Supporting Municipal Actions to Protect and Improve Water Quality

March 1, 2016

Purpose of the Project

- **Improve the ability of organizations to assist municipalities in their efforts to improve and protect water quality.**
- **Main research questions:**
  - What are the barriers to, and conditions of, success for municipal-based conservation practices
  - What municipal TA services are working?
  - How can they be replicated and improved?
  - Where and how could TA be more effective?

Project Team

- **Alison Hastings** – Manager, Office of Communications and Engagement
- **Patty Elkis** – Division Director, Planning
- **Christina Arlt** – Senior Planner
- **Melissa Andrews** – Environmental Planner
- **Kim Korejko** – Manager, Geospatial Resources
- **Chris Linn** – Manager, Office of Environmental Planning

Project Components

- **Task 1:** Plan project and establish the Municipal Technical Assistance Advisory Panel (MTAAP)
- **Task 2**: Analysis of municipal TA support services through MTAAP engagement
- **Task 3:** Establish protocol for municipal interviews and outreach
- **Task 4:** Understand common barriers to, and conditions of, success for municipal-based conservation practices
- **Task 5**: Recommend TA practices, tools, and incentives to meet municipal needs, as endorsed by MTAAP
- **Task 6**: Complete final report and distribute to MTAAP, expanded stakeholder group, DRWI Coordinating Committee, and others as identified

Timeline – July 2015 – Dec 2016

- **July 2015 to April 2016 :** MTAAP formation, knowledge sharing, and peer learning (Tasks 1 & 2)
- **Mar to Sept 2016:** Establish municipal interview protocol and conduct outreach (Tasks 3 & 4)
- **Sept to Dec 2016**: TA recommendations (Task 5)
- **Dec 2016**: Final report (Task 6)
- **Post Dec 2016**: Further Disseminate report

Role of MTAAP

- Approx. 4 – 6 meetings
- Provide baseline understanding of municipal TA services and municipal-based conservation practices
- Share knowledge and facilitate peer learning
- Guide engagement with municipalities
- Inform and prioritize final recommendations
- Help gather feedback at area workshops and conferences (ex. Watershed Forum, WPF Winter Gathering)
- Help present MTAAP final recommendations (ex. APA-PA Annual Conference)

MTAAP Timeline – So Far….

- **December 1, 2015** – MTAAP Mtg #1: Introductions, Overview, and Stakeholder Early Findings
- **March 1, 2016** – MTAAP Mtg #2: Shape Municipal Outreach Phase
- **April 15, 2016** – MTAAP Webinar – Review Municipal Outreach Materials
- **TB D June 2016** – MTAAP Mtg #3: Early Findings from Municipal Outreach Phase; Promising Recommendations
- **TBD Sept/Oct 2016** – MTAAP Mtg#4: Findings from Municipal Outreach Phase; Promising Recommendations

MTAAP Support

- **Travel reimbursement**
  - Mileage, parking & transit fares
- **Participation stipends**
  - Support on a per meeting basis
  - Support for facilitating or presenting at area workshops/conferences
- **Separate consulting opportunities**

Stakeholder Interviews: Findings

Purpose of Interviews

- Learn about new stakeholders as quickly as possible
- Reconnect with partners
- Collect opinions on threats, strategies and recommendations
- Solicit best practices (organizations and municipalities)
- Use responses throughout 18-month study

Methodology

- Interview period from early August 2015 through February 2016
- Project Team conducted "2nd Round Interviews" based on most referenced organizations and/or individuals
- For Today's findings…. not scientific:
  - We did not record the interviews; may have missed some comments
  - Qualitative
  - Judgement calls

