five years we have witnessed a trend that shows that our unscheduled lock closures, (many caused by breakdowns), are not only increasing but are surpassing all other locks in the country. The reliability of Pittsburgh District's 23 locks is drastically decreasing. Unscheduled loss of service impacts everyone in the long run.

With an increasing maintenance and repair workload and the same amount of maintenance funding, we move toward "breakdown maintenance" operating mode.

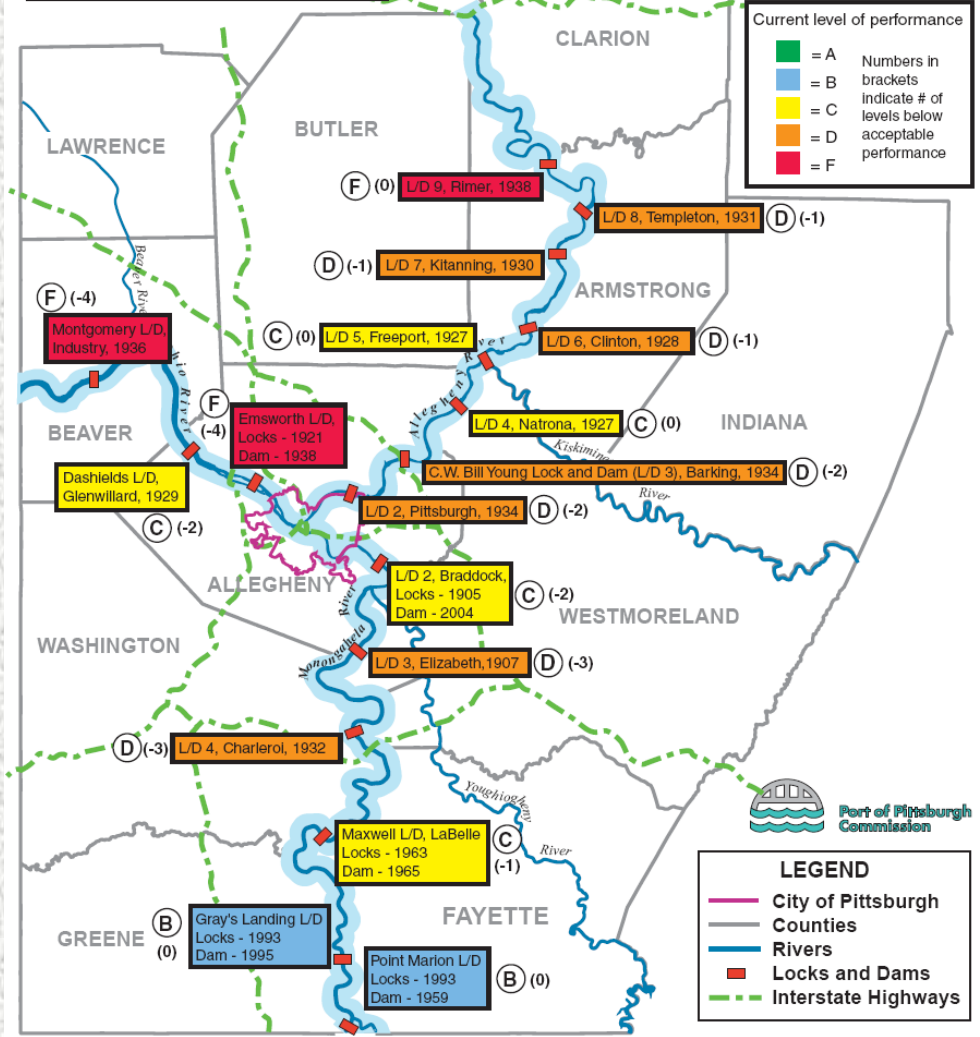
The Corps has initiated an asset management program to focus the available funding to the most effected areas by identifying the projects posing the greatest needs, greatest risks, and greatest impacts.

