



Flood Control Operations Coordination and Communication

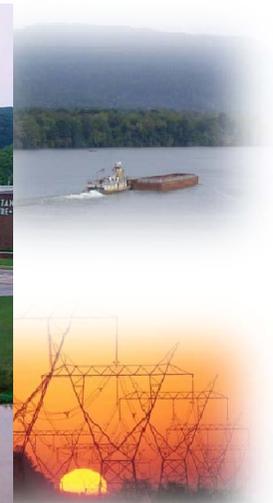
Susan Jacks

River Operations and Renewables

TVA River System Operating Objectives

During floods, other operating objectives become secondary and may be significantly impacted.

- **Flood control**
- Navigation
- Power production
- Recreation
- Water supply
- Water quality
- Fisheries



TVA Relationships Determine Results

- ◆ External Coordination
- ◆ Integrated Systems
- ◆ Past Events



TVA External Coordination and Communication

- ◆ **National Weather Service**

- Tennessee
- Georgia
- Kentucky
- Alabama
- Louisiana

- ◆ **U.S. Army Corps of Engineers**

- Water Management Nashville
- Water Management Cincinnati

- ◆ **U.S. Fish and Wildlife Service**

- ◆ **State Emergency Management Agencies**

- Tennessee
- Alabama
- North Carolina
- Georgia
- Kentucky

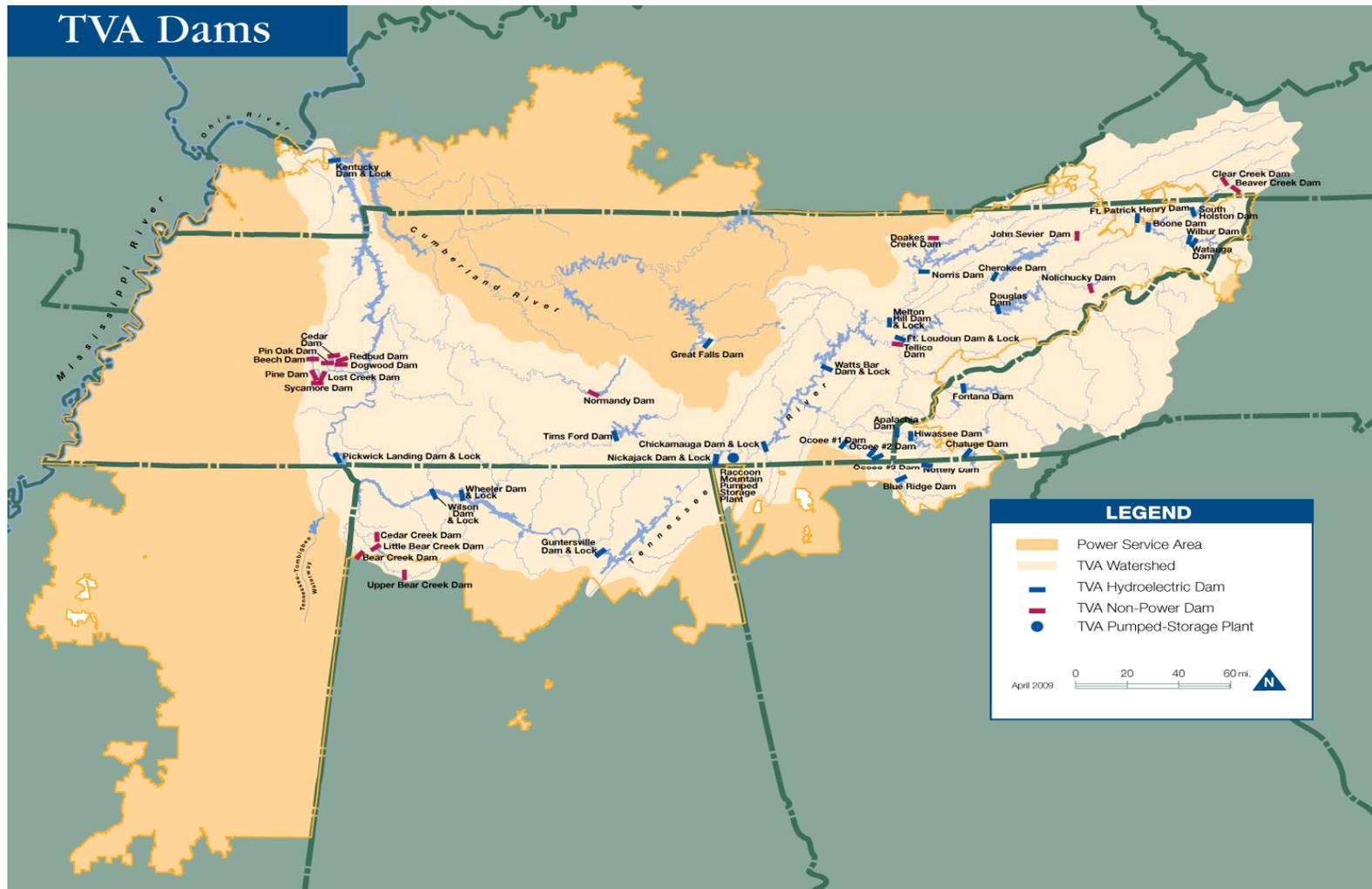
- ◆ **Local Emergency Management Agencies and Local Municipalities**

