Eco-Logical
Webinar Series

How to Build and Strengthen Collaborative Partnerships

Presenters
John Sullivan, FHWA NC Division
Debbie Barbour, NCDOT
John Dorney, Atkins North America
Periann Russell, NCDWQ

Moderated by Mike Ruth, FHWA

Volpe The National Transportation Systems Center
Advancing transportation innovation for the public good

U.S. Department of Transportation
Federal Highway Administration

U.S. Department of Transportation
Research and Innovative Technology Administration
John A. Volpe National Transportation Systems Center

Integrated Eco-Logical Framework (IEF)

- Process to guide transportation and resource specialists in the integration of transportation and ecological decisionmaking
- Helps identify potential impacts to environmental resources very early in the planning process

Step 1 of the IEF

- Build and Strengthen Collaborative Partnerships

When getting started, consider…

- What are the boundaries of your planning region?
- What types of expertise would be helpful to your organization or planning effort?

Next…

- Using relationships your organization already has developed, identify potential partners.
- Approach new partners individually or through convening a team meeting with a shared goal.
- Think about a structure for your partnerships.

Once the partnership is established...

- Establish a joint vision.
- Document partner contributions and desired outcomes.
- Determine how to reach outcomes, including a timeline and communication structure.

As the partnership evolves…

- Clear understanding of goals and abilities
- Clear roles and responsibilities
- Jointly identified opportunities for collaboration

Collaborative Partnering in North Carolina

NorthCarolina's Interagency Leadership Team

John Sullivan, North Carolina FHWA Division Administrator and
Debbie Barbour, North Carolina DOT Director of Pre-Construction

Overview

- Interagency Leadership Team (ILT)
- Initial Vision
- Recipe for Success
- Maintenance

ILT Members

- NC Dept. of Agriculture and Consumer Services
- NC Dept. of Commerce
- NC Dept. of Cultural Resources
- NC Dept. of Environment and Natural Resources
- NC Dept. of Transportation
- NC Wildlife Resources Commission
- US Army Corps of Engineers - Wilmington District
- US Dept. of Commerce - National Marine Fisheries Service
- US Environmental Protection Agency
- US Dept. of Transportation - Federal Highway Administration
- US Fish and Wildlife Service

ILT Mission

Develop and implement an interagency leadership plan for North Carolina to balance successfully mobility, natural and cultural resource protection, community values, and economic vitality at the confluence of our agencies' missions

ILT Goals

1. **Develop a shared, comprehensive Geographic Information System (GIS)**

2. **Partner to integrate local land use plans, long-range transportation planning, environmental and economic development planning to meet mobility, environmental and economic goals – *Eco-Logical Vision***

3. **Improve the project development process (Merger Process)**

The Vision

- To build an multi-agency, executive level team to guide collaboration as each agency conducts planning and identify partnering opportunities.
- To effectively deliver transportation projects will maintaining environmental excellence.

The Challenges

- Trust
- Commitment
- Meeting Multiple Needs
- Understanding Each Other's Needs and Business
- Membership changing
- Logistics: How will we operate?

Partnership Foundation

Interagency Leadership Team 2004

Joint NCDOT- FHWA Planning 2004

Ecosystem Enhancement Program 2003

Interagency Project Development Process (The Merger Process) 2001

The Strategies

- Defined Vision
- Gauged interest using existing relationships
- Hired Facilitators
- Well Planned Initial Workshop
- Strategy Sessions
- Developed Framework
- Developed Common Mission & Goals

Keys to Success

- Strategic Plan Focused on Common Issues and Goals
- Non-Transportation Team Leader
- Leadership Commitment
  - Engagement in Initiatives
  - Communication to Influential Stakeholders
- Committed Staff

Maintaining the Momentum

- Well Planned Meetings
- Standard Dates/Times/Locations
- Team Charter
- Team Strategic Plan
- Documented Operating Procedures
- Co-Chairs
- Continued education/communication

Products from Partnerships
between NCDOT
and State/Federal Agencies

Presented by
John Dorney, Atkins North America
(formerly NC Division of Water Quality) and
Periann Russell, NC Division of Water Quality

