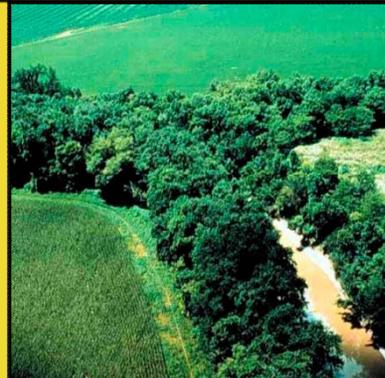
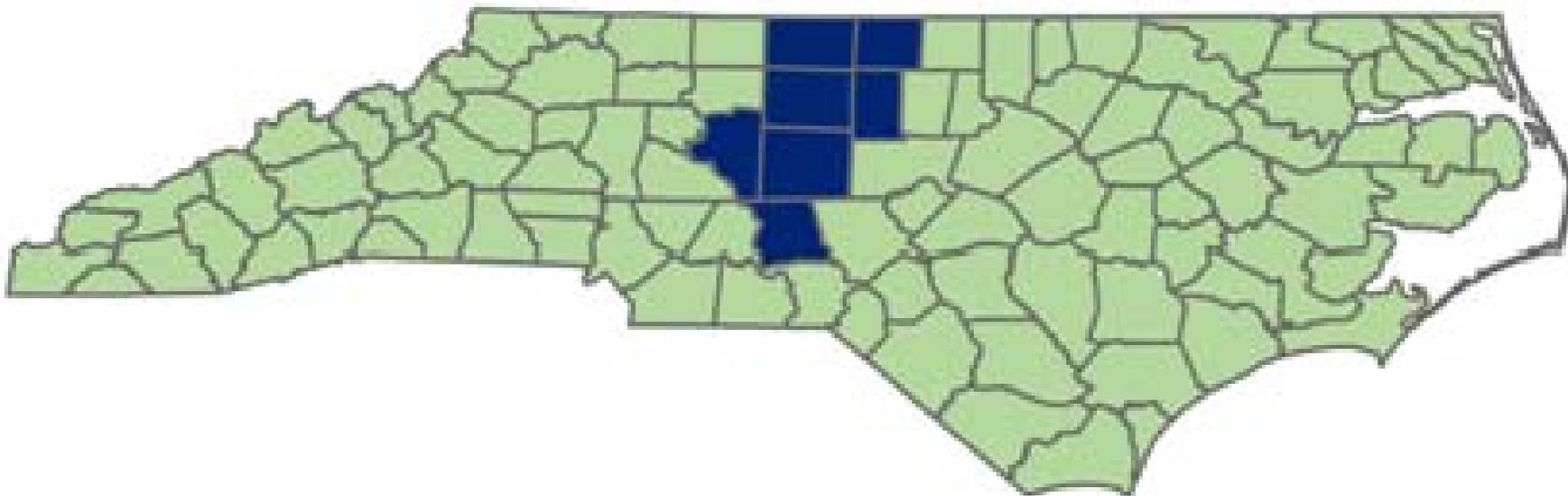


# THE EDEN AREA LOCAL WATERSHED PLAN



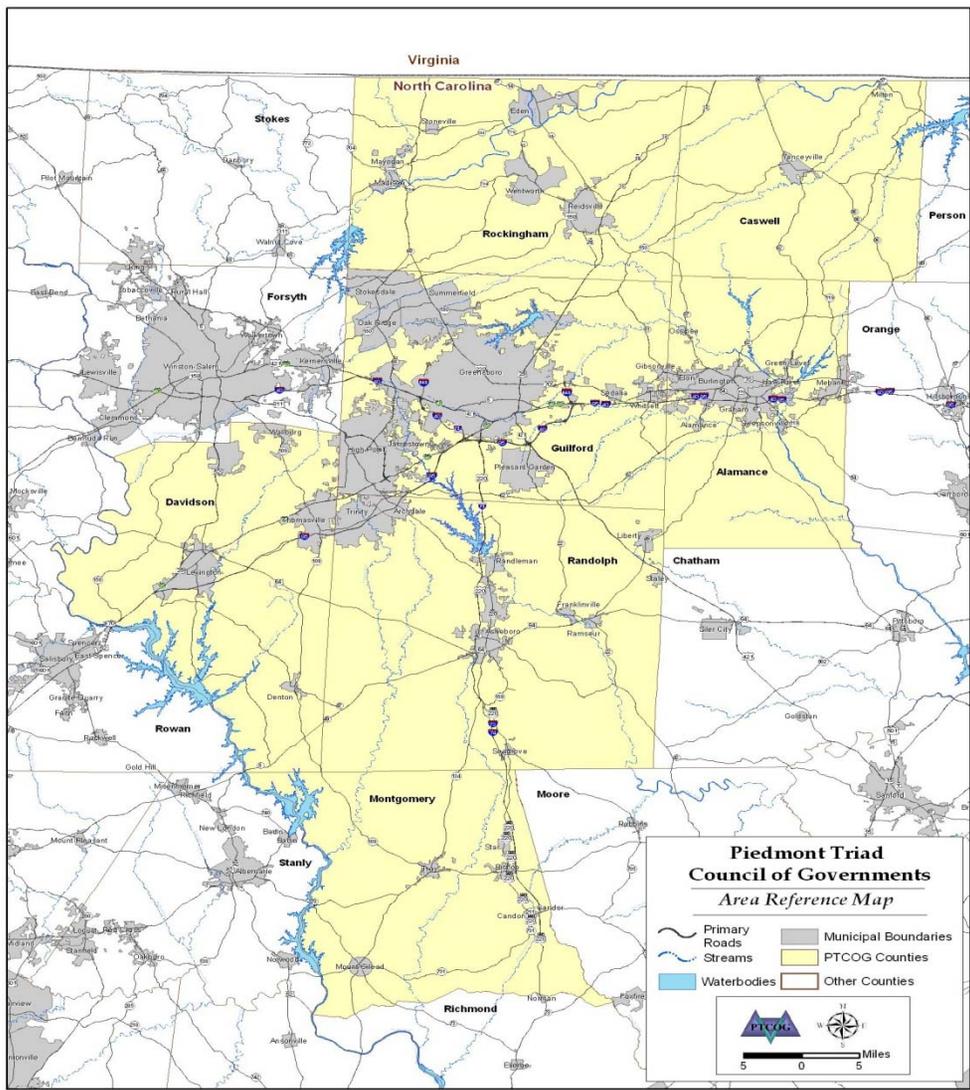
Presented by Cy Stober  
Piedmont Triad Council Of Governments





