

# **Water Resources Management**

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*March 4, 2010*



Discretionary programs and activities to improve water quality in the Valley

Environmental Policy:

- Protect and improve water quality and sufficiency
- Collaborate and coordinate with internal and external stakeholders
- Maintain an in-depth knowledge of changing conditions in the river system



# **IWA** Current Water Quality Programs

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1. Targeted Watershed Initiatives
2. Stream Monitoring
3. Growth Readiness
4. Shoreline Stabilization
5. Clean Marina Initiative



# **IVA** Targeted Watershed Initiatives

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Partners with communities to develop and implement protection and restoration initiatives

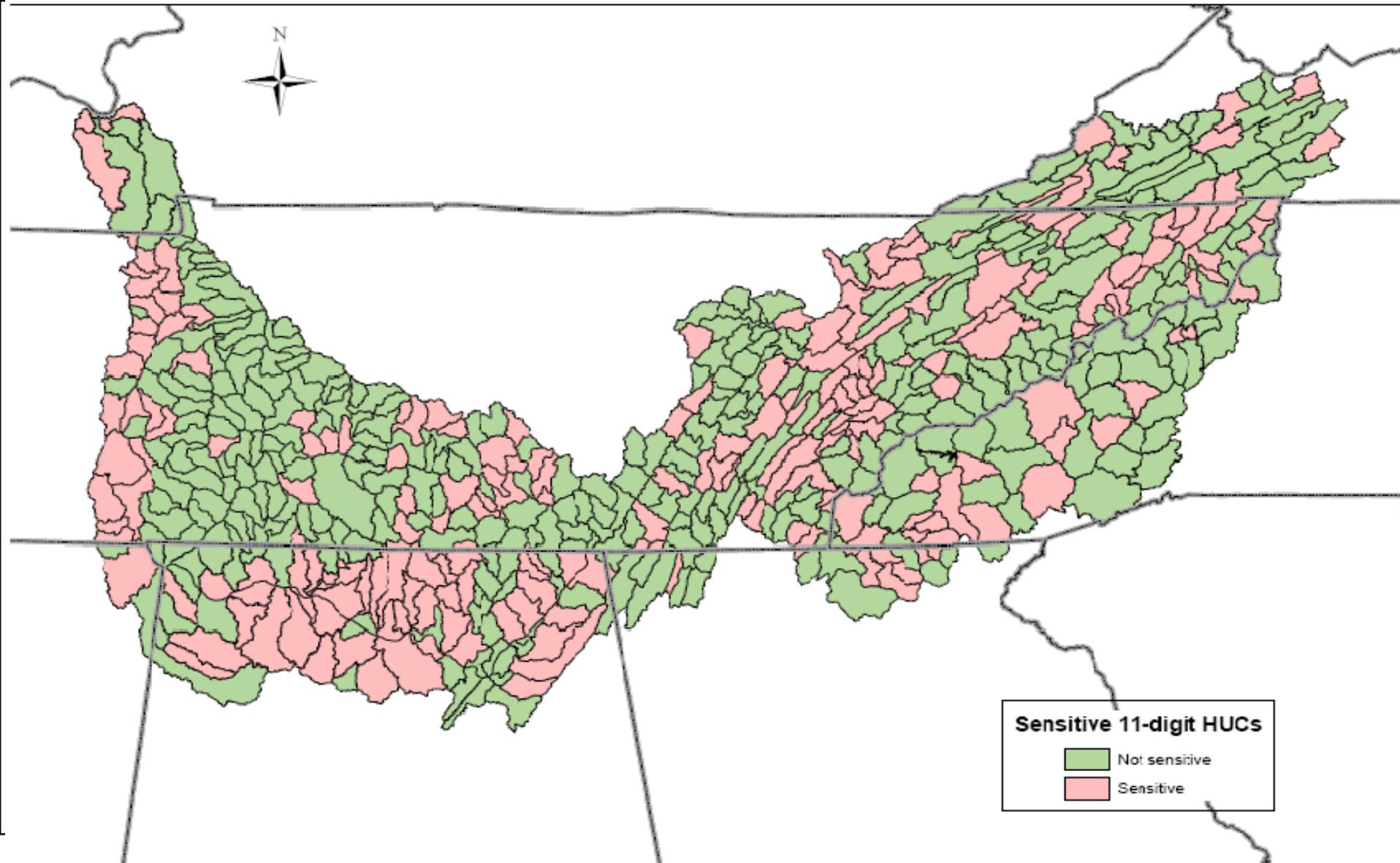
- Targets efforts
- Develops local, regional, and national partnerships
- Develops watershed restoration plans
- Secures funding
- Implement watershed restoration projects