Unscheduled Lock Closures

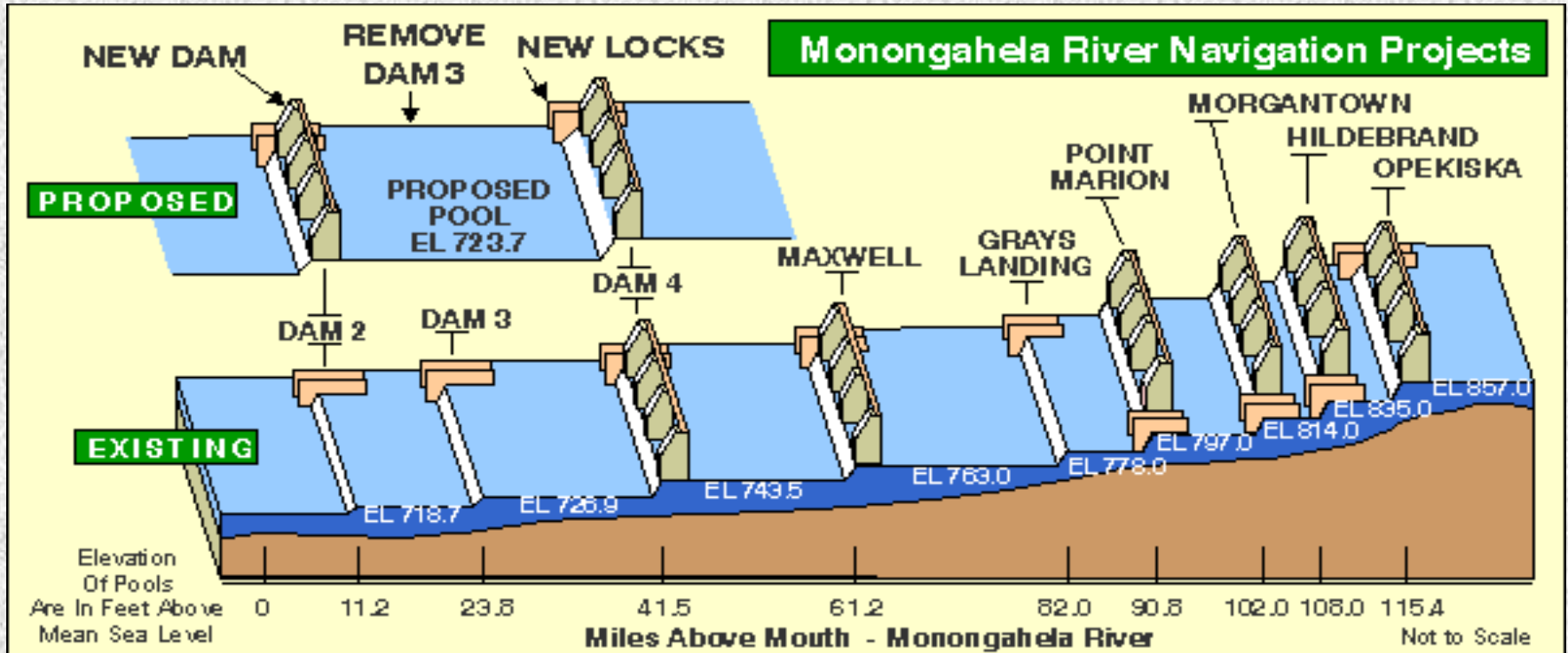




The Port of Pittsburgh's Locks and Dams



1994 Lower Mon Project = \$595M-\$750M + 10 years to complete



2010 Lower Mon Project = \$1.2-\$1.7B + 30 years to complete

Lower Monongahela River Project

- Condition-driven project
- Authorized by WRDA 1992, \$750M, Original completion 2004
- 2-for-3 Replacement, L/D 2, 3, and 4
 - Braddock L/D – New gated dam replaces 100-year-old fixed crest dam
 - L/D 3 – to be removed
 - Charleroi (L/D 4) – New twin 84x720 locks replacing 75-year-old 56' chambers
- Pool changes
 - Municipal relocations
 - Port Perry Bridge
 - Dredging
- Project benefits

Lower Mon Project Cost and Funding

- As authorized \$750M fully funded through 2004
- Current estimate \$1.7B fully funded
 - Unapproved current estimate
 - Includes risk analysis
- 50/50 Cost share with Inland Waterways Trust Fund
- Expenditures through FY 2011 = \$502M
- Allocations through FY 2011 = \$531M

Recent Appropriations/Allocations

Fiscal Year	Appropriation	Allocation	ARRA	Capability
FY 2008	\$69M	\$40M	\$0	\$70M
FY 2009	\$16M	\$1.5M	\$55.2M	\$41M
FY 2010	\$6M	\$0	\$8.7M	\$92M
FY 2011	\$0 (work plan)	\$8M	\$1.2M	\$112M
FY 2012	\$1M (pres bud.)	TBD	TBD	\$121M

Major features of Lower Mon work to be completed

Major Feature	Estimated Cost (April 2011)
Charleroi River Chamber Completion	\$302 Million
Pool 3 Dredging	\$102 Million
L/D 3 Removal	\$11 Million
Municipal Relocations	\$7 Million
Port Perry Bridge Relocation	\$50 Million
Charleroi Land Chamber	\$385 Million
Total	\$857 Million

Built on wood pilings more than a century ago, Lock and Dam 3 on the Mon River has doubled its service life, though it has taken millions of dollars to keep it going.