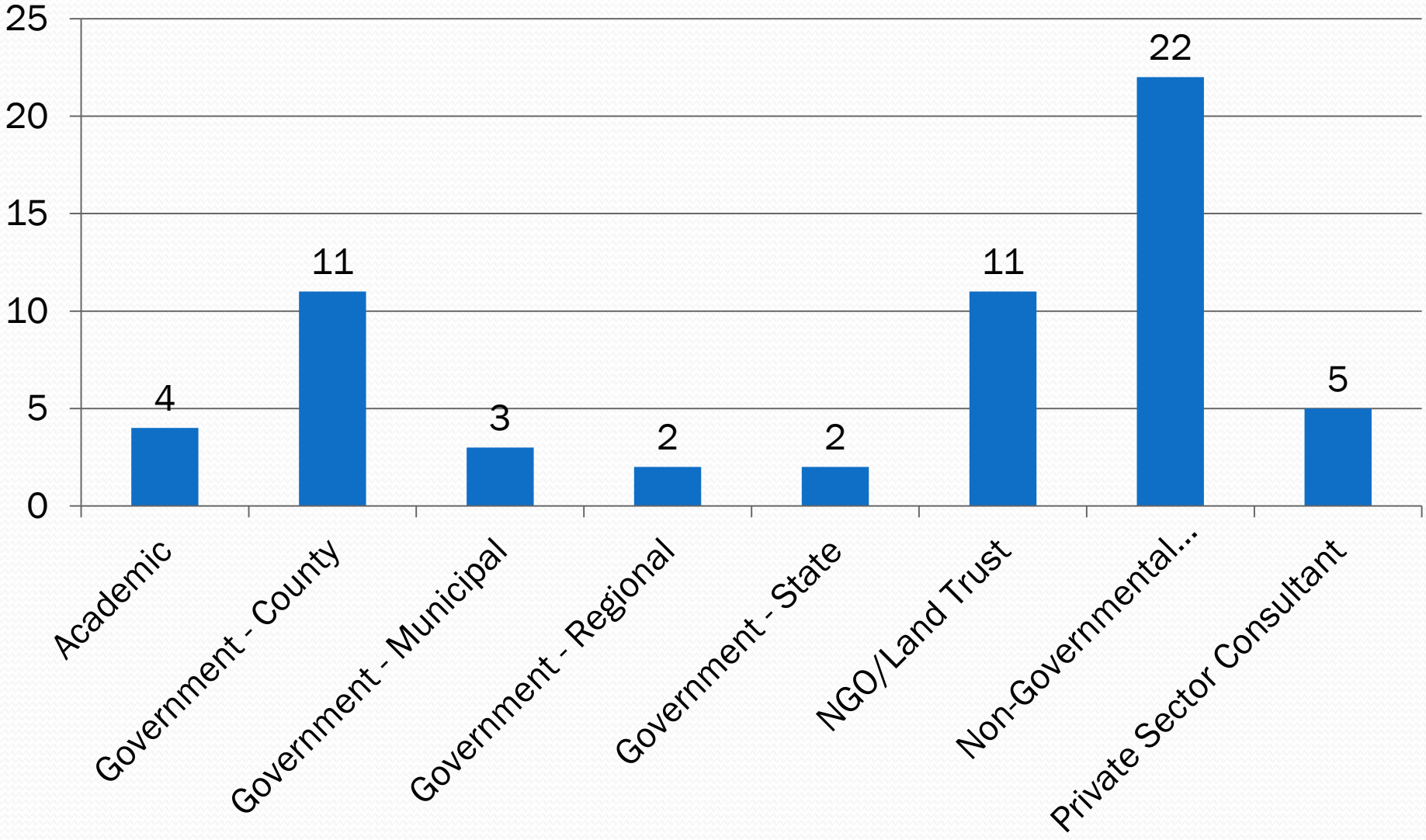
Methodology con't

- 60 individuals in 55 interviews
- Responses coded into most general possible categories (ex. "Education")
  - Identify overall trends; use "wisdom of the group"
  - OK to take broad brush strokes
  - Outliers are still important; will be used throughout project

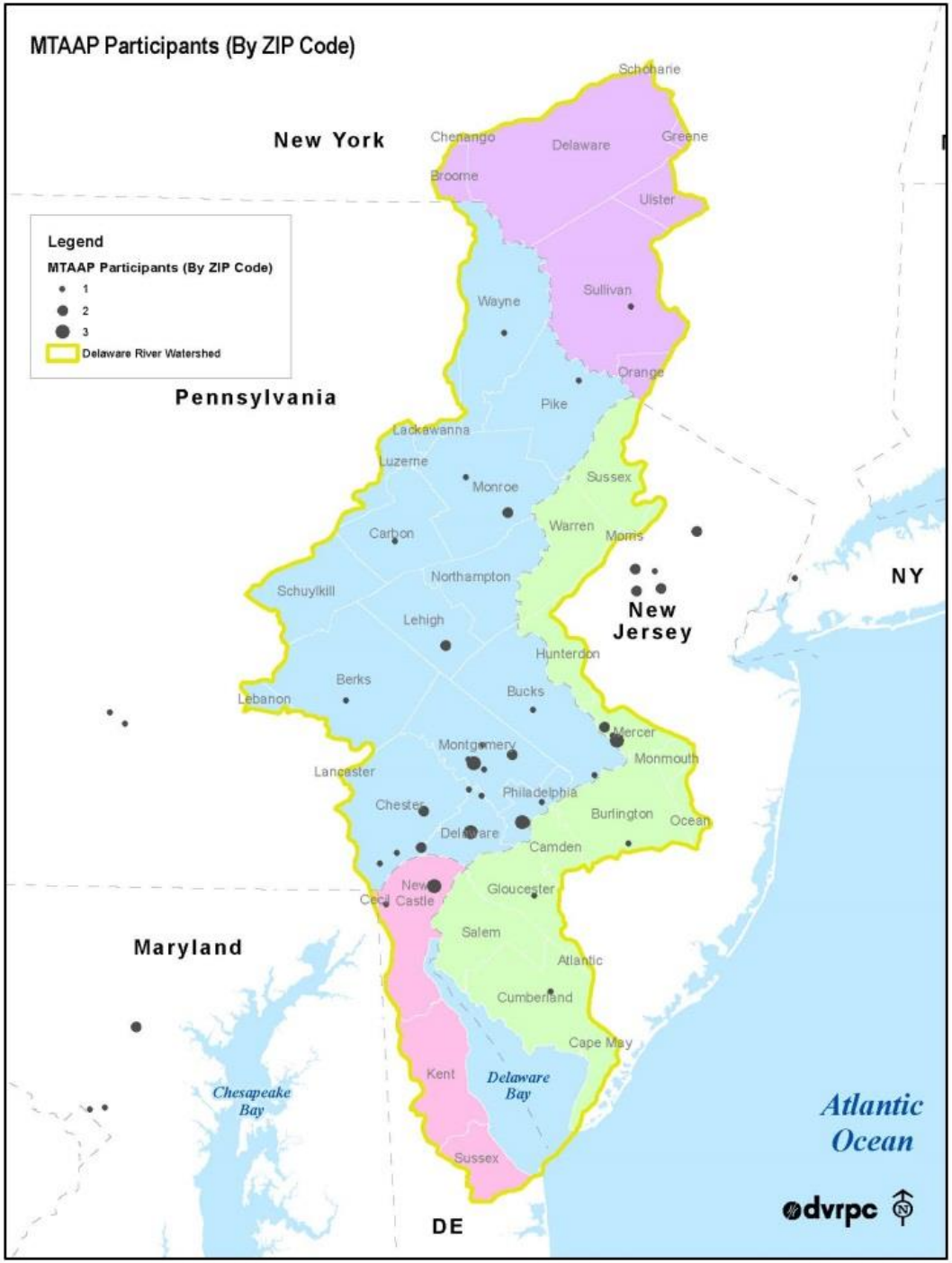
Things to think about…

1. What threats, strategies, or municipal actions are most important?
2. What are the conditions of success that municipalities need in order to improve water quality?
3. What are some recommendations we can develop throughout this project?