- ◆ **Navigation Interests**

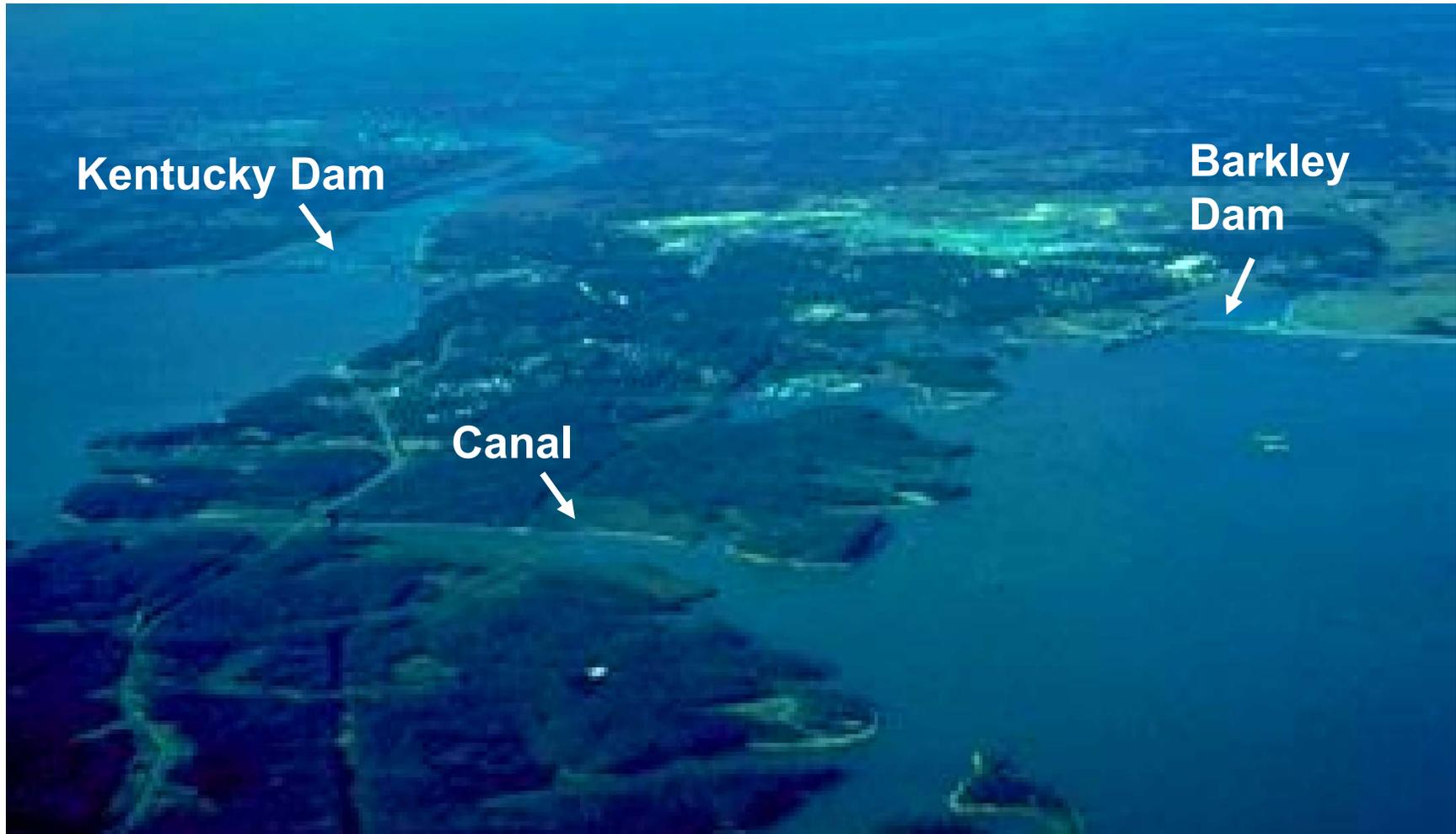
- ◆ **Private and Public Industries**



TVA Integrated River Management

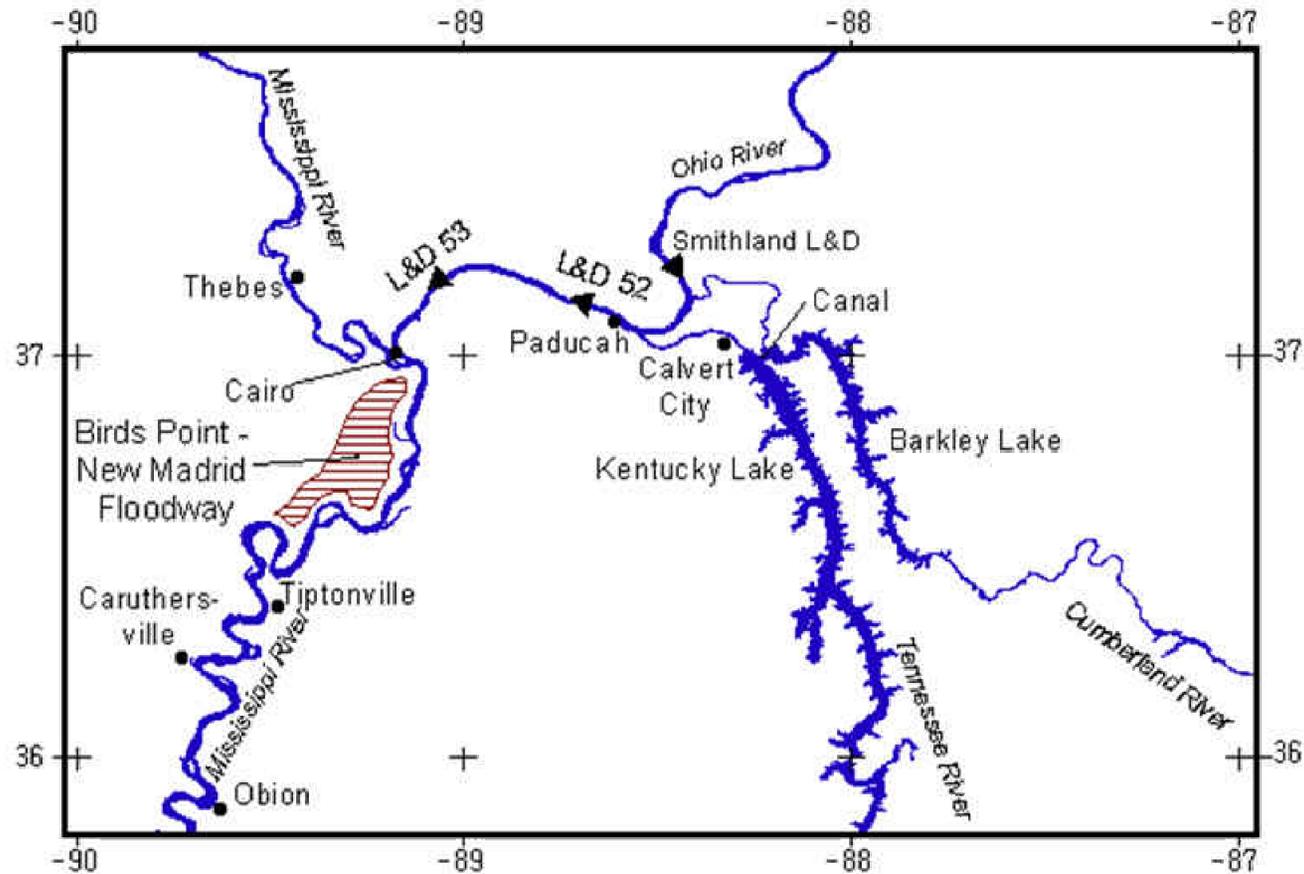


TVA Linked with the U.S. Army Corps of Engineers



TVA Kentucky-Barkley & Critical Downstream Locations

Cairo is the primary location of concern for the Kentucky-Barkley flood damage reduction operations, with Paducah also a location of concern.