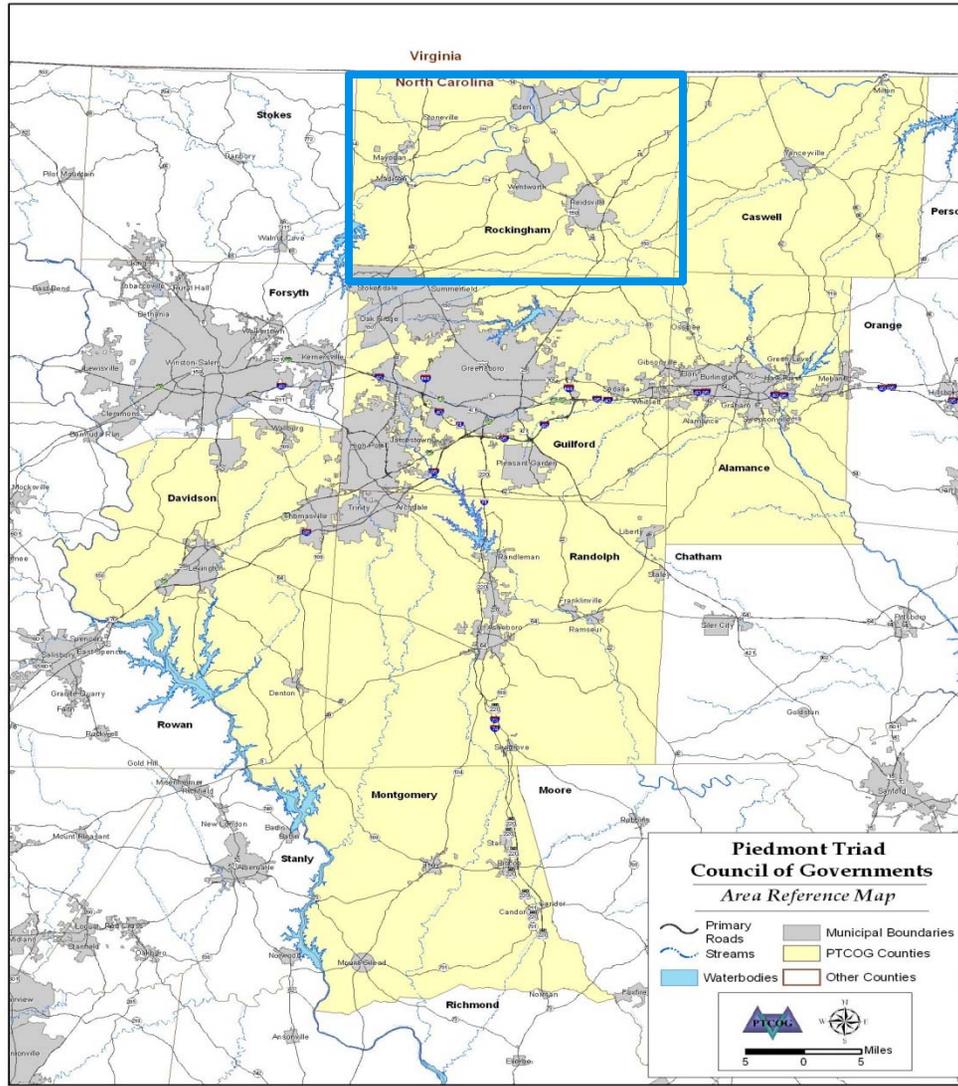


# PIEDMONT TRIAD REGION



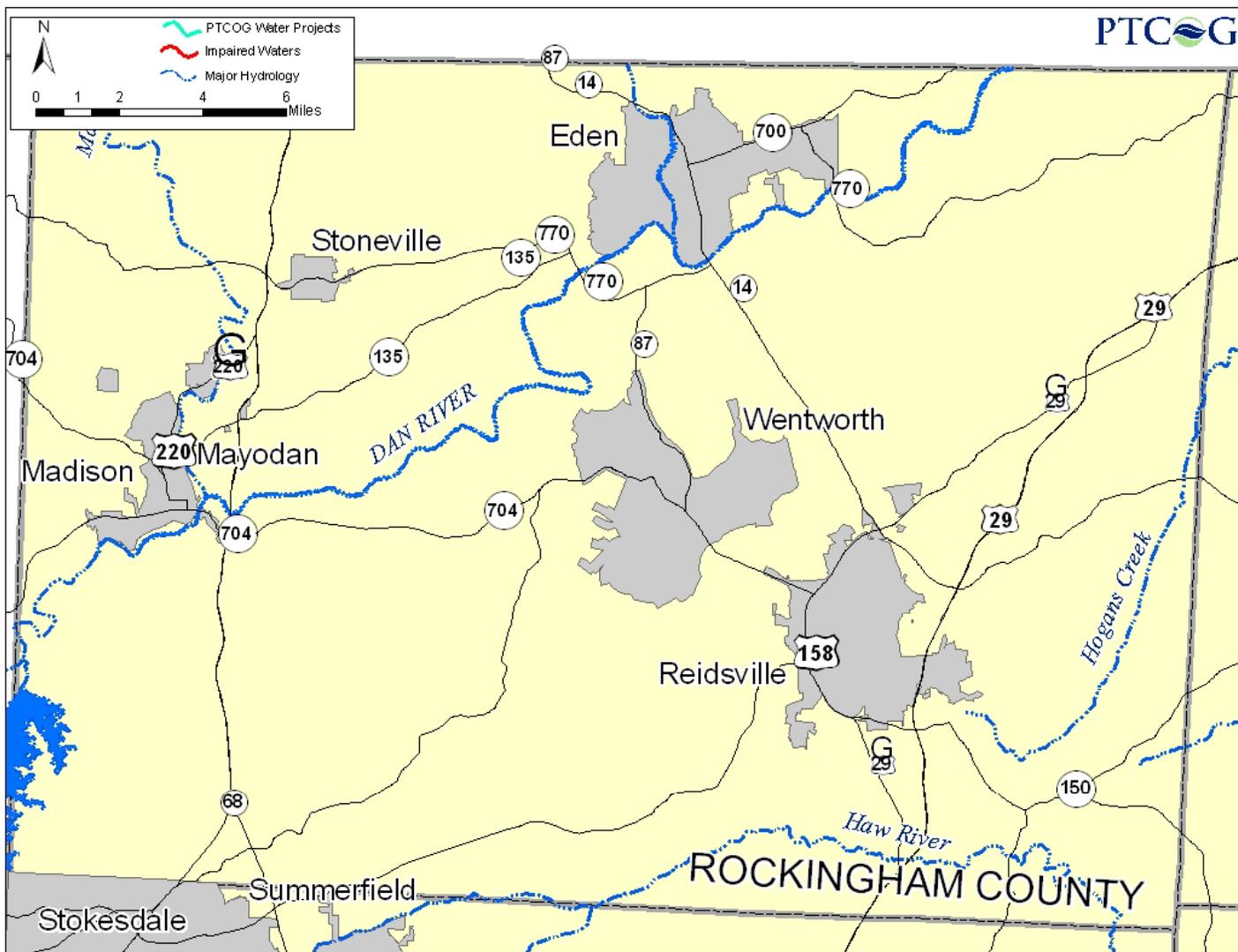


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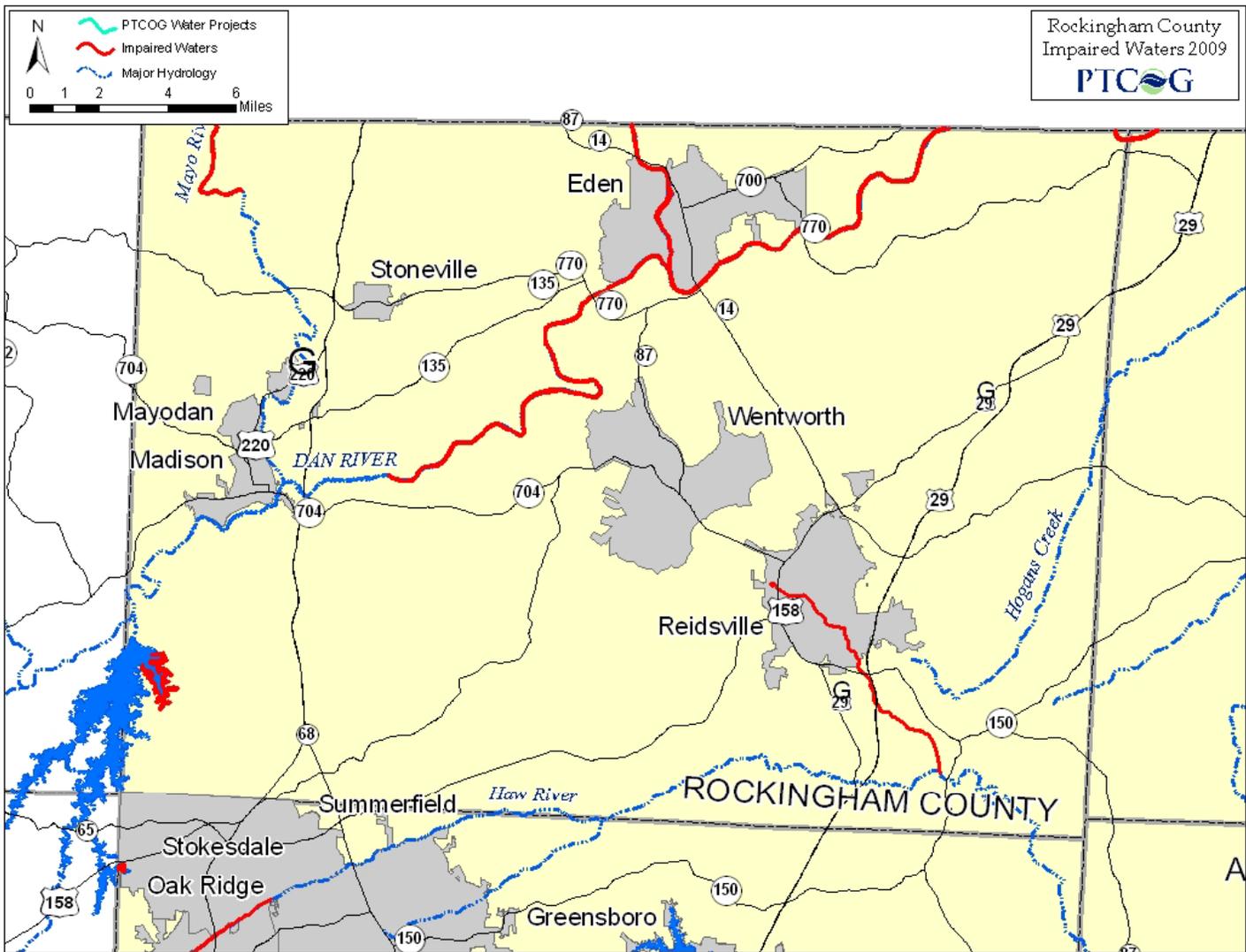