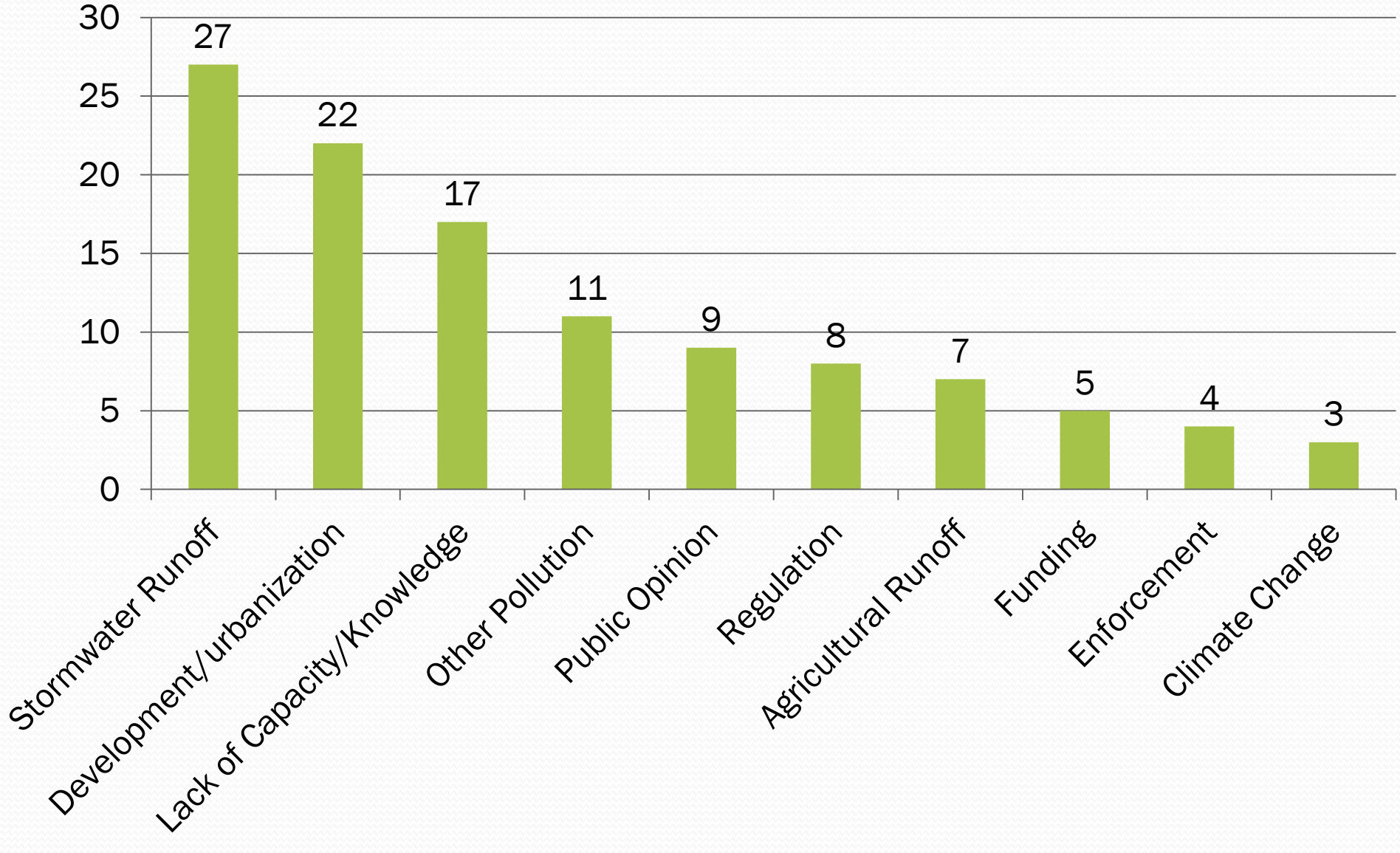
Who we spoke to…



Who we spoke to



Biggest Threats – to the watershed



Threat – Stormwater Runoff

- Existing development
- Runoff from urbanized areas
- Untreated stormwater
- Degraded stream riparian corridors/ banks/ channels
- Nonpoint source pollution
- Flooding