ATKINS
Plan Design Enable

DWQ

Background

- Interagency Team (ILT) oversight primarily from
  - NC Division of Water Quality
  - NC Department of Transportation
  - US Army Corps of Engineers
  - US Environmental Protection Agency
- ILT directed staff to develop products as team partnerships
  - Broad instruction to staff
  - Rely on staff knowledge and experience

Main products

- Wetland Functional Assessment Method (NC WAM)
  - Completed
- Stream Functional Assessment Method (NC WAM)
  - Near completion
- Stream Mapping
  - Under way
- Wetland Mapping
  - Under way

Functional Assessment Methods

- Teams established by ILT
  - Agencies appointed team members
- Jointly chaired by Division of Water Quality and Department of Transportation
- Met bi-monthly for five (5) years
- DOT provided funding for consultants
- All agencies participated except Natural Resources Conservation Service
  - At the time, had other priorities
  - Now looking for functional assessment method and will probably use NC WAM

NCWAM Team members

- **Federal agencies**
  - US Army Corps of Engineers – Dave Lekson and Amanda Jones
  - Environmental Protection Agency – Becky Fox and Kathy Matthews
  - Federal Highway Administration – Donny Brew
  - US Fish and Wildlife Service – Howard Hall

- **State agencies**
  - NC Department of Transportation – LeiLani Paugh (co-chair)
  - NC Division of Coastal Management – Melissa Carle and Steve Sollod
  - NC Division of Water Quality – John Dorney (co-chair)
  - NC Ecosystem Enhancement Program – Jim Stanfill
  - NC Natural Heritage Program – Mike Schafale
  - NC Wildlife Resources Commission – David Cox

- **Consultant Team**
  –Sandy Smith (Axiom Environmental); Matt Cusack and Brad Allen (Atkins)

The Basics of NCWAM

- Rapid functional assessment method
  - 15 minutes per site after training and delineation
- Field based
- Reference based
- Useable for all wetlands in NC
  - Disturbed and undisturbed
- Field check sheet – two pages
- Computer program to derive final results

The Basics of NCWAM (cont.)

- Three main functions
  - Hydrology
  - Water Quality
  - Habitat
- Ratings of High, Medium or Low
- Overall ratings
- Ratings by each function
- DWQ web site for documents - http://portal.ncdenr.org/web/wq/swp/ws/pdu/ncwam

Training

- NC WAM training nearly complete
  - Four day class with tests
  - 14 sessions held for 350 students
- NC SAM training is next
- Division of Water Quality obtained EPA grant for training
- Joint agency instructors
  - Division of Water Quality
  - Department of Transportation
  - US Army Corps of Engineers
  - Consultants

Implementation

- Regulatory agencies developing implementation process
  - US Army Corps of Engineers
  - US Environmental Protection Agency
  - Division of Water Quality
  - Division of Coastal Management
- Non-regulatory agencies (including DOT) will have input during public notice process

General Implementation Themes

- Will be used for
  - Training
  - Permitting
    - 404 Permits
    - State Isolated Wetland Permits
  - Mitigation
  - Compliance/enforcement
  - Watershed planning/mapping

2011 FHWA Environmental Excellence Awards in Seattle, WA

Stream Mapping

- 2004: Partnership established between NC DWQ, NC DOT, and NCSU to develop methods to update GIS stream data – 1st pilot (completed in 2008)
- DWQ positions funded by NC DOT
- Mapping sites based on NC DOT projects
- Work together to develop products that support DOT and DWQ needs