# ROCKINGHAM COUNTY



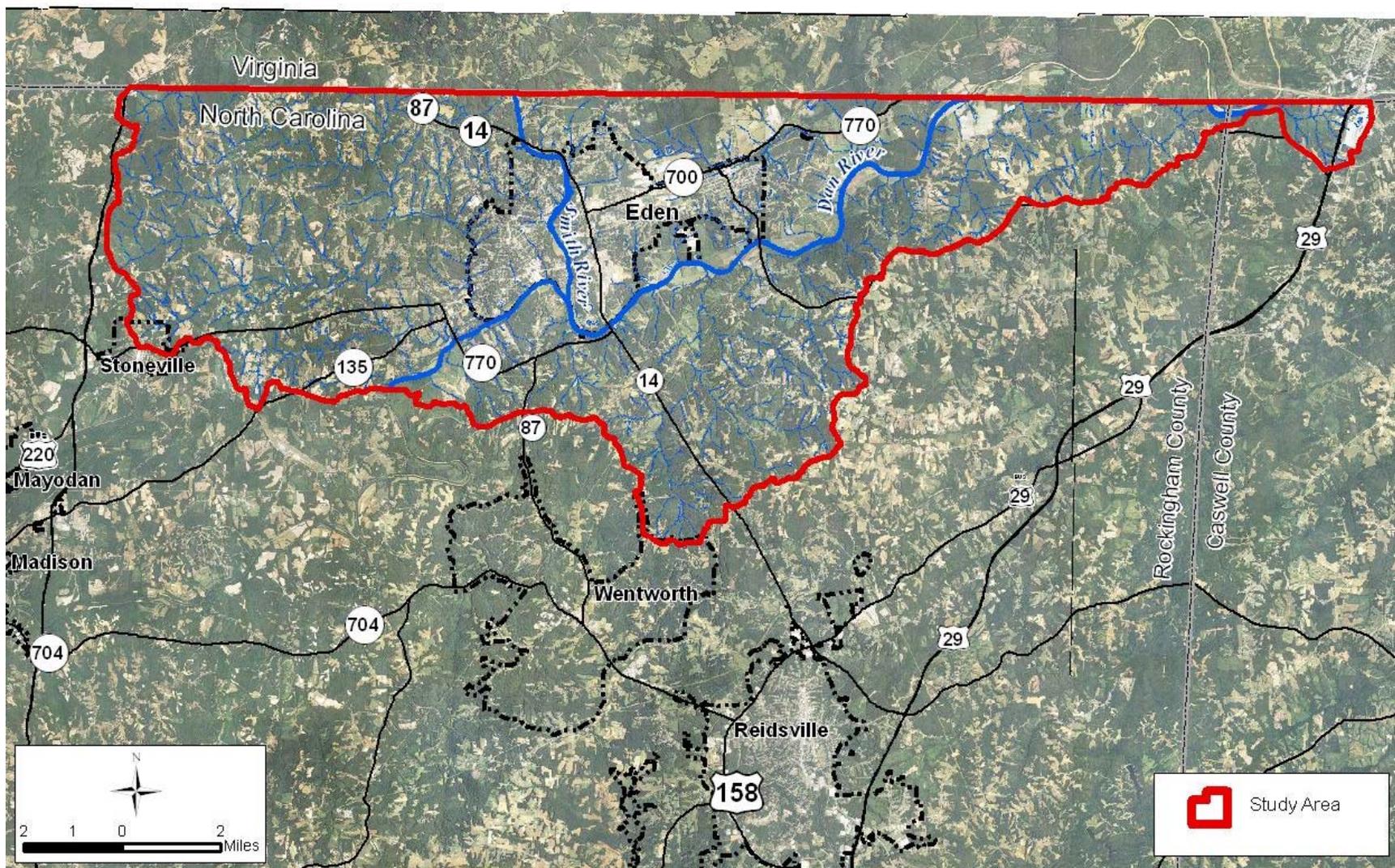


# ROCKINGHAM COUNTY IMPAIRED WATERS





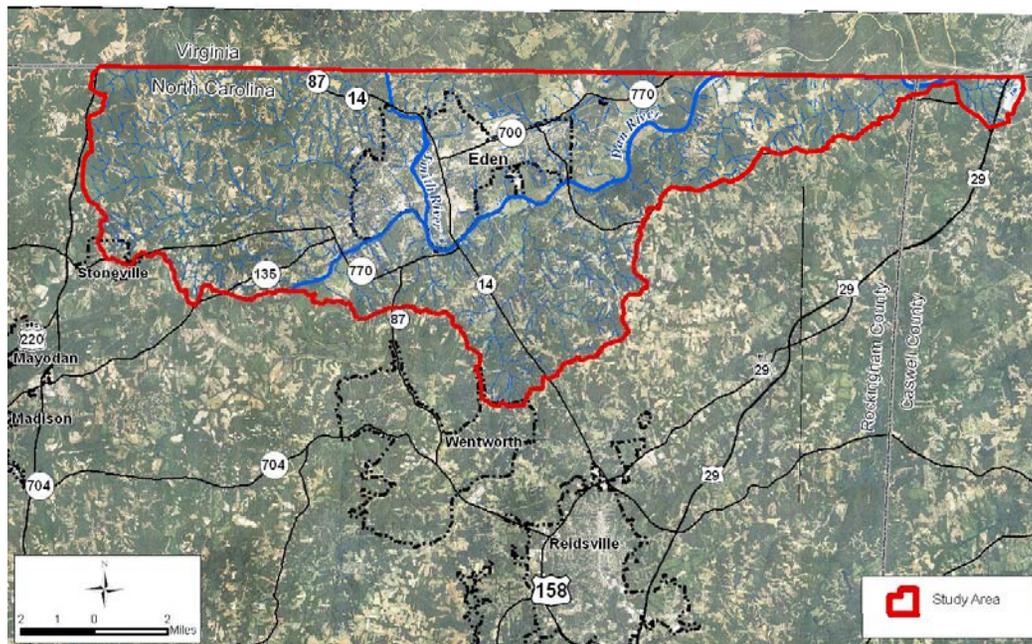
# EDEN AREA WATERSHED





# EDEN AREA WATERSHED

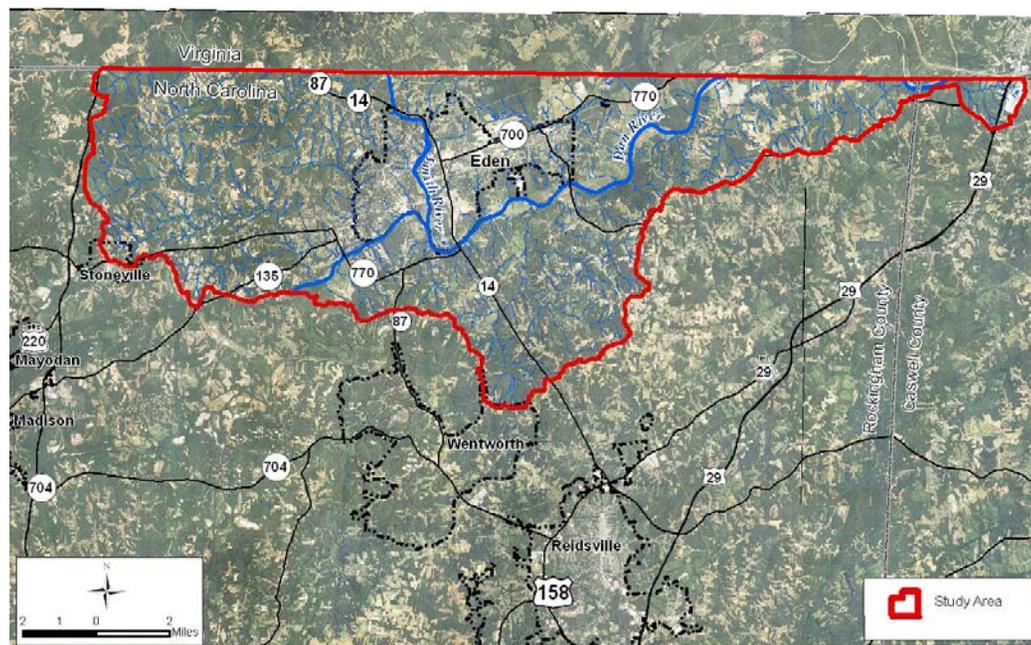
- 119 square miles





# EDEN AREA WATERSHED

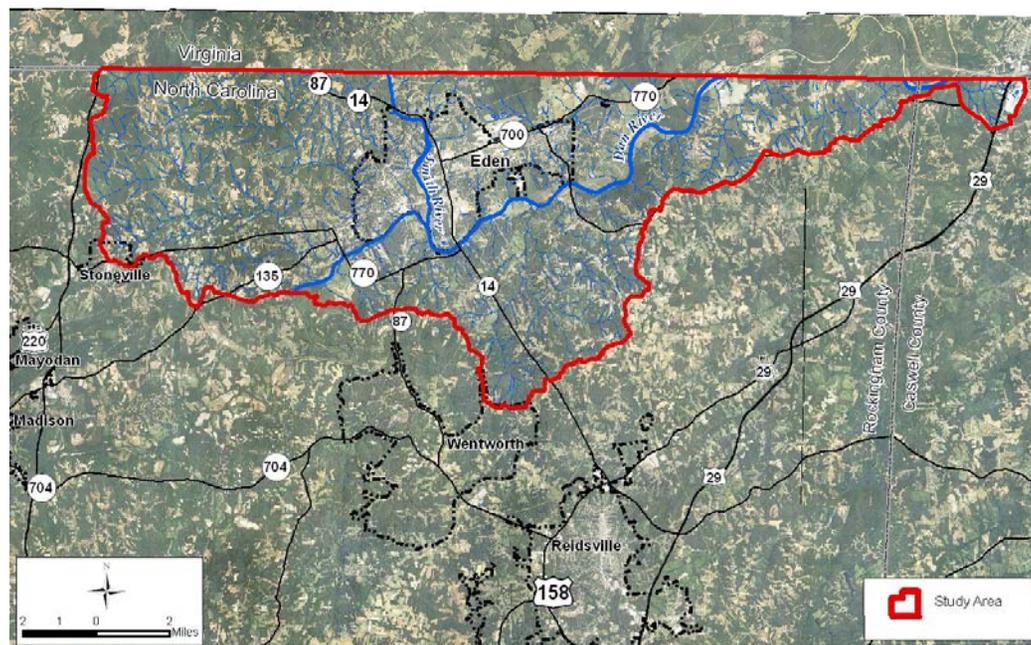
- 119 square miles
- Rockingham & Caswell Counties