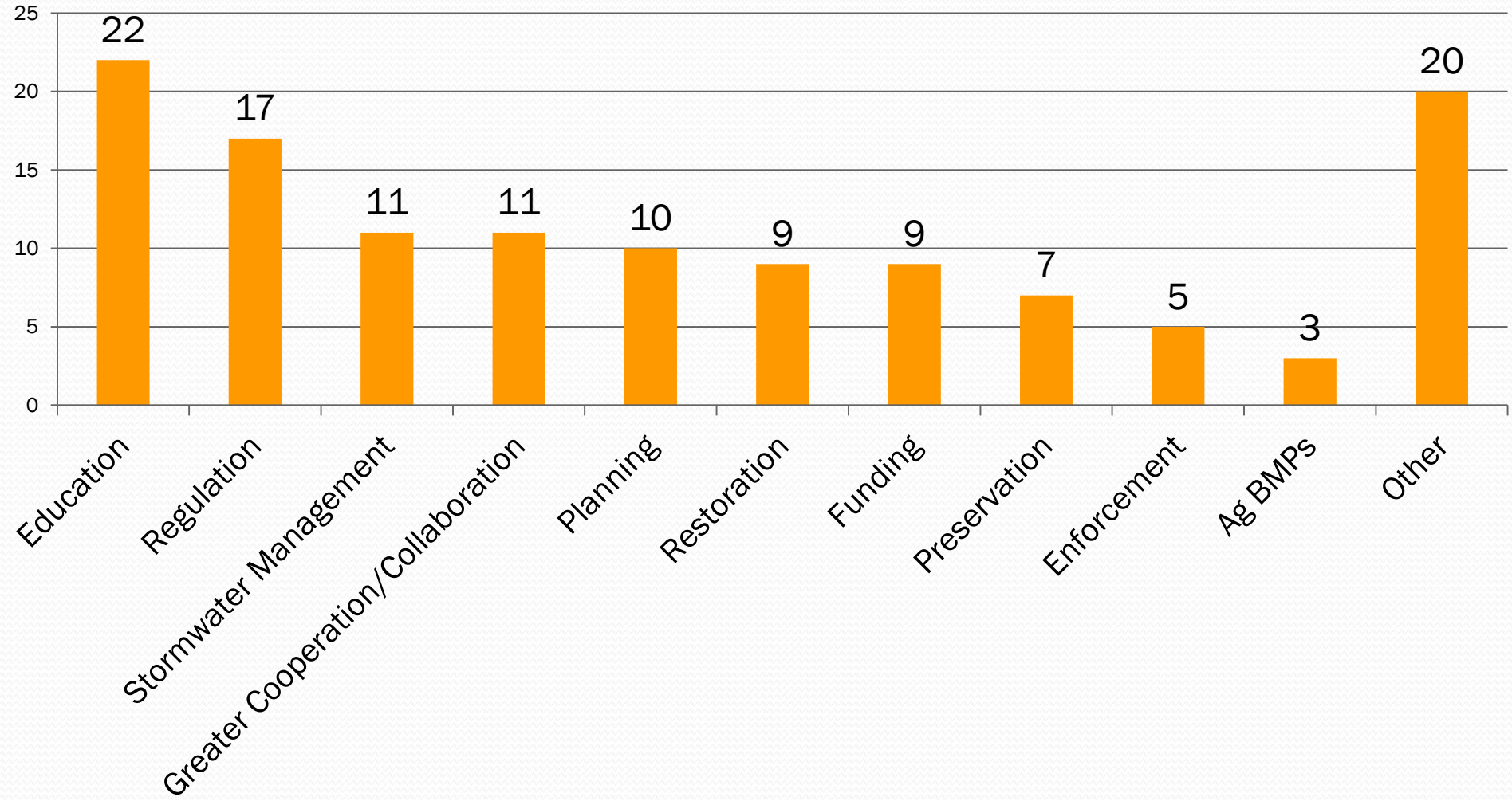
Threat – Development/Urbanization

- New development
- Poor land use decisions
- Fragmentation
  - Threat of pipelines and/or other energy infrastructure
- Deforestation
- Property owners infringing on stream corridors
- People

Threat – Lack of Capacity (Knowledge & Time)

- Land use regulations are complicated
  - One size doesn't fit all
  - Building a barn or a subdivision
  - Intimidated by law
  - Fear and real burden of lawsuits
- Education of staff, elected officials, and general public
- Municipalities have heavy burden; triage; too many small municipalities
- Training is one part, time is another

Important Strategies – to improve or maintain water quality

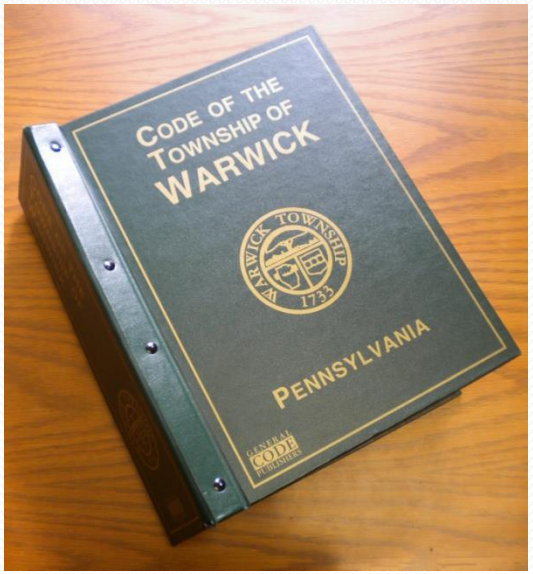


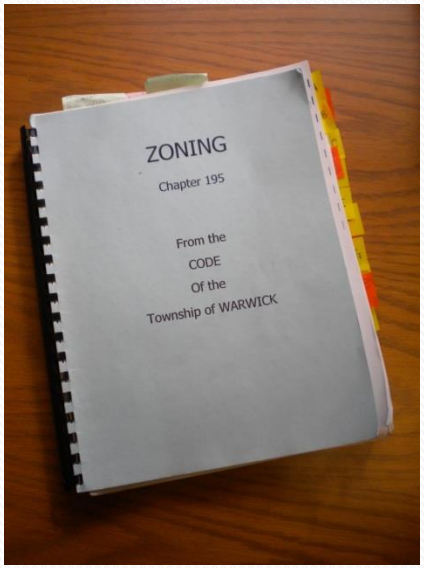
Strategies - Education

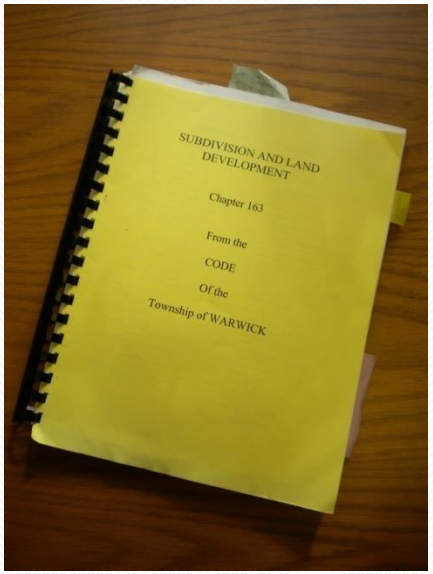
- Educate everyone involved in the development process, from planning board member to municipal engineer
  - Officials are dependent on professional staff
- Encourage individual's behavior change (ex. pick up dog poop)
- Organize clean-up activities
- Educate landowners (stream buffers)
- Employ communication tactics/strategies
  - Communicate water quality monitoring data
  - Branding the watershed, like the Chesapeake Bay