# **TVA** FY10 Watershed Initiatives

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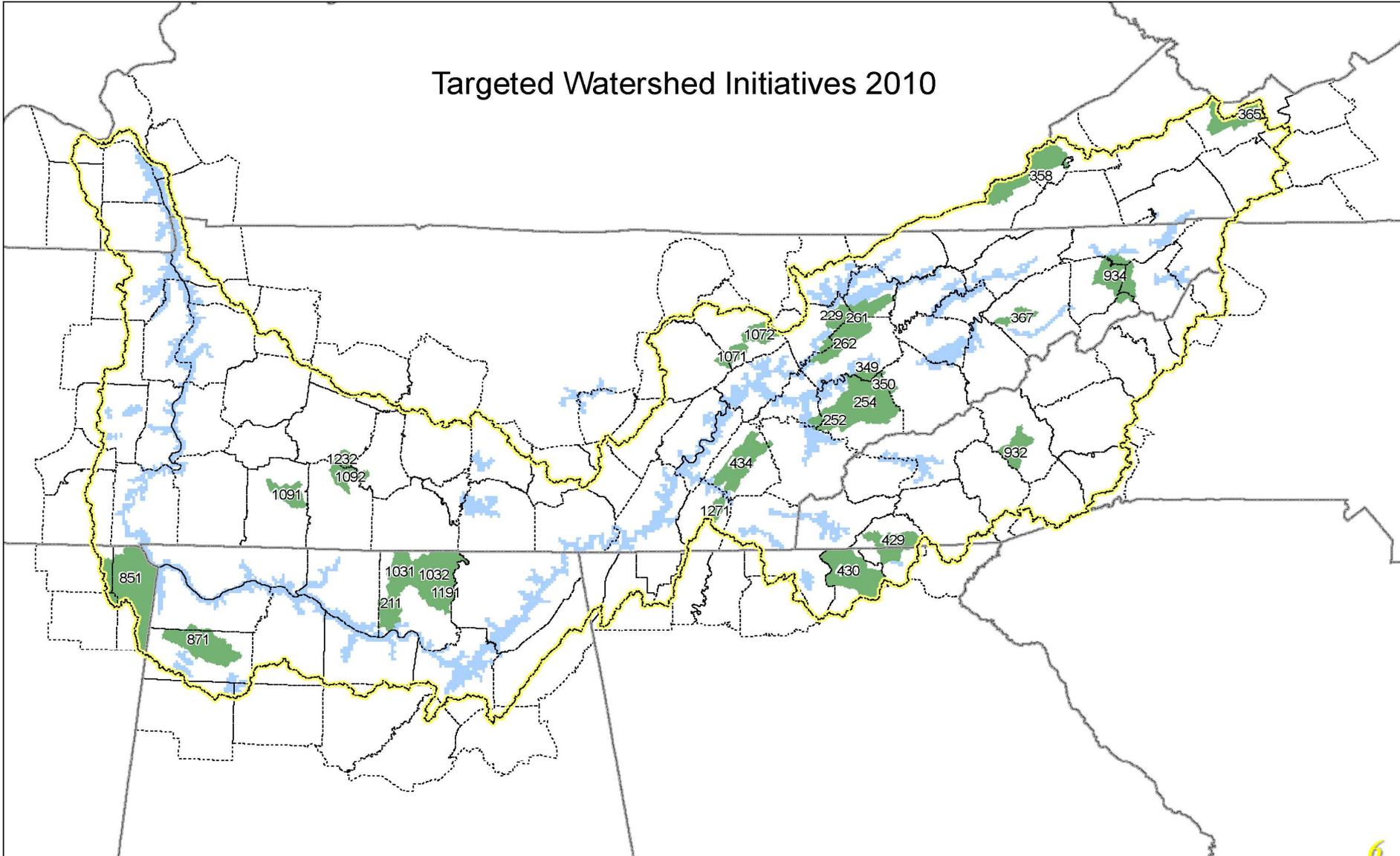


