

# VALUING OUR WATERSHEDS



2010 Work Program 10/7/09

07-27-2005



# **Five Paradigms on the Evolution of Urban Water Resources**



From the proceedings of the international  
Wingspread Conference



**First Paradigm  
Ancient Cities like Pompeii**





**Second Paradigm**  
**Rome engineered water capture/storage**

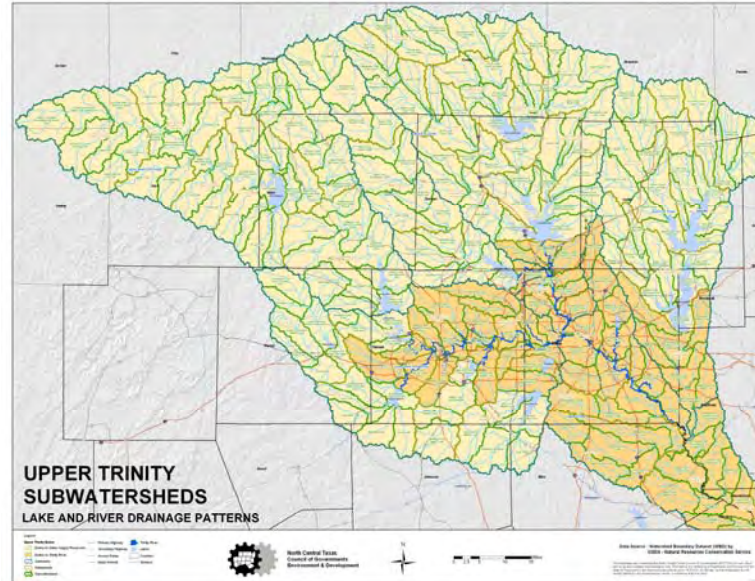
**Third Paradigm**  
**20<sup>th</sup> Century water/wastewater treatment**



**Fourth Paradigm**  
**Nonpoint source/storm water control**



# The emerging Fifth Paradigm ... hydrologically and ecologically sustainable urban watersheds



**Many support sustainable watersheds:**

**Sustainable North Texas**

## **National Association of Clean Water Agencies**

### Watershed Based-Solutions

**Since the Clean Water Act was passed 35 years ago, clean water agencies have contributed significantly to improving the nation's water quality, but the incremental rate of improvement has slowed significantly. A watershed based approach to water quality is now needed to holistically consider all causes of water quality impairment and to restore the physical, chemical and biological integrity of our nation's waters.**

**[nacwa.org](http://nacwa.org)**



**Many support sustainable watersheds:**

**Sustainable North Texas**

## **Clean Water America Alliance Government, Business, Citizen Partners**

**Imagine a world where water is viewed, managed and valued as one resource. A world where the silo thinking that has kept clean water, drinking water, stormwater and water reuse interests segregated erodes away – and a movement toward meeting future challenges on a watershed basis, with a focus on sustainability and green cities emerges in its place. Changing the water paradigm - this is the vision of the Clean Water America Alliance.**

**[cleanwateramericaalliance.org](http://cleanwateramericaalliance.org)**



## **NCTCOG Strategic Plan for 2007-2011:**

**By 2025, North Texans will SEE  
SAFE waterways with  
CLEAN water within a  
regional ecosystem framework of  
GREEN watersheds**

***Our way of describing hydrologically and  
ecologically sustainable urban watersheds***



## **What Watersheds ?**

- **We are using new “subwatersheds” delineated by the Natural Resources Conservation Service (NRCS)**
- **NRCS started with subbasin delineations (8-digit Hydrologic Unit Codes) that were established in the 1970’s**
- **NRCS divided these into more detailed watersheds (10-digit HUC), and these into subwatersheds (12-digit HUC) statewide**
- **They are part of the national Watershed Boundaries Dataset (WBD) to be used by all federal resource agencies**