Strategies - Education

Strategies - Regulations







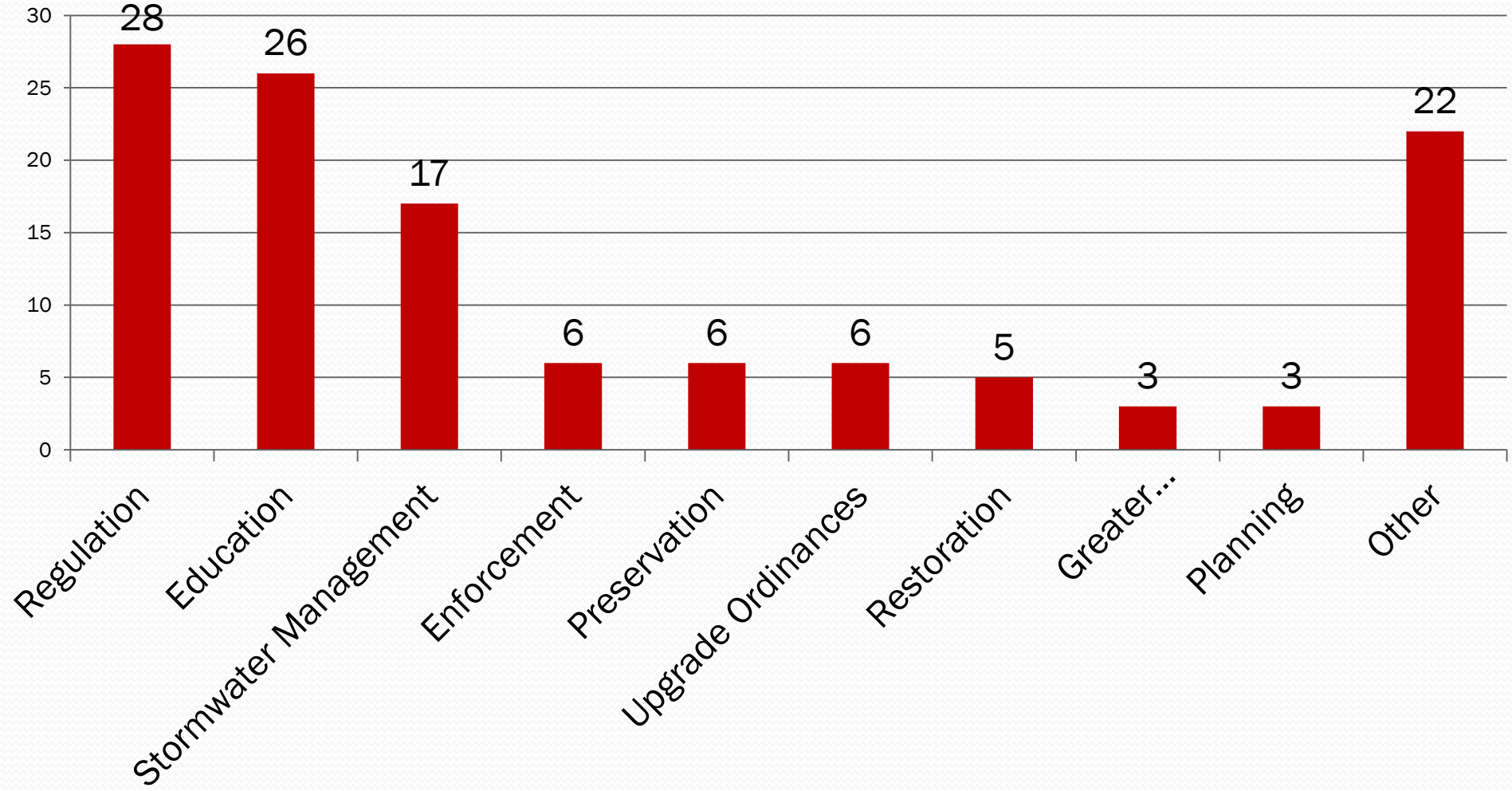
Strategies - Regulations

- Educate everyone involved in the development process, from planning board member to municipal engineer
  - Officials are dependent on professional staff
- If not present, adopt local land use ordinances:
  - Riparian buffer
  - Stormwater
  - Zoning
  - Land Development
- Update ordinances to implement or be consistent with comp plan, county plan, etc.
- Improve ordinances (ex. increase stream buffer from 50’ to 100’)
- Must have state enabling legislation to empower municipalities (ex. Stormwater authorities and/or stormwater billing)

Strategies - Stormwater Management

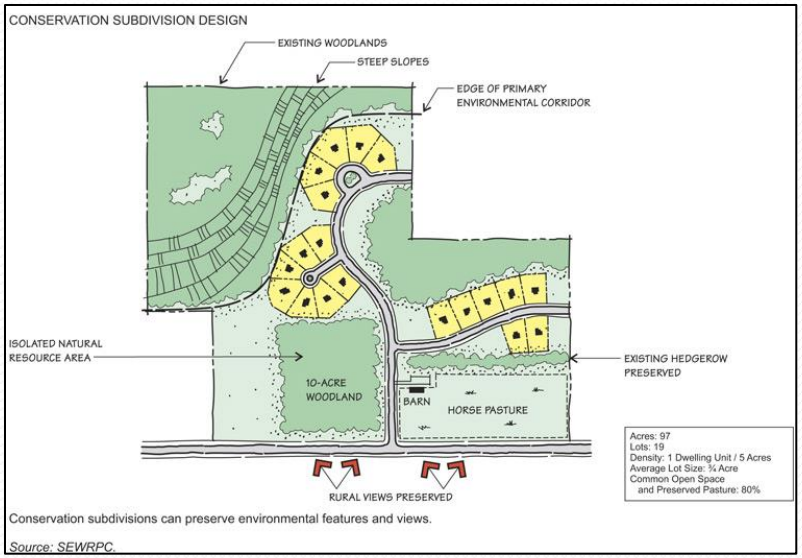
- Retrofit existing development (permits for sheds, driveways)
- Role-model on public property; demonstration projects
- Prioritize nonstructural controls; green infrastructure
- Create incentives for private landowners

