

Planning Center of Expertise for Inland Navigation and Risk-Informed Economics Division (PCXIN-RED)

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28 July 2017

GICA Conference



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Topics

- History
- Background
- Mission/Purpose
- What we do



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Background

PCXIN-RED - History

- Two ORD Navigation Centers in FY 82
 - ▶ LRH - System Models/Data & LRP
 - ▶ LRL - Capacity/Environmental & LRN

- FY 92 - One Navigation Center in LRH
 - ▶ System Funding Plan Started

- FY 99 - LRD Navigation Planning Center
 - ▶ Great Lakes and the Ohio River Systems

- August 2003 - Planning Center of Expertise for Inland Navigation (PCXIN) included the Great Lakes (1 of 7 Planning Centers)

- September 2013 – PCXIN and Risk-Informed Economics Division named and realignment



Background PCXIN-RED Area of Concern

Inland Waterways

- **5 Corps MSCs** with Inland Navigation projects
- 12,000 miles; 9' – 14' draft
- 240 Lock Chambers
- 630 million tons annually; ~50% coal & petroleum
- Includes Great Lakes

U.S. Inland Waterway System





PCXIN-RED Mission/Purpose

The primary mission of the PCXIN-RED is to improve the quality and timeliness of Corps inland navigation planning studies and products

The purpose is to develop, maintain and apply the best and most appropriate national and regional expertise and science and engineering technology to the planning of inland navigation projects across the nation.



What the PCXIN Does

**Navigation
Economics**

Data Management

**Mapping,
Modeling,
Consequences**

**Dam Safety Policy
Advisor**

**Review
Management
Organization**

Special Studies



Navigation Economics

- Inland Navigation Economic Analysis
 - ▶ Feasibility Studies
 - ▶ Major Rehabilitation Reports
 - ▶ Economic Updates
- NED Benefits
 - ▶ Transportation Rate Savings
 - ▶ Forecasts
 - ▶ Capacity
- Research and Development/Modeling



Data Management

- Waterborne Commerce Statistics Center - Partnering
 - ▶ Vessel Operator Reports (VOR) – Domestic – Ohio River Basin/Great Lakes
 - ▶ Dock and Vessel inventory
- Data Sets
 - ▶ WCSC Data
 - ▶ Lock Performance Monitoring Systems
 - ▶ Navigation Economic
- Outreach



<http://outreach.lrh.usace.army.mil/>



GIWW Tonnage (2015)

- 118.9 million tons
- 93% of which are:
 - ▶ Petroleum & Petroleum Products
 - ▶ Chemicals and Related Products
 - ▶ Crude Materials



GIWW 2015 Tonnage Heat Map



Modeling, Mapping & Consequences Center (MMC)

- Dam & Levee Safety Programs – director in Vicksburg; LRH-PX has one of three MMC branch chiefs (Modeling=Vicksburg, Mapping=Kansas City)
- Consequences Team estimates
 - ▶ Direct Property Damages
 - Inundation depth at the structures
 - Apply the appropriate depth-damage curves by structure type
 - ▶ Life Loss
 - Was population warned and mobilized?
 - Assign a fatality rate for remaining population based on inundation depth and structure type
 - ▶ Other Lost Benefits



Dam Safety Modification Mandatory Center of Expertise (DSMMCX)

- National center supporting all aspects of dam modification projects across USACE
- Economics Lead
 - ▶ Advice and guidance on interpretation of national economic policy
 - ▶ SME in Dam Safety Consequences and modeling
 - ▶ Support drafting of new national policy
 - ▶ Develops and advises on consequence assessment, both human safety and economic
 - ▶ Performs and coordinates ATR of DSM studies, focusing on Consequences
 - ▶ Develops and evaluates methodologies and technical processes for inclusion in Dam Safety Modification analyses
 - ▶ Develops and advises on appropriate consequence analyses as needed to apply to unique situations
 - ▶ Trains and mentors District and DSPC economists in consequence assessment