# TVA FY10 Watershed Initiatives

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Targeted Watershed Initiatives 2010





# Streams in “Good” or “Fair” Condition

<b>Year</b>	<b>Stream Performance</b>
2000	62.3%
2001	64.6%
2002	66.2%
2003	67.6%
2004	66.4%
2005	67.0%
2006	68.9%
2007	69.0%
2008	68.4%



# **TVA** Stream Monitoring

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Collect, store, and analyze data for the ecologic health of streams

## **Streams**

- ~550 sites
- 5 year cycle
- Biotic indicators (fish and aquatic insects)

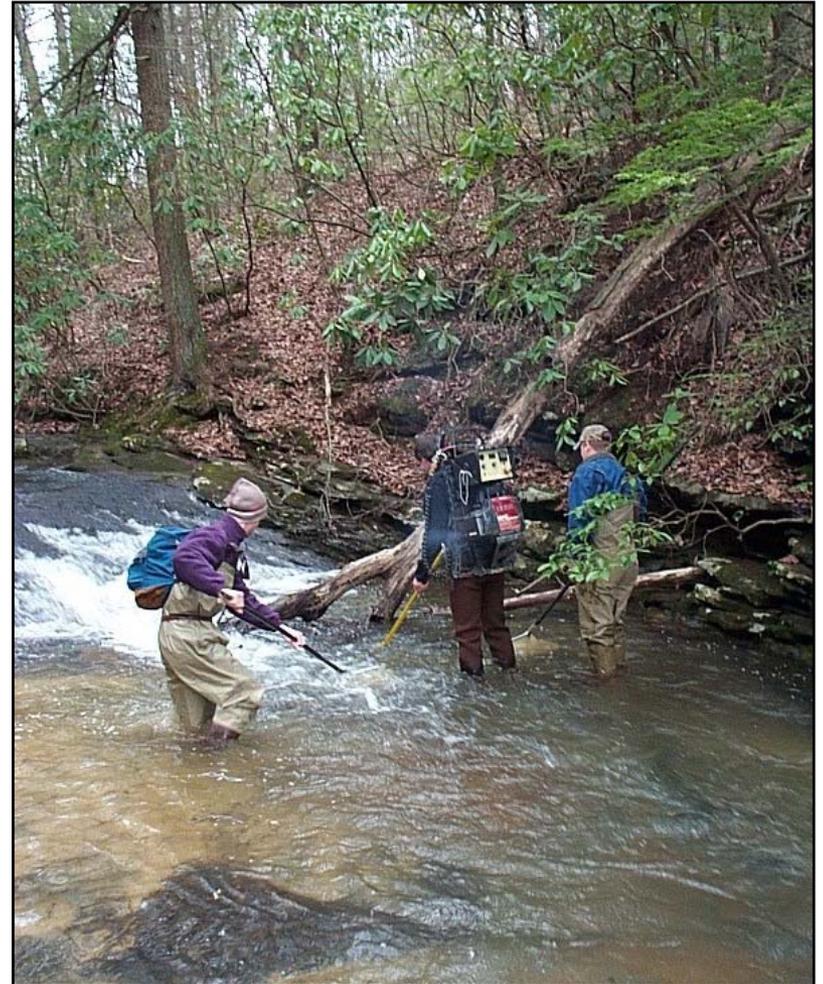


# **TVA** Stream Monitoring

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One of the most complete set of long-term monitoring data for this size river system in the U.S.



# TVA Growth Readiness

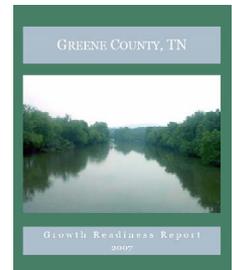
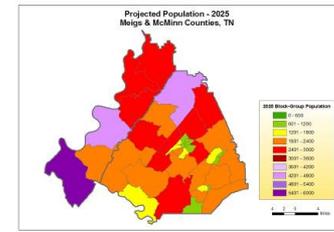
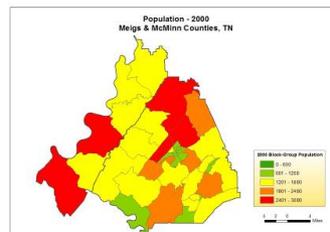
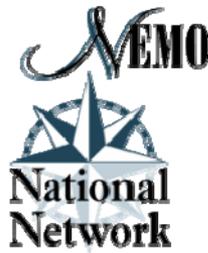
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Helps communities make informed decisions about managing growth and its impact on water resources