# EDEN AREA WATERSHED

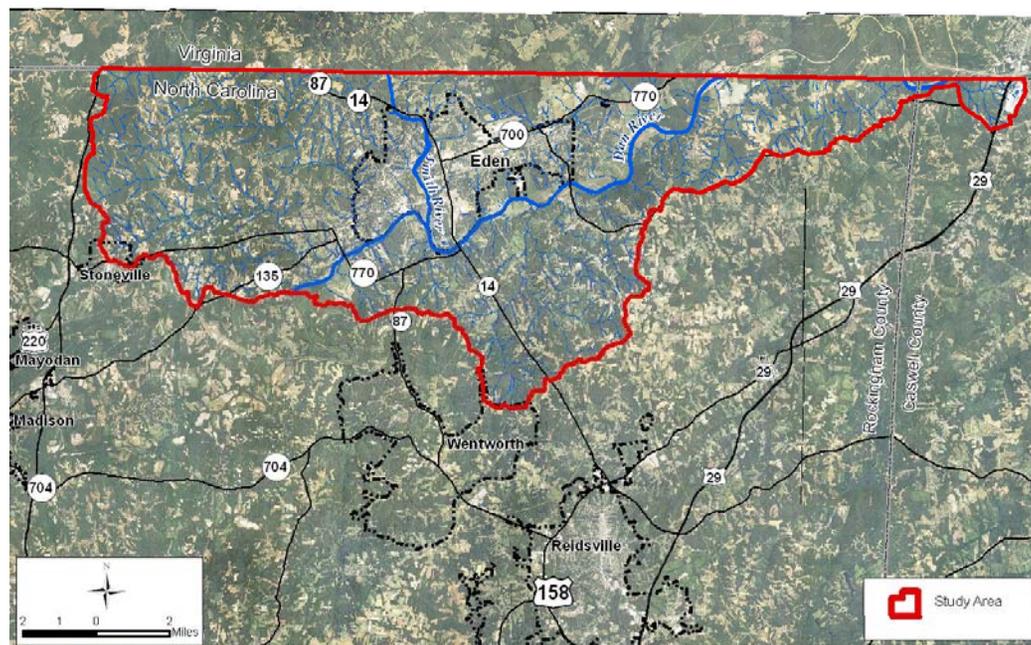
- 119 square miles
- Rockingham & Caswell Counties
  - Mostly forested
  - City of Eden





# EDEN AREA WATERSHED

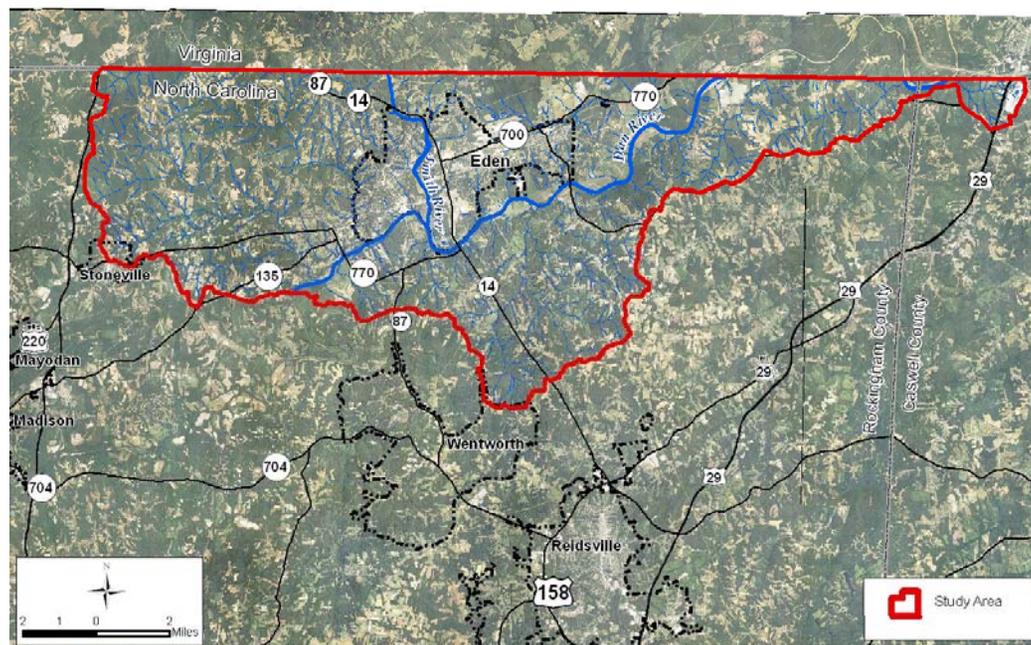
- 119 square miles
- Rockingham & Caswell Counties
  - Mostly forested
  - City of Eden
- Dan River Basin
  - 7 federally-listed species