Water pours from the 100+ year-old lock wall at the Mon River Lock and Dam 3 at Elizabeth, PA during a Maintenance pump out of the auxiliary chamber. The Navigation facility is the oldest in the district's inventory of 23 locks





The dewatered main chamber of Monongahela River Lock and Dam 3 at Elizabeth is heavily braced due to its questionable stability. The district has spent more than \$7.3 million since 2006 to maintain the locks originally slated for removal in 2004.

Pittsburgh District maintenance workers pump out the auxiliary lock chamber ahead of scheduled repairs to the aging, pre-World War 1 facility. The Corps planned to remove the structure in 2004.

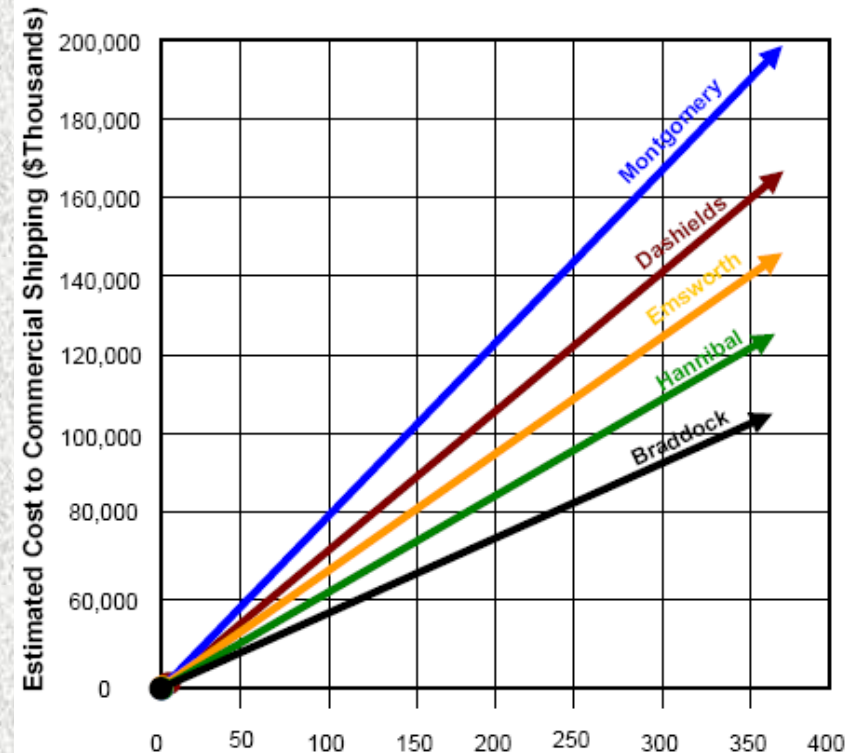


It has not been well maintained and funding is not available to remove it for years to come.

Unscheduled Lock Closure Days

1. Unreliable system requires development of contingency plans, including construction of access roads and rail spurs that would allow transportation by other modes if necessary.
2. At best, unscheduled closures results in delays, use of alternative modes, increased production from alternative plants and/or mines.
3. At worst, an unreliable or closed systems results in a deterioration of the market position of area businesses to the point that some may close.
4. Many of the businesses are major producers and employers in the area:
 - 4.1 USS Mon Valley works - Edgar Thompson, Clairton, Irvin (Clairton is largest coke plant in US)
 - 4.2 Consolidated coal company - Bailey mine, Enslow Fork Mine, Alicia transfer complex (mines are largest underground mines in US)
 - 4.3 Other mining companies
 - 4.4 Electric generating plants

Impact of Catastrophic Failure and Lock Closure



Emsworth Dams Project Costs/Funding

- IWTF Cost Shared
- Total Cost = \$160M; 2014 Project Complete
- \$148M recd thru FY 11
 - \$65M CG; \$33M ARRA; \$50M IWTF
- Remaining \$12M to be 100% IWTF
- \$1.5M required in FY 12
- Final Contract award - 1st QTR FY12