Provides training and technical assistance

- Targets local elected officials, opinion leaders and practitioners
- Provides evaluation tools, future projections, and local consensus building for change
- Demonstrates projects to build knowledge and capacity



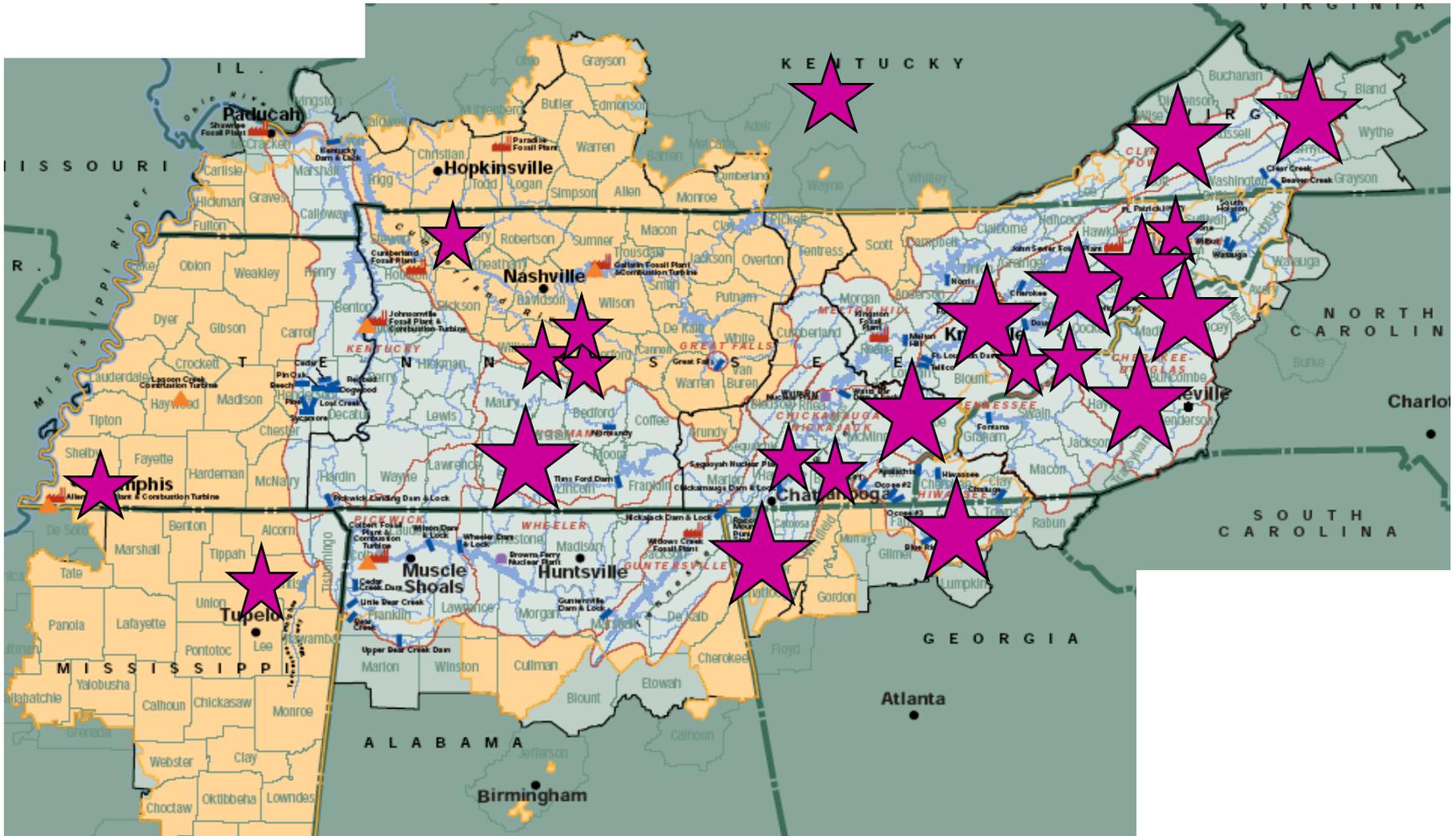


# Growth Readiness

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## Where We Have Worked

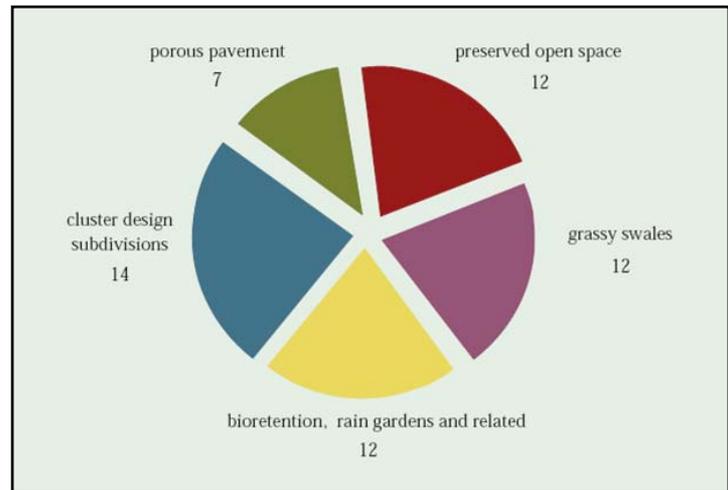


# TVA Growth Readiness

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- 230 communities reviewed their codes and ordinances
- 123 communities made changes *or* plan to change their codes and ordinances



**57 Projects**  
Reported by Communities

# **TVA** Shoreline Stabilization

Promotes the management and stewardship of some 11,000 miles of reservoir shoreline

Objectives:

- Control critical shoreline erosion
- Protect or improve water quality
- Protect significant cultural resources and improvements
- Enhance aquatic and wildlife habitat



# **TVA** Shoreline Stabilization

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Stabilization Techniques:

- Bioengineering
- Rock Riprap
- Vegetative cover

Stabilized 77 miles of shoreline since 1990's



# Clean Marina Initiative

Promotes environmentally responsible marina and boating practices.

Objectives:

- Reduce water pollution and shoreline erosion
- Encourage marina-sponsored boater education



# **TVA** Clean Marina Initiative

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## **Provide information about:**

- Sewage Management
- Fuel Management
- Solid Waste and Petroleum Recycling/Disposal
- Vessel Operation, Maintenance and Repair
- Marina Design and Maintenance
- Stormwater Management and Control
- Public Education