TVA The Mississippi River Basin

The Tennessee River Watershed is an integral piece of the bigger Mississippi River Watershed



TVA Flood Control Act, December 1944

Section 7

“...in case of danger from floods on the Lower Ohio and Mississippi Rivers the Tennessee Valley Authority is directed to regulate the release of water from the Tennessee River into the Ohio River ... as may be issued by the Department of the Army.”

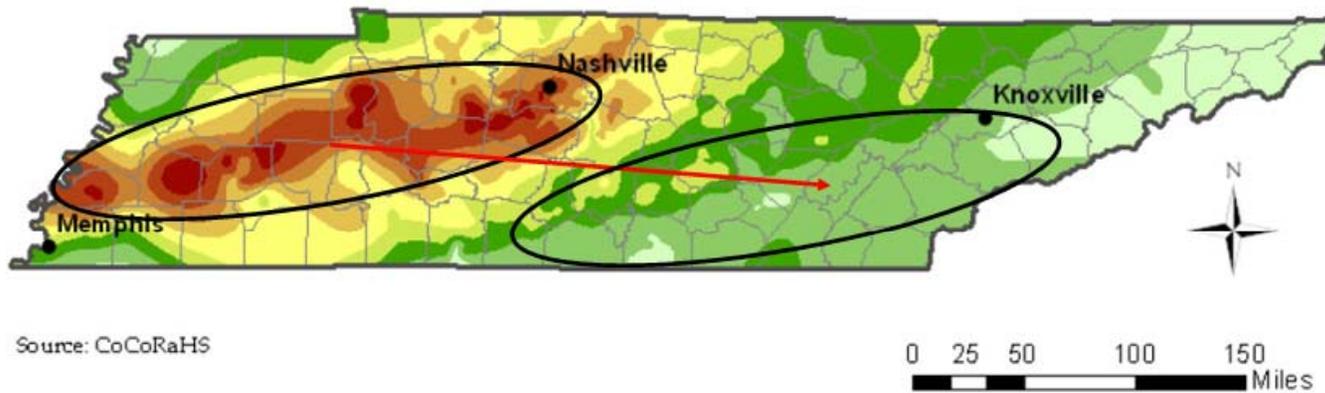


TVA May 2010: It Happened in Nashville



Photo Sources: Examiner; MSNBC

TVA What if it Happened in Chattanooga?



TVA Lessons Learned

- ◆ Enhance Communications
- ◆ Improve Forecasting Tools



TVA Spring 2011: Record Flooding on the Ohio River



Photo Sources: The Columbia Missourian; WJBC; MSNBC

TVA Spring 2011: Record Flood Stages

- ◆ **U.S. Army Corps of Engineers, Great Lakes and Ohio River Division Increased coordination March–May**
 - Kentucky and Barkley storage usage
 - Kentucky and Barkley releases
- ◆ **Activated Bird’s Point-New Madrid Floodway**
 - Past activation 1937
- ◆ **Cairo, Illinois flood crest**
 - 61.72 feet on May 2
 - Previously 59.50 feet in 1937
- ◆ **Pool at Kentucky Dam**
 - Elevation 372.49 feet on May 4
 - Previously 369.99 feet in 1984



Photo Source: The Columbia Missourian

TVA Spring 2011: External Coordination

- ◆ **National Weather Service liaison**
- ◆ **Coordination calls**
 - Tennessee Emergency Management Agency
 - Towing industry
 - ❖ U.S. Coast Guard,
 - ❖ U.S. Army Corps of Engineers
- ◆ **Local emergency management agencies notifications**
 - Loudon, Hamilton, Hardin, and Decatur Counties in Tennessee
 - Florence, Alabama
 - Clifton, Tennessee
- ◆ **Issued high water level/flow notifications**
 - Eastman Chemical
 - Olin
 - Red Stone Arsenal
 - Packaging Corporation of America
 - Multiple Marinas
- ◆ **Farming Community** — coordinated/communicated releases and crest
- ◆ **U.S. Fish and Wildlife Service** — coordinated/communicated releases



TVA Relationships Determine Results

- ◆ **River Forecast Center Improvements**
- ◆ **Improved Communications**
 - U. S. Army Corps of Engineers
 - National Weather Service
 - State and Local Emergency Management Agencies
 - Navigation Interests
 - U. S. Fish and Wildlife Service
- ◆ **Hydrologic System Improvements**



Photo Source: Gault and Law, PLLC