

# Healthy Watersheds Initiative

U.S. EPA  
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Clinch River, VA

# How Does the Healthy Watersheds Initiative Differ From Other EPA Programs?

- ▶ A systems approach to maintenance of the chemical, physical and biological integrity of the nation's waters (CWA Section 101(a))
- ▶ State-scale implementation of strategic watershed protection priorities that leverages programs and resources across state agencies

# Key Elements of the HWI

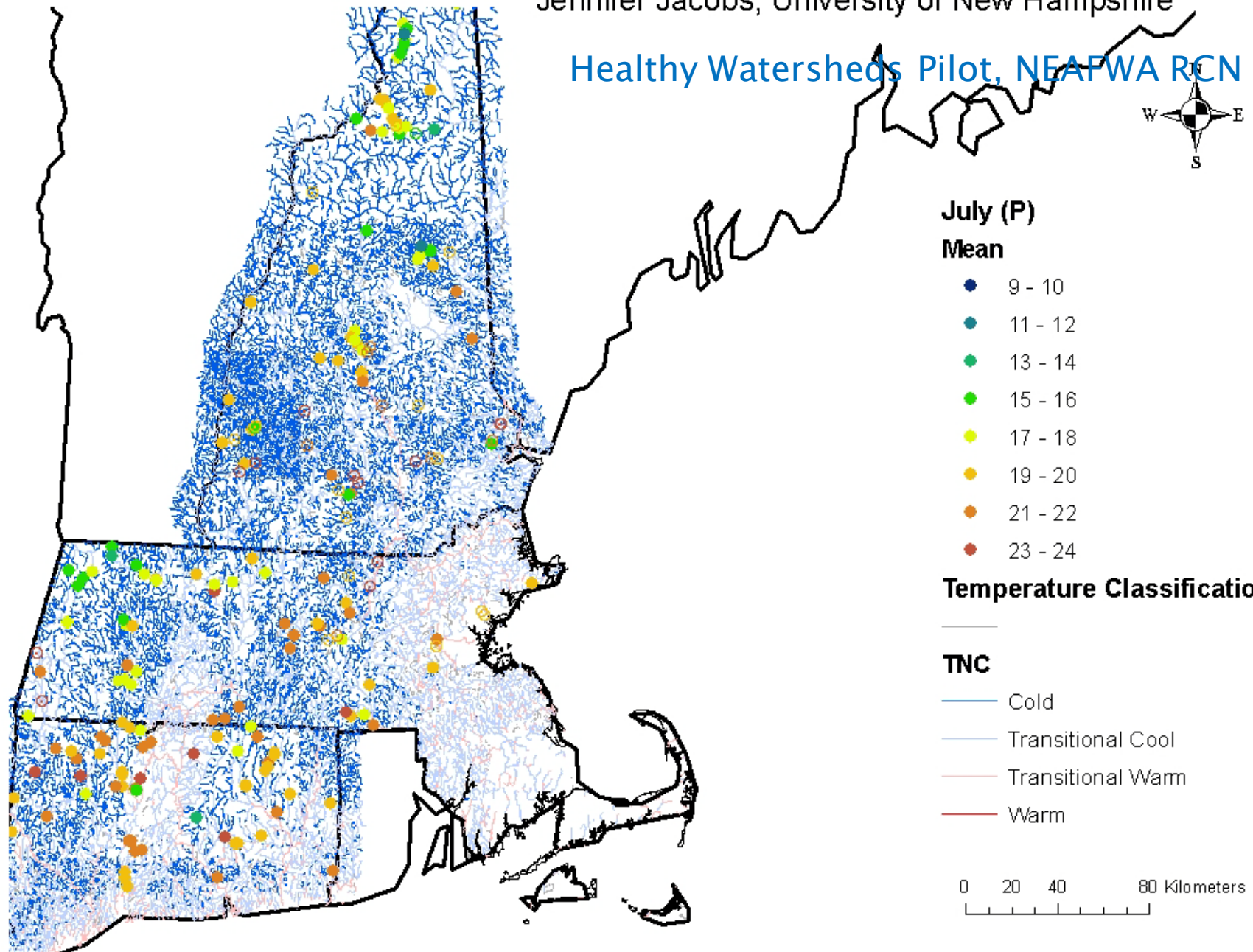
- ▶ Healthy watersheds are **identified** by States using scientifically-sound, integrated assessments
- ▶ Healthy watersheds are **listed, tracked, maintained and increased in number**
- ▶ Healthy watersheds are **protected** and, if applicable, **enhanced** using the best regulatory and non-regulatory tools
- ▶ **Partnerships** are used to invest resources for protection in healthy watersheds
- ▶ **Progress** on protecting healthy watersheds **is measured and tied to EPA's Strategic Plan**