# EDEN AREA WATERSHED

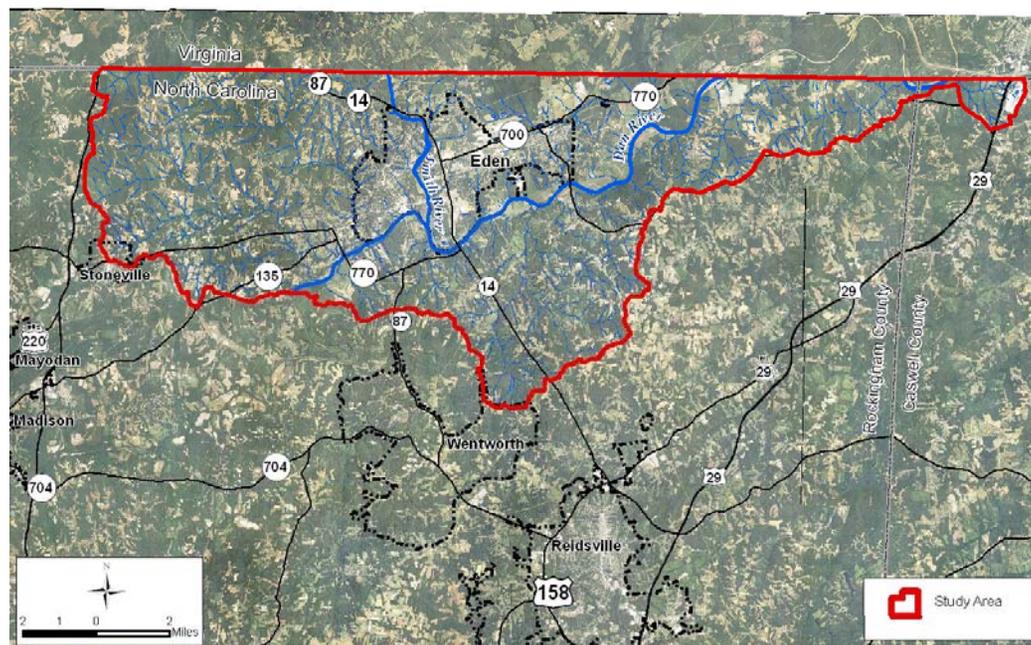
- 2008 Draft 303(d) List
  - Dan River
    - Aquatic Life
      - Turbidity
    - Recreation
      - Fecal Coliform

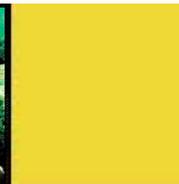




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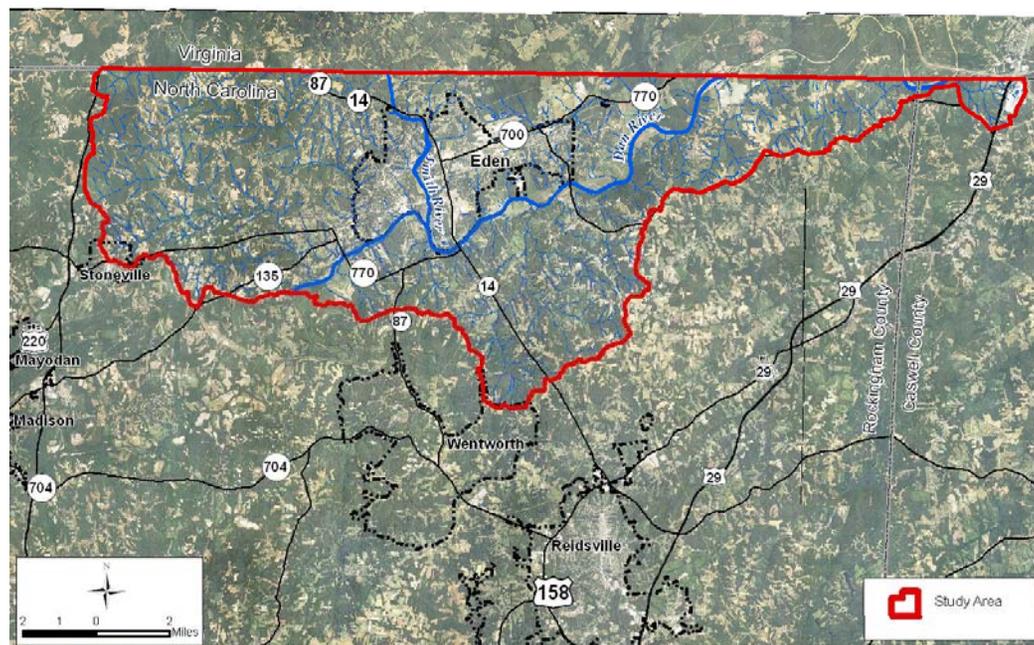
- 2008 Draft 303(d) List
  - Smith River
    - Aquatic Life
      - Poor Habitat
    - Recreation
      - Fecal Coliform





# EDEN AREA WATERSHED

- 2008 Draft 303(d) List
  - History of high levels of metals
    - Iron
    - Copper
    - Manganese
    - Zinc
  - Virginia TMDL
  - Cotton Spray Mill dam in downtown Eden





# DAN RIVER TMD

- Turbidity study  
– 2005

---

*Total Maximum Daily Load for Turbidity and Fecal Coliform for  
Haw River, Deep River, Third Fork Creek, and Dan River in North  
Carolina*

Final Report

EPA Approved Date: Jan 11, 2005

*Cape Fear River Basin and Roanoke River Basin*

Prepared by:  
NC Department of Environment and  
Natural Resources  
Division of Water Quality  
Water Quality Section – Planning Branch  
1617 Mail Service Center  
Raleigh, NC 27699-1617  
(919) 733-5083





# DAN RIVER TMD

- Turbidity study
  - 2005
  - 59% reduction in inputs
    - Much of this input due to new development in Stokes and Rockingham Counties
    - Majority of violations during high volume storm events

---

*Total Maximum Daily Load for Turbidity and Fecal Coliform for  
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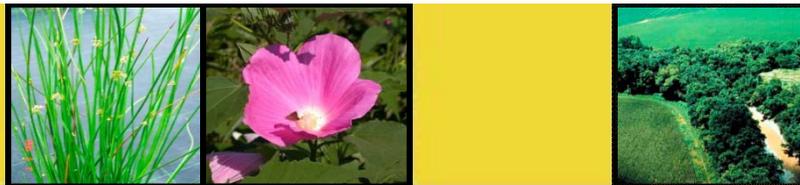
# EDEN AREA WATERSHED

- Potential Sources of Impairment



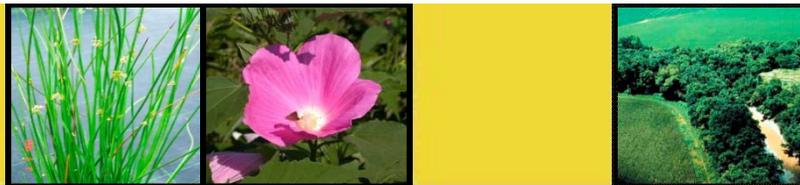
# EDEN AREA WATERSHED

- Potential Sources of Impairment
  - Urban Growth
  - Primary Discharges
  - Dams
  - Agriculture
  - Forestry Practices
  - Nonpoint Sources
  - Unknown Sources