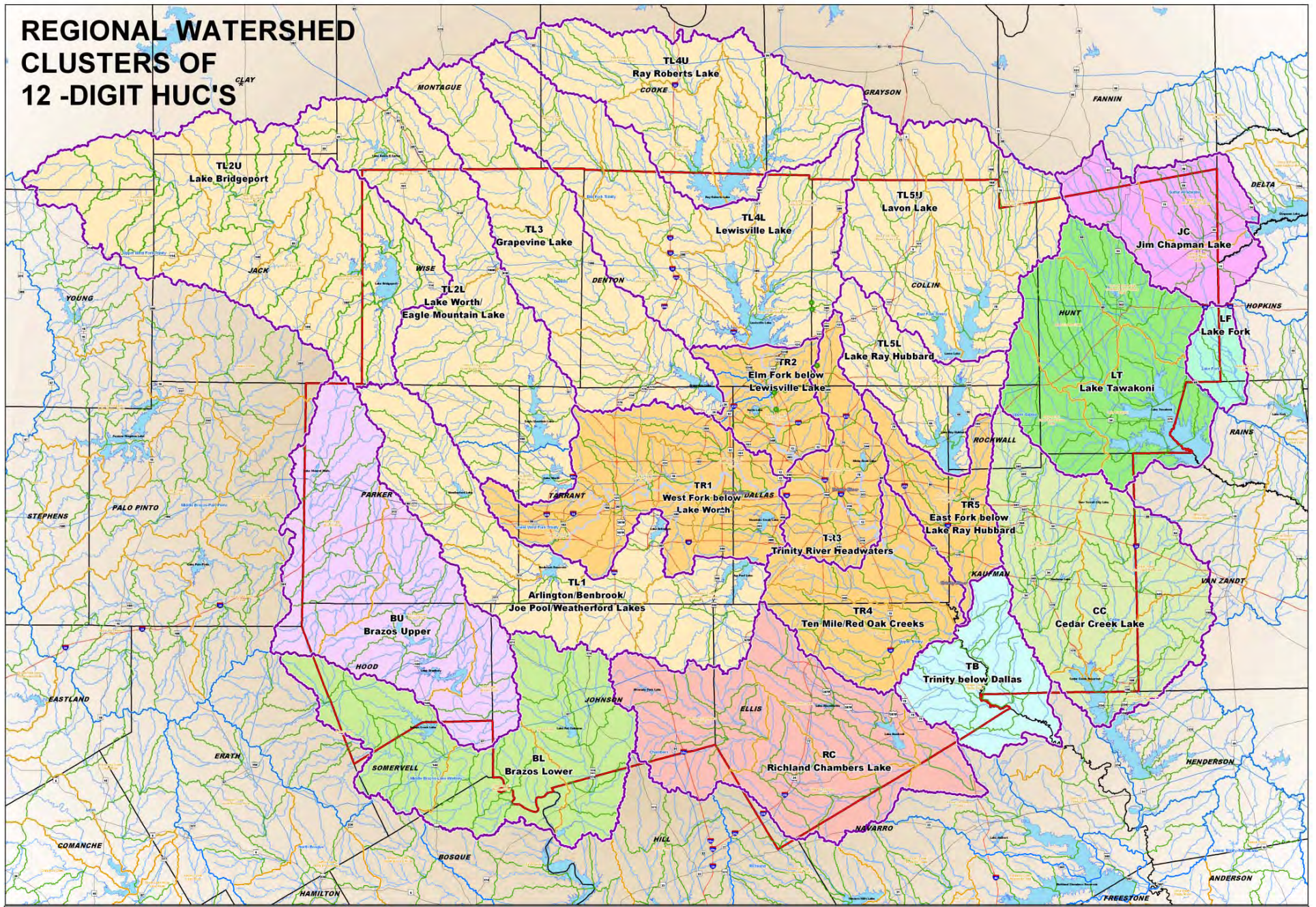


## **Regional Watersheds for MPA**

- **Have clustered more than 300 12-digit HUC's into 21 "Regional Watersheds" for the proposed twelve-county Metropolitan Planning Area**
- **Five regional watersheds drain directly to the Trinity River for the urban area (TR1, TR2, etc)**
- **Eight regional watersheds drain directly to the major water supply lakes of the Upper Trinity (TL1, TL2, etc)**
- **Eight regional watersheds have been formed for the surrounding Brazos, Sabine, Sulfur and lower Trinity within the MPA**