# EPA Healthy Watersheds Pilot Projects 2011

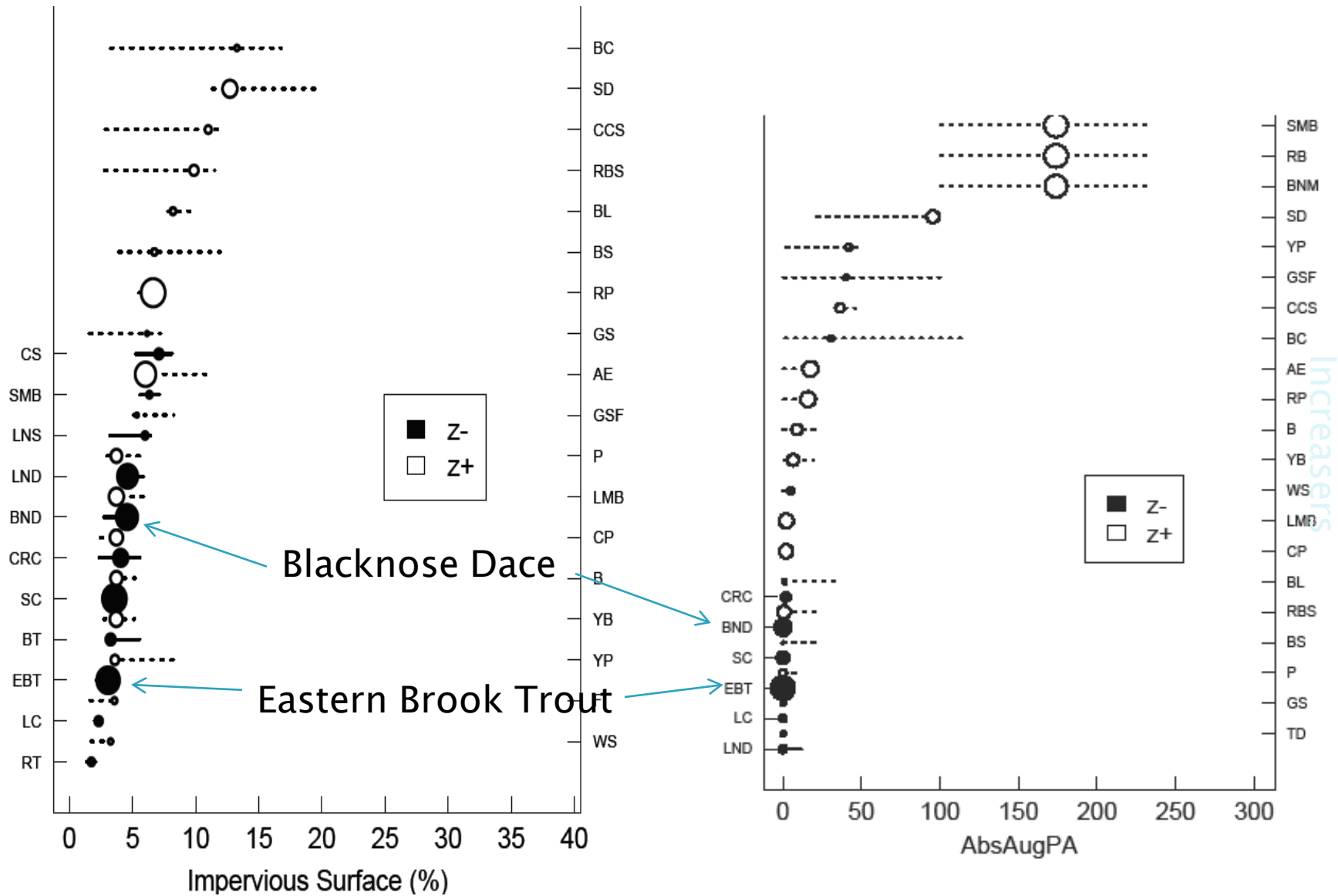
- ▶ **Coldwater Resources of New England – Coordinated Assessment and Protection**
  - Thermal Regime Characteristics of High Quality Coldwater Streams in Connecticut
  - Multivariate analysis approach to examine effects of land use change, impervious cover and water withdrawal on the distribution and abundance of coldwater taxa in Massachusetts
- ▶ **Virginia ELOHA Flow–Ecology Relationships**
- ▶ **West Virginia State–Wide Green Infrastructure Assessment**
- ▶ **Protecting Chesapeake Bay's Forested Headwaters –Green Infrastructure Strategy for Nelson County, VA**
- ▶ **Environmental Flows for New Mexico**
- ▶ **Identification and Protection of Least Disturbed Watersheds and Reference Stream Reaches in Kansas**