Back Channel Dam

Main Channel Dam





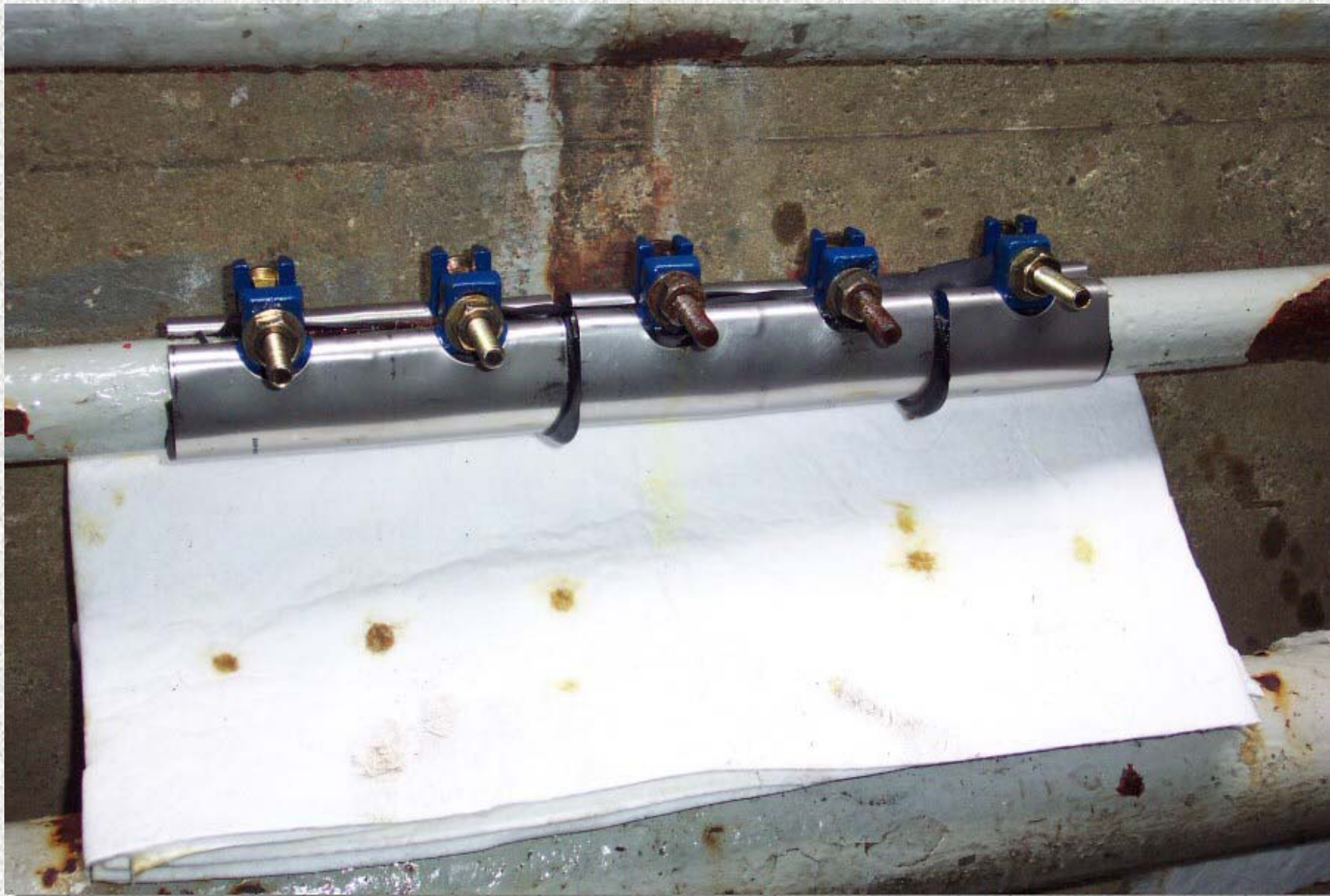
Corroded structural steel members highlights concerns that the dam gates at Montgomery Lock and Dam would not survive a barge strike or heavy ice loads.



The district has spent \$3.5 million on temporary repairs to keep the Montgomery dam gates from failing.