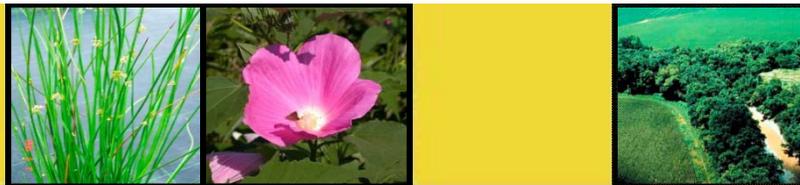
# **PTCOG WATERSHED RESTORATION PLANNING**

- Address sources of biological impairment & high fecal coliform levels in the Dan River
- Address sources of biological impairment, high turbidity & fecal coliform levels in the Smith River
- Policy, water quality data, field, & land use analyses
- Priority projects, policy recommendations, and programmatic solutions



# **PTCOG WATERSHED RESTORATION PLANNING**

- Examine the whole watershed and identify areas of pollution



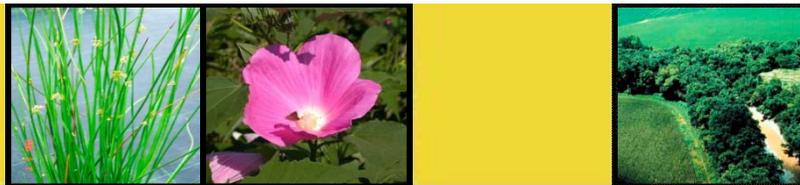
# PTCOG WATERSHED RESTORATION PLANNING

- Examine the whole watershed and identify areas of pollution
  - Field work
  - GIS



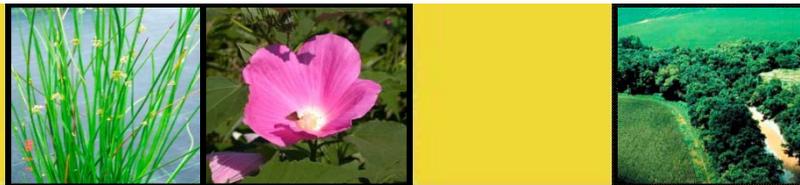
# **PTCOG WATERSHED RESTORATION PLANNING**

- Examine the whole watershed and identify areas of pollution
- Examine local policy and ordinances for increased watershed protection



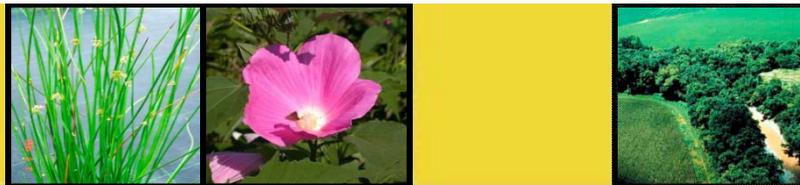
# PTCOG WATERSHED RESTORATION PLANNING

- Examine the whole watershed and identify areas of pollution
- Examine local policy and ordinances for increased watershed protection
  - What is allowed now?
  - What was allowed?
  - What can fix some of the current problems?



# **PTCOG WATERSHED RESTORATION PLANNING**

- Examine the whole watershed and identify areas of pollution
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- Talk with local stakeholders – including private & public landowners – about working with us



# PTCOG WATERSHED RESTORATION PLANNING

- Examine the whole watershed and identify areas of pollution
- Examine local policy and ordinances for increased watershed protection
- Talk with local stakeholders – including private & public landowners – about working with us
  - A number of options in which we can help landowners AND help water quality



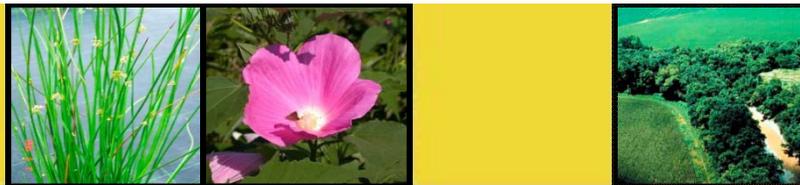
# **PTCOG WATERSHED RESTORATION PLANNING**

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- Examine local policy and ordinances for increased watershed protection
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- **Plan Implementation**



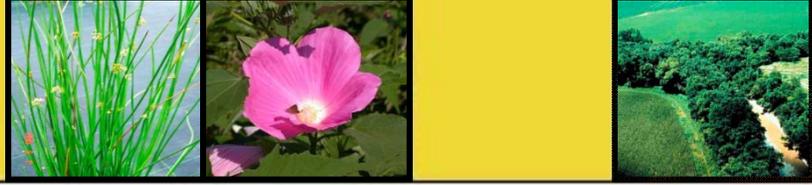
# PTCOG WATERSHED RESTORATION PLANNING

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- Examine local policy and ordinances for increased watershed protection
- Talk with local stakeholders – including private & public landowners – about working with us
- **Plan Implementation**
  - Voluntary
  - NOT a Land Use Plan!



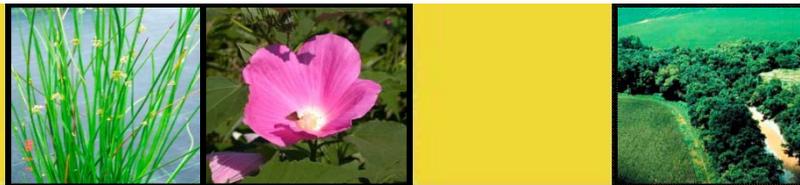
# **PTCOG WATERSHED RESTORATION PLANNING**

- Led by the stakeholders committee



# PTCOG WATERSHED RESTORATION PLANNING

- Led by the stakeholders committee
  - All community views *should* be represented
  - More stakeholder involvement = Better watershed plan



# PTCOG WATERSHED RESTORATION PLANNING

- Led by the stakeholders committee
  - All community views *should* be represented
  - More stakeholder involvement = Better watershed plan
- 1<sup>st</sup> Task
  - 2 -5 Priorities for next meeting



# CURRENT WATER QUALITY EFFORTS

- City of Eden
  - Greenway Master Plan
  - Strategic Plan
  - Land Development Plan



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- City of Eden
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  - Strategic Plan
  - Land Development Plan
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  - Dan River Watershed Protection Plan
  - Continued ecological conservation & stewardship



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  - Coordinated efforts in Dan River Basin



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- Dan River Basin Association
  - CWMTF grant to conduct intensive water quality testing
- NC Soil & Water Conservation
  - Coordinated efforts in Dan River Basin
- Piedmont Conservation Council
  - Coordination of Roanoke River Communities across state lines



# WHAT DO THE RIVERS GET?



[http://www.piedmontland.org/sites/images/dan\\_river/river-bends-1.jpg](http://www.piedmontland.org/sites/images/dan_river/river-bends-1.jpg)



# WHAT DO THE RIVERS GET?

- Watershed Assessment
  - Policy Recommendations



[http://www.piedmontland.org/sites/images/dan\\_river/river-bends-1.jpg](http://www.piedmontland.org/sites/images/dan_river/river-bends-1.jpg)



# WHAT DO THE RIVERS GET?

- Watershed Assessment
- Project Atlas
  - Pilot Projects



[http://www.piedmontland.org/sites/images/dan\\_river/river-bends-1.jpg](http://www.piedmontland.org/sites/images/dan_river/river-bends-1.jpg)



# WHAT DO THE RIVERS GET?

- Watershed Assessment
- Project Atlas
- Implementation Timeline



[http://www.piedmontland.org/sites/images/dan\\_river/river-bends-1.jpg](http://www.piedmontland.org/sites/images/dan_river/river-bends-1.jpg)



# WHAT DO THE RIVERS GET?

- Watershed Assessment
- Project Atlas
- Implementation Timeline
- Better Stewardship
  - Work with stakeholders, other agencies, and landowners