# REGIONAL WATERSHED CLUSTERS OF 12 -DIGIT HUC'S



- Legend**
- Proposed MPA Boundary
  - Counties
  - Trinity River
  - Major Lakes
  - Primary Highway
  - Secondary Highway
  - Access Ramp
  - Major Arterial
  - Drains to Water Supply Reservoirs
  - Drains to Trinity River
  - Cluster/Drainage
  - Subwatersheds
  - Subbasins
  - Watersheds
  - Subwatersheds

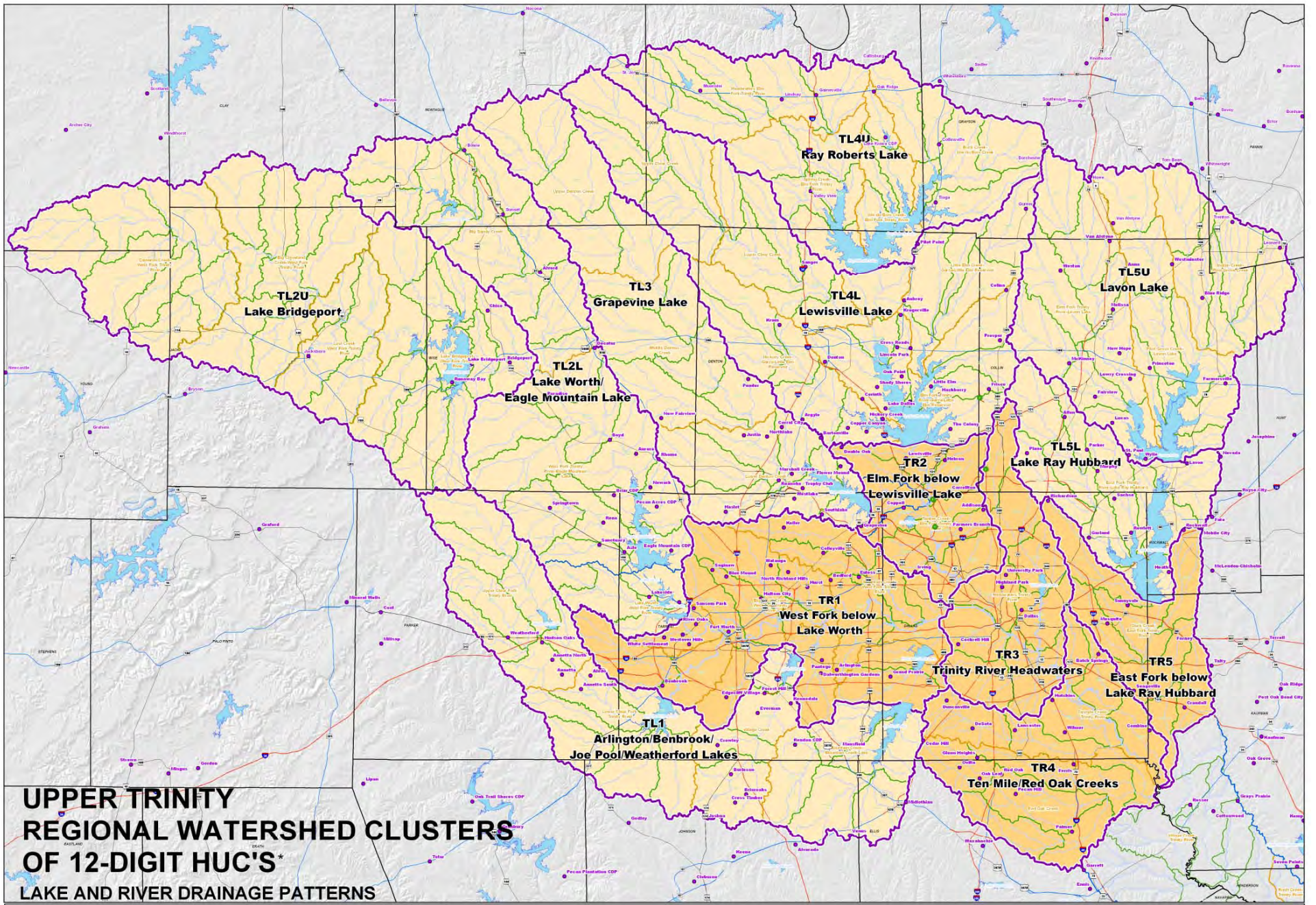


North Central Texas  
Council of Governments  
Environment & Development



Data Source : Watershed Boundary Dataset (WBD) by  
USDA - Natural Resources Conservation Service  
Stream Data by National Hydrography Dataset (NHD)  
This map/data was created by the North Central Texas Council of Governments (NCTCOG) for use "as-is" and as an aid in graphic representation only. This data is not verified by a Registered Land Surveyor for the State of Texas and is not intended to be used as such. NCTCOG, its officials, and its employees do not

\*HUC - Hydrologic Unit Code



**UPPER TRINITY  
REGIONAL WATERSHED CLUSTERS  
OF 12-DIGIT HUC'S\***  
LAKE AND RIVER DRAINAGE PATTERNS

- Legend**
- Upper Trinity Basin
  - Drains to Water Supply Reservoirs
  - Drains to Trinity River
  - Subbasins
  - Watersheds
  - City Centroids
  - Upper Trinity Basin Drain Areas
  - Trinity River
  - Lakes
  - Streams
  - Primary Highway
  - Secondary Highway
  - Access Ramp
  - Major Arterial



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0 4 8 16 24 Miles

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\*HUC - Hydrologic Unit Code

## **Valuing Our Watersheds: Key Elements of 2010 Work Program**

- **Long-Range Trinity River Restoration Strategy**  
(using Trinity Common Vision \$)
- **Long-Range Watershed Protection Strategy for Water Supply Reservoirs** (using stimulus \$)
- **Transportation/NEPA** (using FHWA \$)
- **Continuing programs in**
  - **Wastewater** (using annual TCEQ funding)
  - **Storm water** (using local cost-sharing)
  - **Flood risk mgt** (seeking TWDB funding)