Stream Mapping: Goals

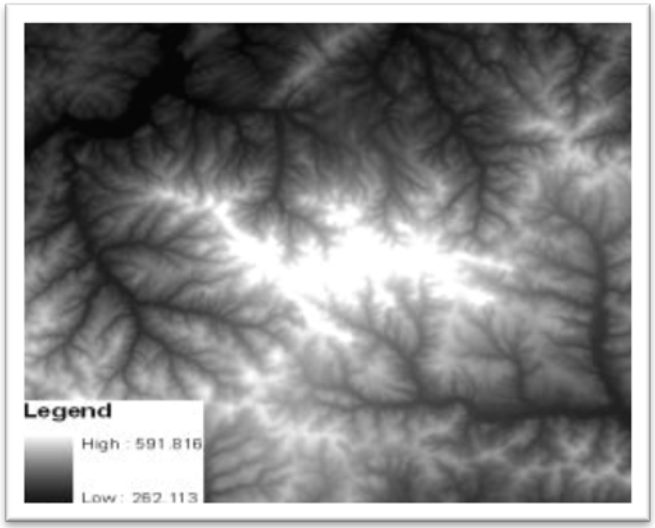
- Develop spatially-based headwater stream models by ecoregion that:
  - Predict stream location, length, and flow classification (intermittent or perennial)
  - Resulting stream lines are of known and consistent accuracy
- Develop procedures/documentation for large-scale application

**Consistent accuracy allows maps to be used for regulatory purposes

Stream Mapping:To Date

- Assessed technical (GIS) methods
- Developed field and analytical tools for data collection and analysis
- Identified useful GIS data (e.g., LiDAR)
- Develop accuracy assessment methods
- Field data in 12 of 24 potential Ecoregions
- Modeled 6 Ecoregions

Stream Mapping Methods



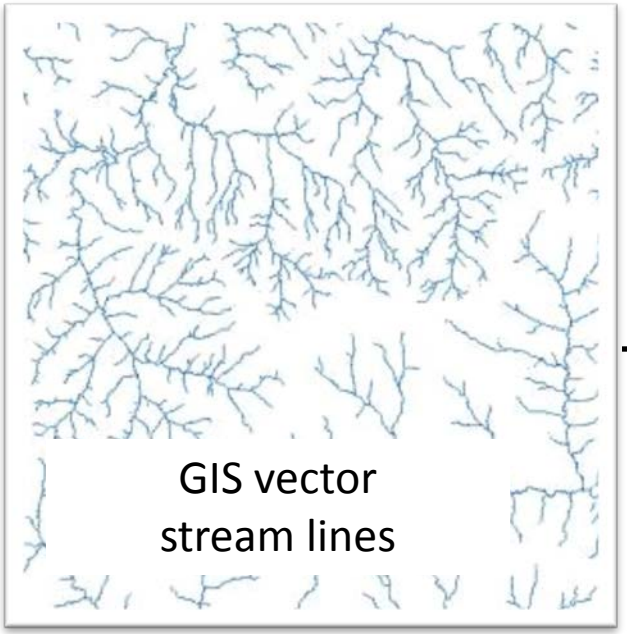
Model Development (logistic regression)

Model

1 / (1 + Exp(-39.1406 + ([asp] * -0.00214) + ([avgasp] * -0.00187) + ([plan] * 0.9620) + ([avgplan] * -104.7) + ([avgprof] * 47.9643) + ([d8slp] * -7.9884) + ([avgd8slp] * 79.0305) + ([elev] * -0.00321) + ([plen] * -0.00015) + ([lntlen] * 3.0704)))