The Corps reported warned that the deteriorated condition of the riveted connections at Montgomery could result in a “sunny-day failure”.







07/02/2010





Corps: Reduced O & M Budget

Pittsburgh District Repair Fleet –
Declining Major Maintenance Funding
for Mon/Ally/Ohio Navigation Systems

FY09 – FY12 (38\$ reduction)


~~“More with Less”~~

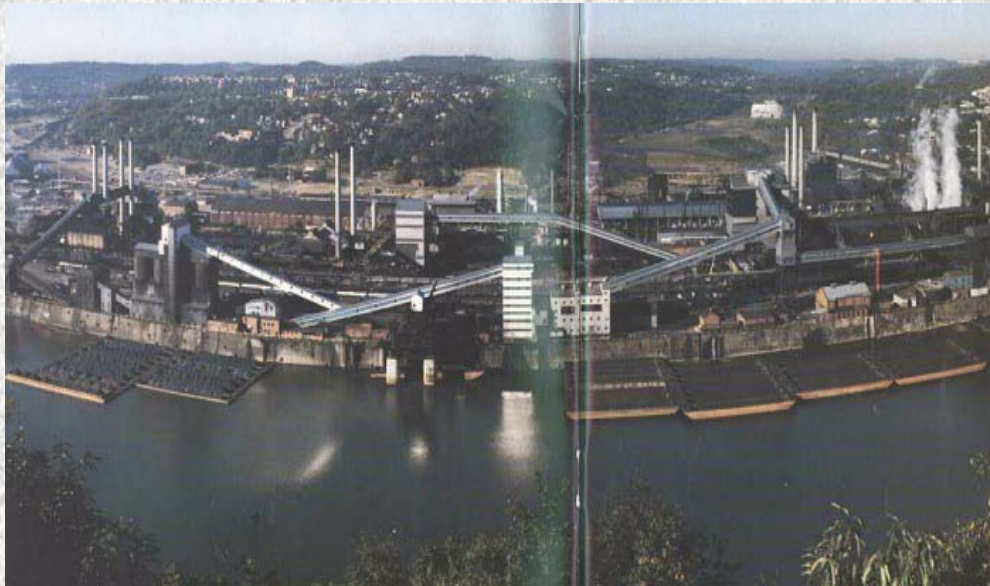


“Less with Less”

Corps: Reduced Budget Actions

Reduce repair fleet/crew operations:

- 3-shift  2-shift operation
- Monday through Friday
- No weekend work – limited overtime
- Reduce labor force through attrition



If USX Clairton Coke Works were unable to take coal delivery by barge, it would require 75 trucks, 24 hours per day, 7 days per week to deliver the same quantity of raw material.



OPEN FOR WATERFRONT BUSINESS



Port of Pittsburgh
Commission

**POINT
OF
ARRIVAL**

**PORT
OF
MANUFACTURE**

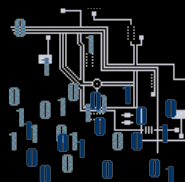
*Voyage: ▶
sand to skyscrapers.*



- ▶ Marine contractors dredge high-quality sand and gravel from the bottom of the Allegheny and barge it to river terminals.
- ▶ At terminals, manufacturers combine sand and gravel with limestone to make concrete and cement, and with petroleum to make asphalt.
- ▶ Concrete and cement make roads, dams, bridges, and buildings; the infrastructure of manufacturing, banking, health care, and education.
- ▶ New locks and dams on the Monongahela will position it among the most modern waterways in the world, securing a vital role for water transport in the region's 21st-century growth.

SmartLock Architecture

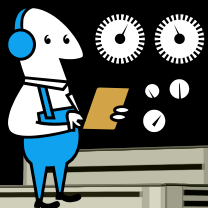
- well-tested technologies
- multiple uses
- convergence



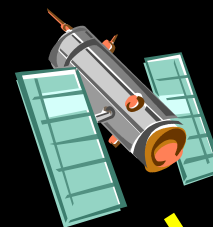
XML – Standard Data Protocol



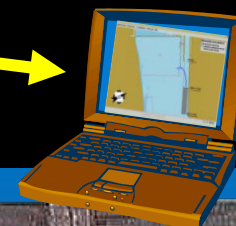
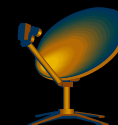
SSL – Integrity, Authenticity



WiFi – Multiple Uses



DGPS – Real-time position data



ENC – Navigation Uses