- **Regional Ecosystem Framework for watersheds**



## **Valuing Our Watersheds: Regional Watersheds**

- **Long-Range Trinity River Restoration Strategy** (using 5 regional watersheds to the river, and their subwatersheds)
- **Long-Range Watershed Protection Strategy for Water Supply Reservoirs** (using 8 regional watersheds to the Upper Trinity reservoirs)
- **Regional Ecosystem Framework Transportation/NEPA** (using 21 regional watersheds for the twelve-county Metropolitan Planning Area)



## **Valuing Our Watersheds: Staff Roles**

- **Managers continue to manage**
- **Watershed Facilitator helps us connect people (Erin)**
- **Watershed Investigators collect & analyze the essential information, and with technology staff, help us connect places with info (Scott, TJ, Tracy, Krystal)**
- **Watershed Storyteller helps us understand and express the story of each watershed (Doug)**
- **Watershed Implementers help us connect programs (Audra, Jeff, Kathleen)**
- **Support staff continue to support**



# **Protecting Our Water Supply Reservoirs**

- **Regional Policy Position was developed by Water Resources Council in 1987**
- **Utilizing stimulus funds to address protecting our water supply reservoirs as the region's population doubles by 2050**
- **Three major objectives:**
  - **Assess opportunities & threats to lake watersheds from future development**
  - **Greenprint priority watersheds with TPL**
  - **Draft long-range watershed protection strategy**
- **Water Resources Council guiding the process**



# **1. Assess Opportunities & Threats**

- **Organize available data using GIS and regional watershed clusters of subwatersheds to reservoirs**
- **Assess opportunities & threats by comparing Business As Usual scenario and any “preferred” development/investment scenarios from Vision North Texas**
- **Involve key stakeholders via outreach, interviews, and ecosystem teams ... watershed roundtables in February 2010**
- **Prepare summary report (24 pages or less) by Spring 2010**