Important Municipal Actions



Municipal Action - Regulation

- Update ordinances
  - Riparian buffer (100', 150', 300')
  - Stormwater
  - Zoning
  - Land Development
- Other types of ordinances
  - Trees
  - Steep slopes
  - Groundwater/Water Resource Protection Areas (encourage recharge; reduce possible contamination)
  - Conservation Design Ordinances



Municipal Action - Education

- Educate everyone involved in the development process, from planning board member to municipal engineer
- Residents (ex. pick up dog poop)
- Create incentives for staff/officials training
  - Only choir attends
- Organize clean-up activities
- Employ communication tactics/strategies
  - Communicate scientific information

Municipal Action - Education

"Innovate or get basins"

"Conventional practices are still the norm"

Clean-up activities: "Local impact matters"

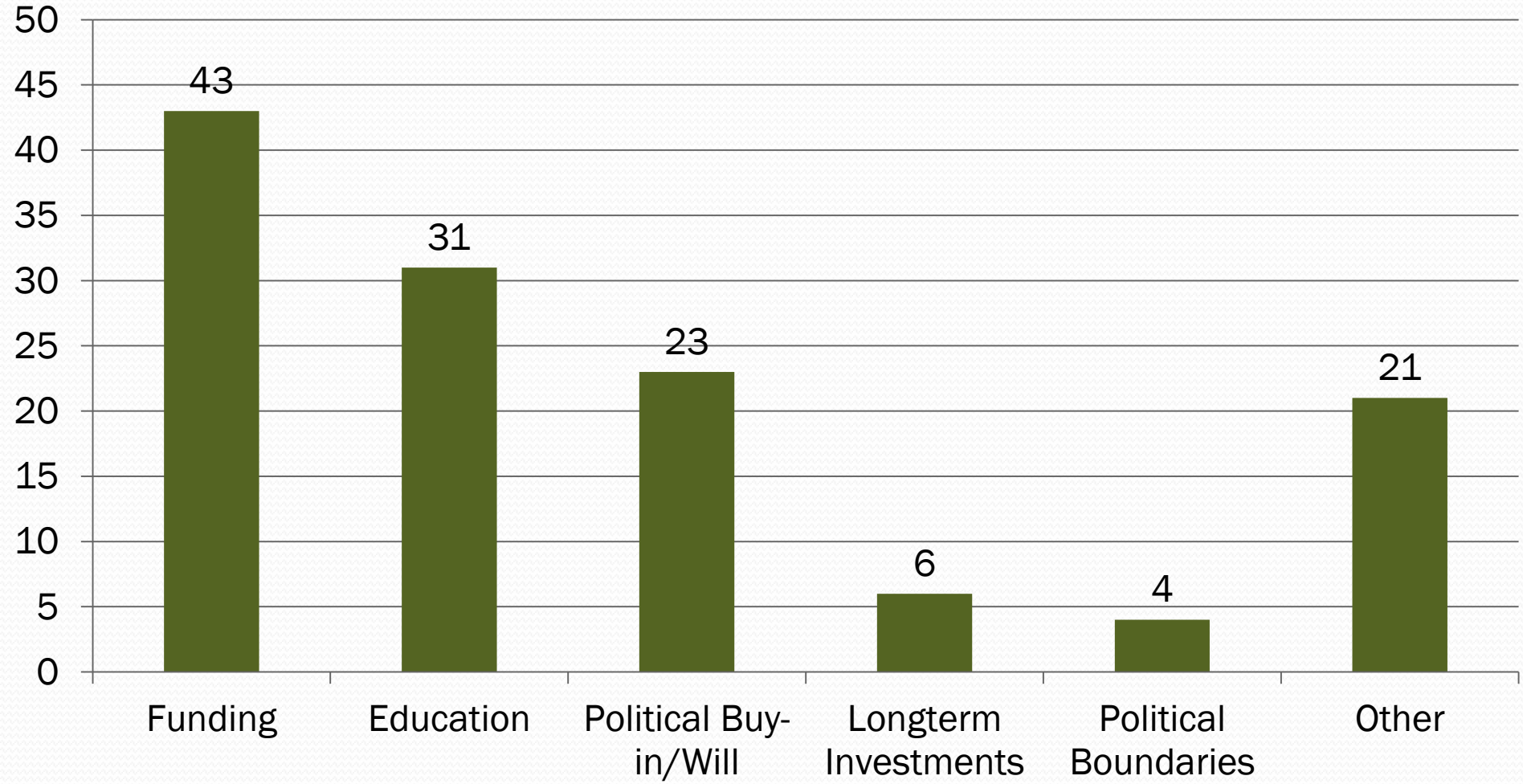
Optional Training: "Only the choir attends"

"How do we work with engineers?"