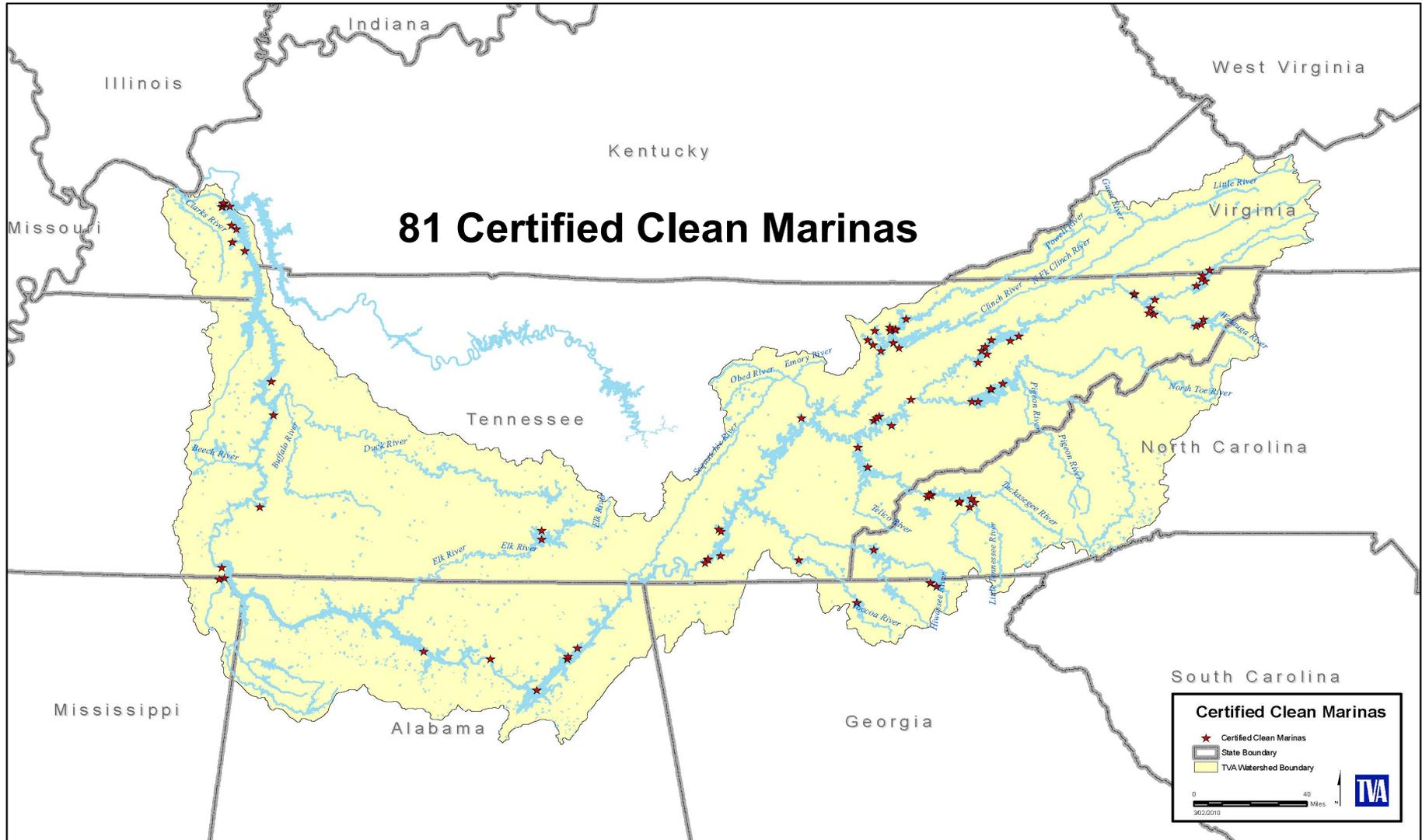




# Clean Marina Initiative

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# Additional Programs and Activities

- 1. Water Efficiency**
- 2. Water Resource Stewardship Campaigns**
- 3. Targeted Reservoir Initiatives**



# Water Efficiency

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Promotes using water wisely across the Valley

Host WaterSense workshops and outreach activities

- MS4 communities
- Irrigation professionals
- TVA



# WR Stewardship Campaigns

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Provide public outreach and technical support

- Improve riparian and stream side management
- Create Blueways (river trails)
- Improve water resource conditions on TVA lands
- Raise public awareness of stormwater management issues
- Provide technical and organizational support to existing watershed restoration projects



# **IWA** Targeted Reservoir Initiatives

- Focus would be on improving reservoir water quality
- Address point source pollution in reservoirs
- Utilize same process as Targeted Watershed Initiative Program
- Provide grant support for infrastructure and training



# **TVA** Implementation Activities

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- Agricultural Best Management Practices
- Bank Stabilization
- Critical Area Management
- Mine Lands Reclamation
- Organizational and Technical Support
- Grant Support



# **TVA** Implementation Activities

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- Recreation
- Reservoir Shoreline Management and Restoration
- Riparian Vegetation Planting
- Stream and Riparian Management and Restoration
- Solid Waste Litter Cleanup and Disposal



# **TVA** Implementation Activities

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- Urban Best Management Practices
- Water Quality Pollutant Trading
- Wetlands Restoration, Creation and Enhancement
- Public Outreach and Education



**Straight Pipe**

# Things to Consider

- Environmental Policy directs TVA to implement water quality protection and improvement activities
- Several initiatives and tools are currently being implemented
- Some are based on opportunity and some based on targeting
- Opportunity doesn't necessarily mean water quality improvement
- Targeted process has proven to be successful



# Things to Consider

- Do we continue to implement the existing programs with the current approaches?
- Should we increase or decrease level of activity?
- Should TVA's approach to Water Resource Management be targeted or opportunity driven?