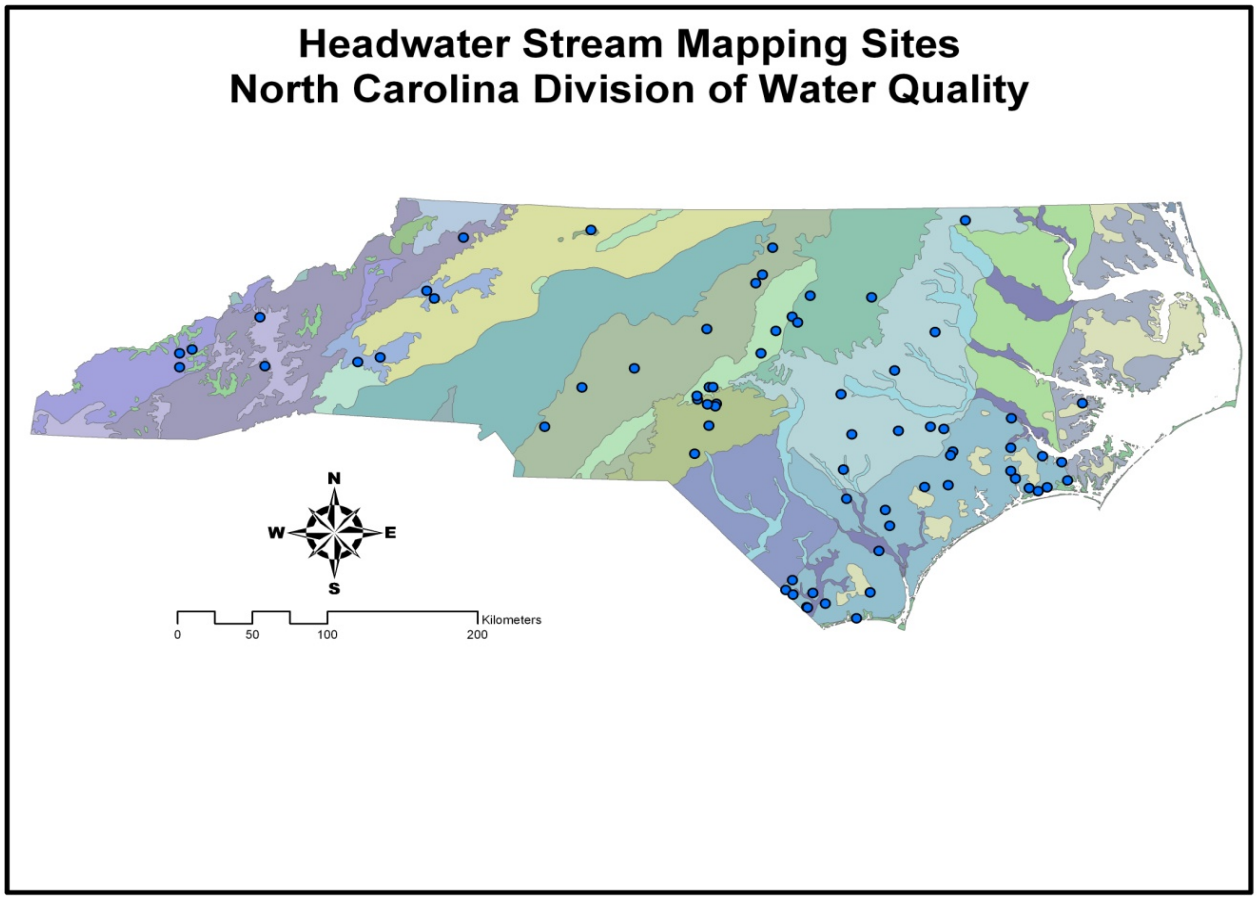
Stream Mapping Methods

Model applied to test areas



Accuracy

Progress



12 Ecoregions
84 watershed sites

Length

~ 700,000 meters (430 miles) stream

- 176,360 meters (100 miles) Int.
- 530,596 meters (330 miles) Per.

Stream Mapping: Implementation

- First test of stream maps for regulatory use
- Major NC DOT road project – Kinston Bypass
- Cooperators: FHWA, USACE, USFWS, USEPA, NC DWQ, NC Wildlife Resources, NC DOT
- Working through use, application, limitations of data

Conclusion

- Value of partnerships at staff level
- Funding positions across agencies important
- Communication between regulatory and non-regulatory agencies essential
  - Regular meetings during method development and training
  - Similar language developed between agencies
  - Common interests nurtured

Next Webinar

- **Step 2 of the IEF: Characterize Resource Status and Integrate Natural Environment Plans**
- Maine's Department of Inland Fisheries and Wildlife and Department of Transportation will share lessons from their collaborative effort, *Beginning with a Habitat*, a habitat-based approach to conserving wildlife and plant habitat on a landscape scale.
- www.environment.fhwa.dot.gov/ecological