Municipal Action- Stormwater Management

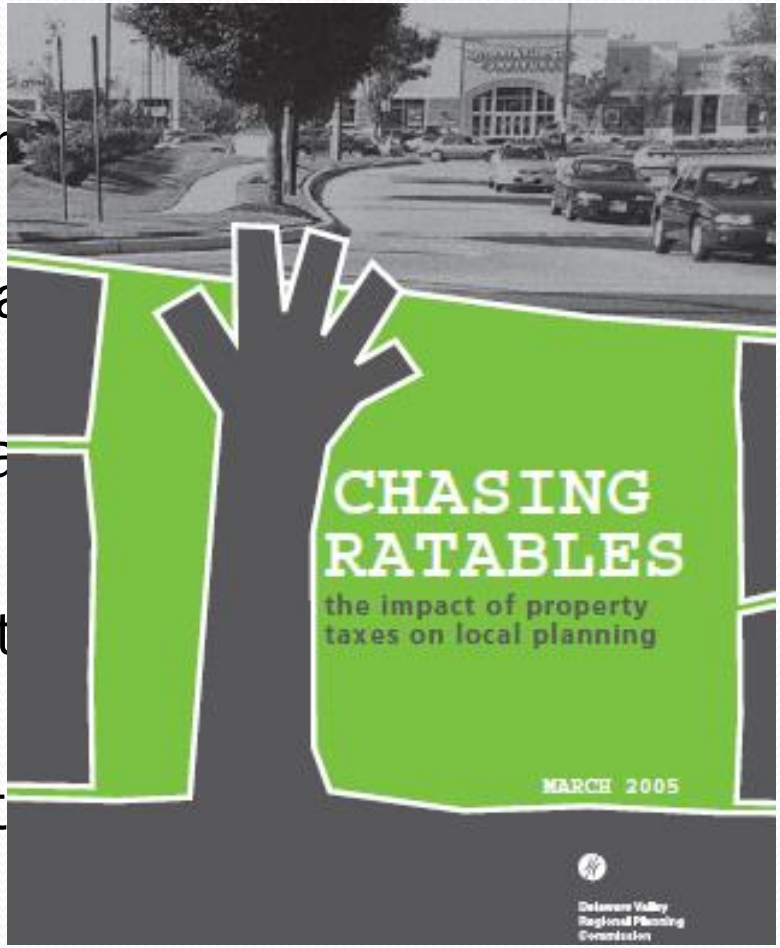
- Funding
  - Dedicate tax or regular part of budget
  - Institute Fees
- Best Practices
  - Require them on all disturbances
- Lead by example
  - High Profile
- Incentives!
  - For Developers (time savings?)
  - For Residents (cost-sharing?)
  - For large landowners (reduction of SW fee?)

Greatest Limitation faced by municipalities



Limitation – Funding

- Staff Time
  - Not enough people, not enough needed;
  - Need professional, qualified sta approach
- Stormwater is unfunded manda
- Say yes to development:
  - Chasing ratables – short-term t
  - Fear of lawsuits
- Limited ability and willingness t



Limitation - Education

- Training for staff:
  - All Staff
  - Engineers
  - DPW
- Education:
  - Elected Officials
  - Public

Limitation – Political Buy-in/Will

- Leadership at the municipal level
- Overcoming fear: lawsuit, change, reelection
- Unwillingness of public to demand action or pay additional taxes

Conclusions

- Cross-cutting Themes:
  - Education – elected officials, professional staff, public
  - Regulations – adopt them; update them; enforce them; assess them (repeat)
  - Stormwater management – big threat but comprehensive approach is best strategy; municipalities have opportunity to lead by example
- Undercutting Limitations:
  - Funding – Where's the revenue? Lots of expenditures: education, staff time, and technical assistance; facilities; longterm investments
  - Political Buy-in and Public Will

Recommendations

- Start systematically reviewing at June meeting
- Final report will feature “mini-proposals”
- Examples:
  - Establish legal fund for municipalities that change land use and zoning ordinances to support water quality goals
  - Create matching fund for municipalities based on training and/or continuing education credits
  - Include (and resource) County Conservation Districts and Planning Commissions in WPF cluster proposals
  - Work with PSATS, PSABS, NJ League and other one-stop shops for municipalities to raise awareness re: water quantity/quality and promote municipal tools

Municipal Outreach Phase

Project Components

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Municipal Outreach Phase

- Municipal Tools Inventory
- Municipal Case Study Methodology
  - Hypotheses – What do we want to learn?
  - Typologies – How do we organize municipalities?
  - Variables – What information do we need to collect to prove or disprove hypothesis?
    - Objective – What can we collect from third-party sources?
    - Subjective – What do we need to know from municipal stakeholders?

How can we protect water quality?