Review Management Organization

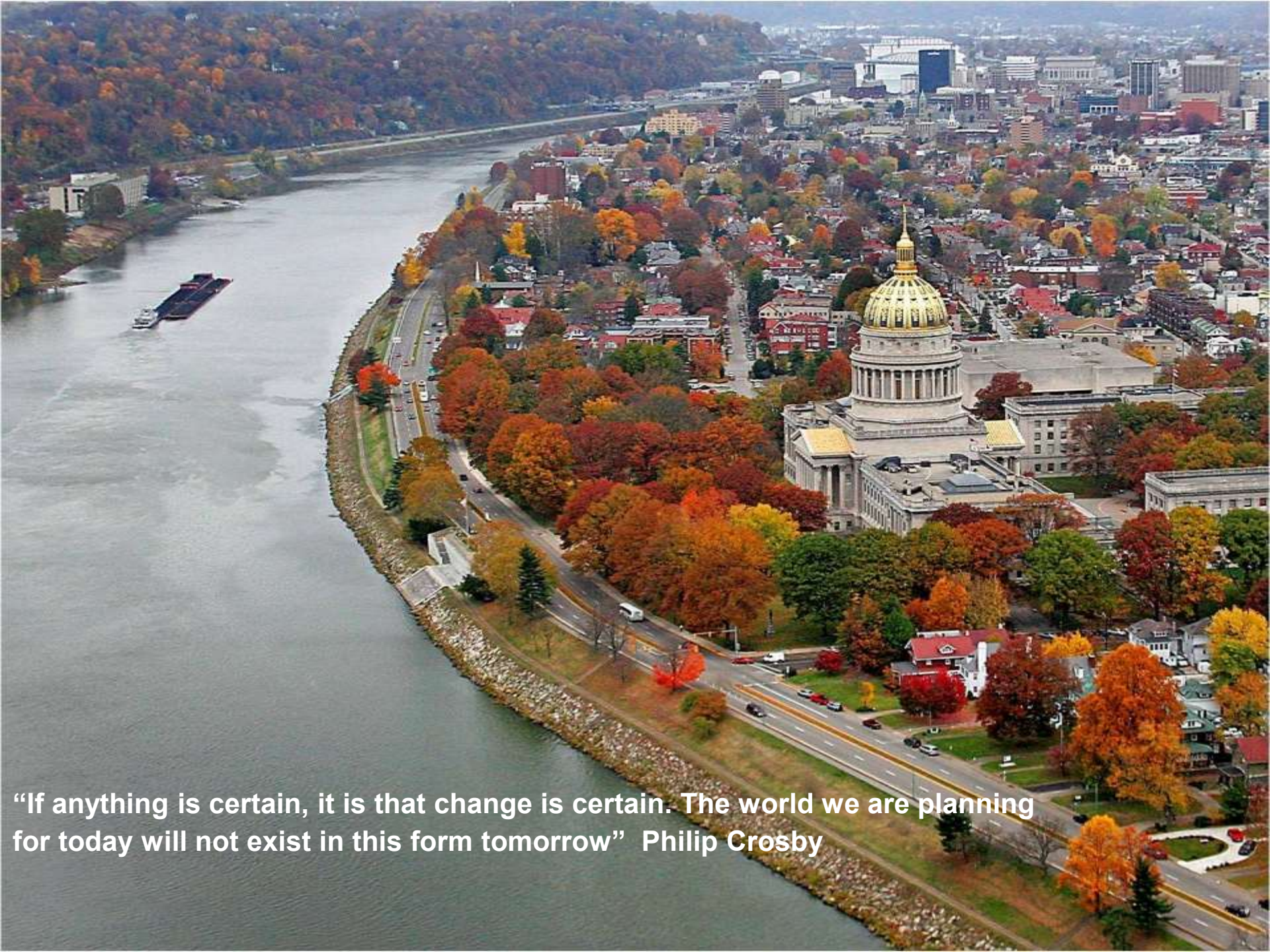
- Review Plans
- Agency Technical Review
- Model Certification
- Independent External Peer Review
- Planning and Policy Guidance



Special Studies

- Columbia River Treaty
- Madeira Feasibility Study
- Modernization of U.S. Coastal Ports and Inland Waterways – A Vision For Accommodating Post-Panamax Vessels (2012)
- Lock Closure Reports
 - ▶ Low-Water and Mississippi River Lock 27
 - ▶ Greenup Lock and Dam Closure
 - ▶ MacArthur Lock (Soo Locks)





“If anything is certain, it is that change is certain. The world we are planning for today will not exist in this form tomorrow” Philip Crosby



Thank You!

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