[http://www.piedmontland.org/sites/images/dan\\_river/river-bends-1.jpg](http://www.piedmontland.org/sites/images/dan_river/river-bends-1.jpg)



# WHAT DO THE RIVERS GET?

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- Better Water Quality



# EDEN AREA WATERSHED TIMELINE

## Watershed Characterization (Months 1 - 6)

- Eden Area Stakeholder Meetings & Framework
- Public Outreach & Involvement
- Data Acquisition & Analysis (Land Use, GIS, Policy, etc.)
- Subwatershed Prioritization

## Watershed Assessment (Months 6 - 18)

- Field Work: Streamwalk & Windshield Assessments
- Project Identification
- Water Quality Modeling
- Stakeholder Advisement
- Detailed Watershed Policy Analysis

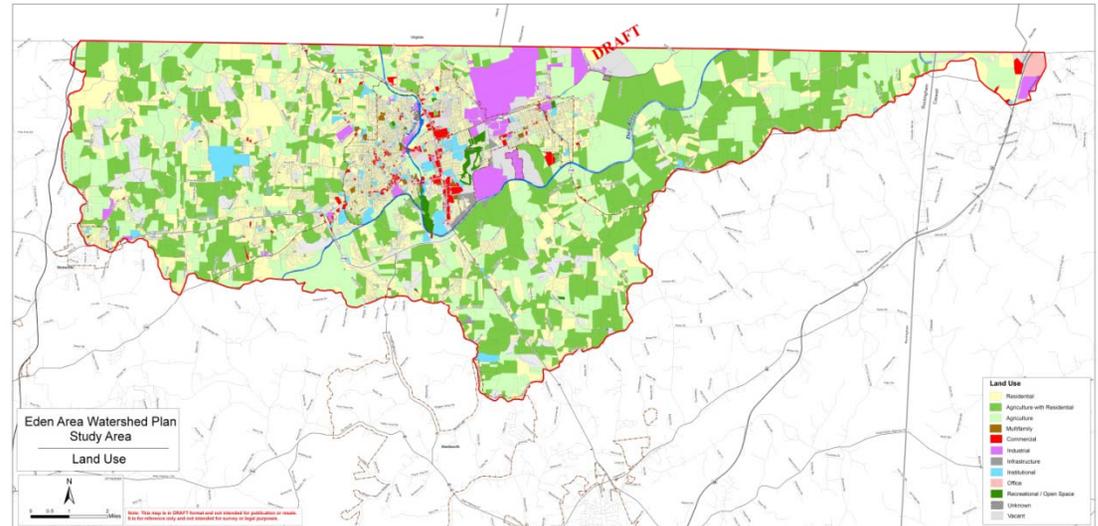
## Watershed Restoration Planning (Months 15 - 24)

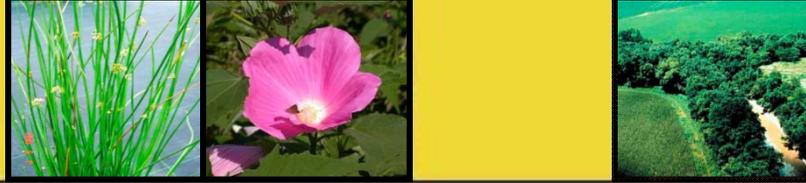
- Prioritize Identified Restoration or Preservation Projects
- Estimate Load Reduction and Water Quality Benefits of Projects
- Compile Project Atlas
- Recommend Policy & Programmatic Approaches for Improved Water Quality
- Issue an Implementation Timeline For Efficient and Effective Remediation and Sustainable Stewardship
- Present Watershed Planning Products to Stakeholders & Public



# EDEN AREA WATERSHED TIMELINE

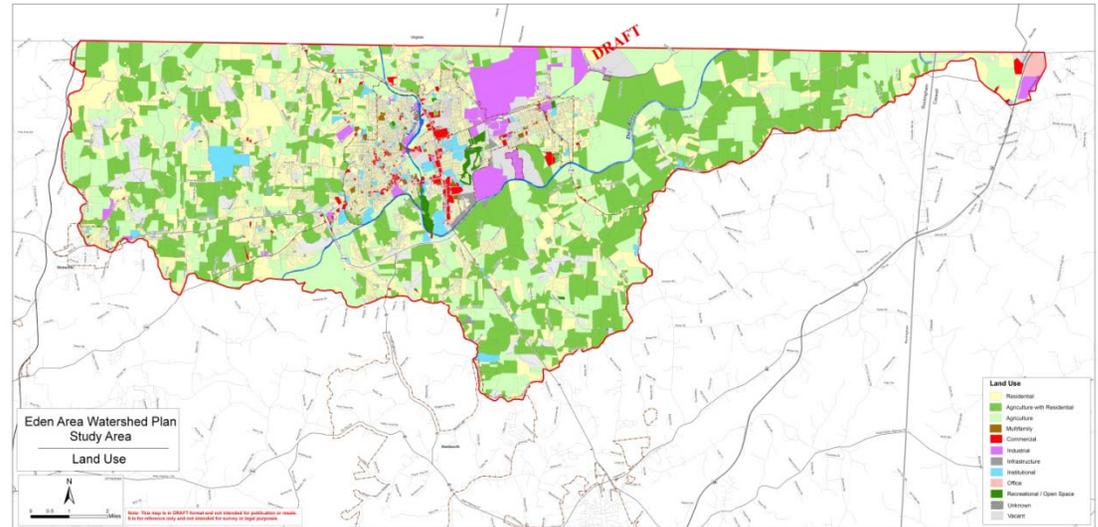
- Watershed Review

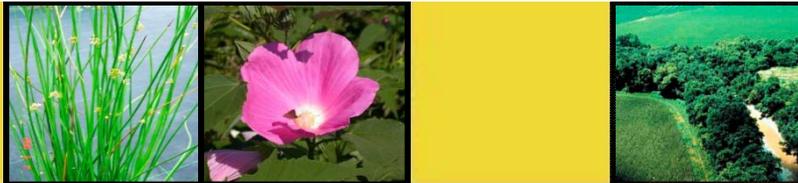




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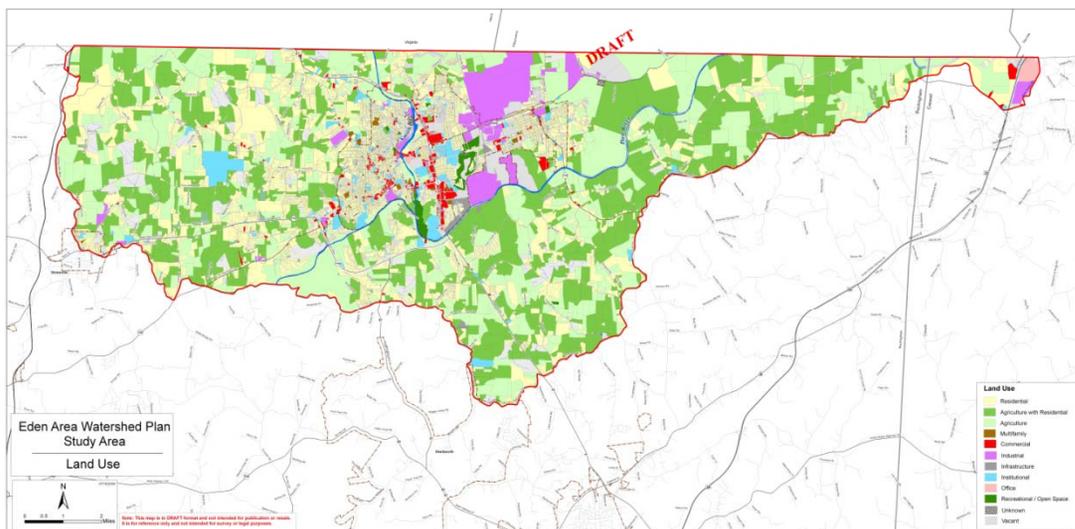
- Watershed Review
  - Now → October
    - Stakeholder Input
    - Policy
    - GIS analysis