Stream Temperature Analysis  
Jennifer Jacobs, University of New Hampshire

Healthy Watersheds Pilot, NEAPWA RCN



# Taxa by taxa stressor analysis using TITAN (Baker and King)



# How Do You Assess a Healthy Watershed?

National Experts Workshop hosted by EPA's Office of Research and Development

## Some characteristics include:

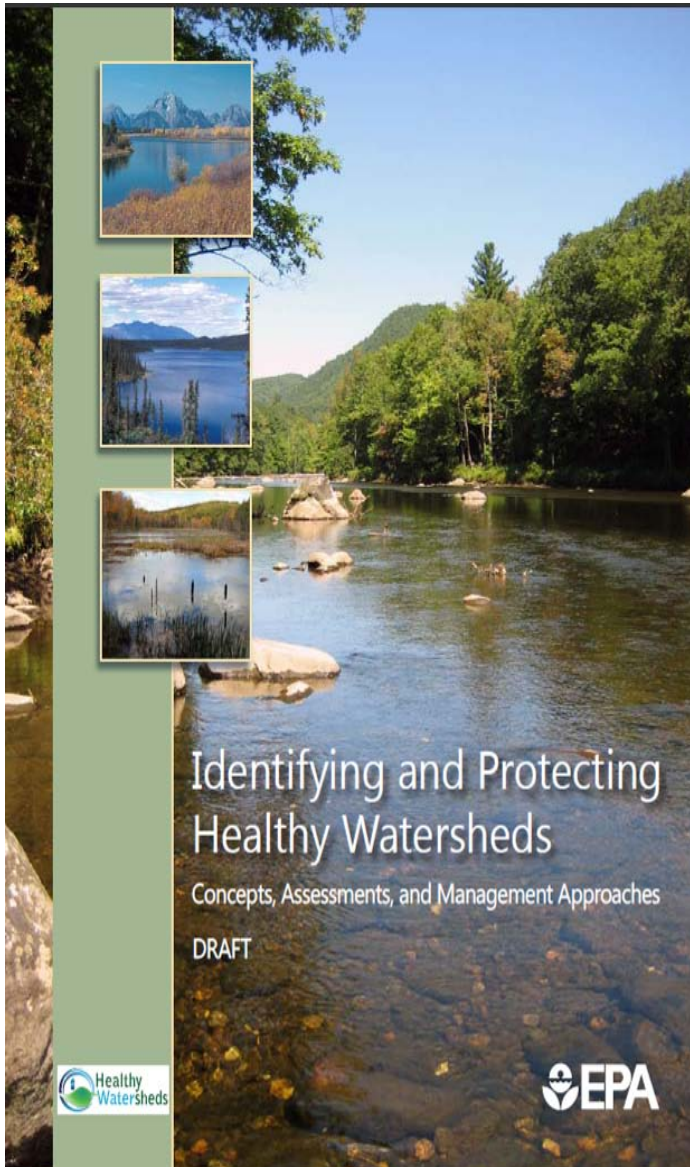
- ▶ **Habitat of sufficient size and connectivity** for native aquatic and riparian species
- ▶ Biotic refugia or **critical habitat** (e.g., deep pools, seeps & springs for survival during droughts)
- ▶ A **natural hydrology (flow regime, ground water, lake levels)** that supports aquatic species and habitat
- ▶ **Natural transport and storage of sediment and wood** and stream geomorphology that provide natural habitat
- ▶ **Water quality** that supports biotic communities & habitat
- ▶ Healthy aquatic **biological communities**



# Program Status

- ▶ HWI Pilot Projects funded in FY 11
- ▶ *Healthy Watersheds Integrated Assessments Workshop*, Nov. 2010, Estes Park, CO
- ▶ Developing EPA Program Integration Guidance
- ▶ Draft Economic Benefits of Protection Healthy Watersheds paper
- ▶ National Framework and Action Plan, September 26, 2011





# Identifying and Protecting Healthy Watersheds

Concepts, Assessments, and Management Approaches

DRAFT



# Healthy Watersheds Initiative



National Framework  
and Action Plan

2011



EPA 841-R-11-005

# Thank You

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