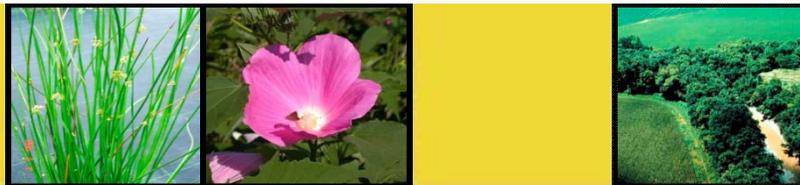




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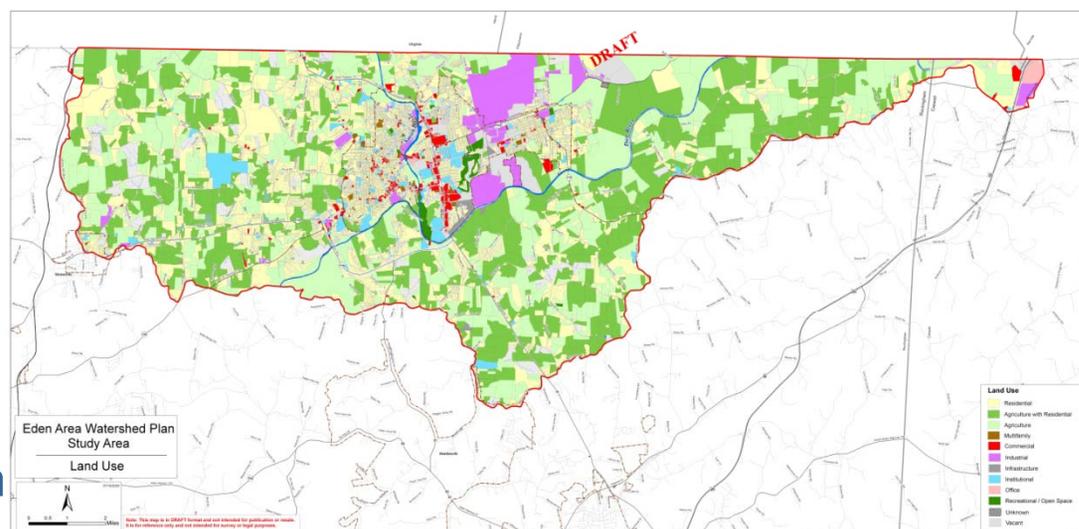
- Watershed Review
  - Now → October
- Public Meetings & Education

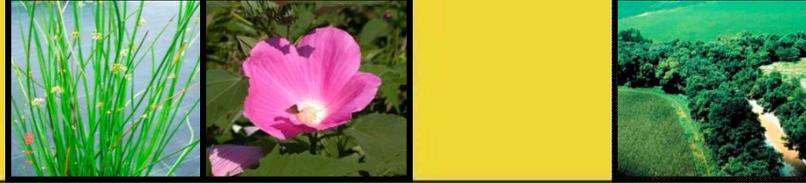




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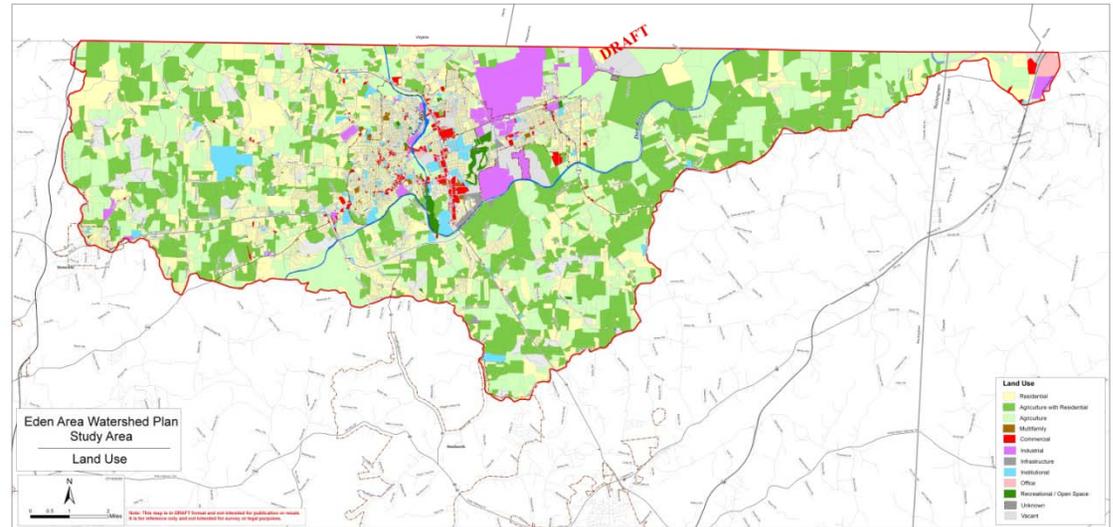
- Watershed Review
  - Now → August
- Public Meetings & Education
  - Now → Summer
  - Open forums for discussion on problem with rivers
  - Public input in what they want done

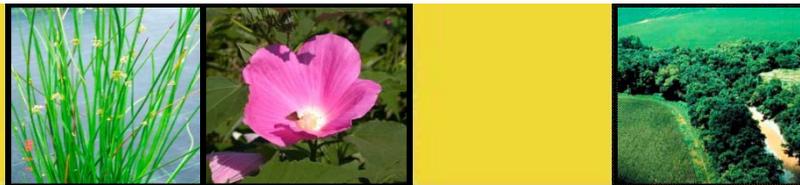




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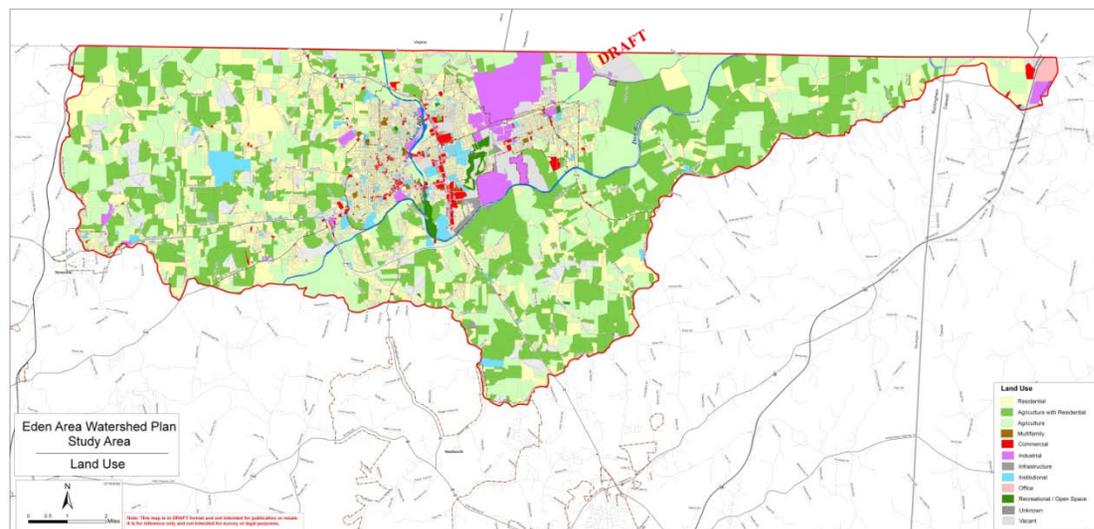
- Watershed Review
  - Now → August
- Public Meetings & Education
  - Now → Summer
- Watershed Analysis





# EDEN AREA WATERSHED TIMELINE

- Watershed Review
  - Now → August
- Public Meetings & Education
  - Now → Summer
- Watershed Analysis
  - Now → October
  - GIS
  - Watershed Pollutant Model





## QUESTIONS?

Cy Stober  
Water Quality Planner  
Piedmont Triad Council of Governments  
[cstober@ptcog.org](mailto:cstober@ptcog.org)  
336-294-4960

<http://www.ptcog.org/waterquality.html>