Acid Mine Drainage Abatement and Treatment Program (AMDATP) (PA)	"Net Out" of Resources (PA Only)
Adequate Public Facilities Ordinance/Concurrency/Growth Control/Timing)	Nutrient/Fertilizer Management
Advance Acquisition/Land Banking	Official Map
Agricultural Zoning (Large Lot = 40 acres+)/Agricultural Protection Zoning	On-site Septic Ordinances
Agricultural Sliding Scale Zoning	Open Space and Recreation Plans
Agricultural Security Areas	Orphan or Abandoned Well Plugging Program (OAWP Act 13) (PA only)
Baseline Qater Quality Data Program (Act 13) (PA)	Parking Management (reduces impervious surfaces)
Build-Out Analysis	Pennsylvania Agricultural Conservation Easement Purchase Program
Capital Improvement Program (e.g., for upkeep of waste water treatment plants and sewer infrastructure)	Parkland Dedication/Public Dedication of Lands and Fees in Lieu for Parks and Recreation
Coastal Zone Management	Planning Board Education
Comprehensive Planning (especially Multimunicipal Comprehensive Plans) - Water quality as a stated goal	Plumbing Codes that allow water reuse or protect against groundwater impairment (Building Code)
Community Visioning	Preferential Property Taxation
Conservation by Design/Cluster Development/Performance Zoning/Open Space Design Ordinance	Recharge Zone Protection
Conservation Easement Program	Reclaiming Brownfields / Industrial Sites Reuse Program (PA)
Cost of Community Services Study	Regional Tax Base Sharing
Creating Sustainable Community Parks (Land Management)	Right-to-Farm Provisions
Conservation Reserve Program (CRP)	Riparian Buffer Ordinance/Stream Corridor Protection Ordinance
Conservation Reserve Enhancement Program (CREP)	Riparian Buffer Protection Agreement
Development Threat Analysis	Runoff control or runoff reduction BMPs on agricultural operations
Development Impact Fee	Sea Level Rise Planning and Climate Ready Estuaries
Environmental Advisory Council/Environmental Commission	Source Water Protection Planning
Environmental Impact Assessments	Special Assessments
Environmental Resource Inventory (ERI)/Natural Resource Inventory	Subdivision and Development Review/Site Design
Erosion and Sedimentation Ordinance	Streambank Fencing
Farmland Preservation Plan	Stream Channel/Stream Bank Stabilization
Fee Simple Land Purchase/Program	Steep Slope Ordinance
Floodplain Management Ordinance	Stormwater Ordinance
Flood Mitigation Program (PA)	Stormwater BMPs (Structural and Non-Structural)
Forestry Zoning (80+ acres)	Subdivision and Land Development Ordinance (SALDO)
Green Stormwater Infrastructure (Green Roofs, Green Streets, Rain Gardens, Bioswales, Naturalized Basins, etc.)	Stormwater Outfall Mapping
Greenway Plan	Traditional Neighborhood Development (TND)
Growth Rate Caps	Transfer of Development Rights (TDR)
Hazardous Waste Collection Program	Tree Inventory
Historic Preservation	Tree Management Plan
Impervious Surface/Cover Limits	Tree Ordinance (Buffer zones, Tree Planting Care & Standards, Specimen & Special Tree Protections)
Invasive Species Management Program	Tree Planting/Muncipal Tree Management
Sustainable Land Management Program (Invasive species, DPW training - GI maintenance, no/low mow)	Underground Storage Tank Regulations
Land Conversion Tax	Urban Growth Boundary (UGB)
Landscape Ordinances (especially those encouraging use of native plants)	Well Construction/Closure Standards
Locally Funded Open Space Program (Tax or Bond)	Wellhead Protection Ordinance
Low Impact Development	Watershed Planning
Manure Management	Watershed Restoration and Protection Program (WRPP) (PA)
Master Plan Green Building and Environmentally Sustainable Plan Element	Wetlands Management Ordinance (PA Only)
Master Plan Conservation Element	Wetlands Mapping (NJ Only)
Multimunicipal Partnerships for Recreation and Parks	Woodland Protection/Percent Tree Cover Ordinance
	Zoning (and Zoning Revisions), especially Multimunicipal Zoning

Municipal Tools

Plans	• Comprehensive Plan
Ordinances	• Zoning Ordinance • Subdivision and Land Development Ordinance
Programs	• Preservation Program
Taxes/Fees/ Bonds/Incentives	• Preferential Property Taxation
People	• Environmental Advisory Council (EAC)/Environmental Commission (EC) • Planning Commission

What tools are available to municipalities?

Tools Municipalities Could Use to Protect/Improve Water Quality

Plans	
Comprehensive Plan with Water Quality as a Stated Goal	
Tree Management Plan	
Ordinances	
Building Code/Plumbing Code (e.g., allowing water reuse)	
Erosion and Sedimentation Ordinance	
Floodplain Management Ordinance	
Official Map	
On-site septic ordinance	
Recharge Zone Protection	
Riparian Buffer Ordinance/Stream Corridor Protection Ordinance	
Steep Slope Ordinance	
Stormwater Ordinance	
Subdivision and Land Development ordinance • Green infrastructure • Low Impact Development • Impervious Surface Limits	
Tree Ordinance • Buffer zones • Tree Planting & Care Standards • Specimen & Special Tree Protections	
Wellhead Protection Ordinance	
Wetlands Management Ordinance (PA)/Wetlands Mapping (NJ)	
Zoning Ordinance • Agricultural zoning • Forestry zoning • Landscape Ordinance • Multimunicipal zoning • Conservation by Design/Cluster Development/Performance Zoning	
Programs	
Preservation Program • Conservation Easements • Fee Simple Land Purchase • Locally Funded Open Space Program (Tax or Bond)	
Sustainable Land Management Program • Public Works training re: green infrastructure maintenance • No/low mow • Reduced pesticide/fertilizer application • Demonstration projects	
Transfer of Development Rights Program	
Tree Inventory	
Taxes/Fees/Incentives/Bonds	
Preferential Property Taxation	
People	
Environmental Advisory Council/Environmental Commission	
Planning Commission	

The Municipal Tool Inventory

- What tools are available to municipalities to protect or improve water quality?
- Which tools are most effective?
- Where are these tools most effective?
- What do the tools need to have in order to be effective?

Are any municipal tools missing?

- If so, let's add them to the list.

Municipal Managers, Staff, Elected Officials have a lot on their plate


Bonds
Police Union
Insurance
Road Maintenance
Crime
Workman's Comp Claims
Lawsuits
Contracts
H.R. Issues
Boards & Commissions
Emergency Management
Auditors
Municipal Pensions
School District
Parks & Recreation
Ordinances & Resolutions
Taxes
Grant Applications
State Agencies
Business Owners
Trash & Recycling
Residents
Right to Know Requests
Planning & Zoning

Limited Time, Attention, & $$$

- Writing ordinances takes time and money
- Enforcing ordinances takes time and money

Which tools are most effective?

- Let's prioritize.
- Everyone has 3 dots. Come up and vote!
- Reconvene in 10 minutes; by breakout group:

  Group 1: Pennsylvania Room – Melissa Andrews

  Group 2: New Jersey Room – Alison Hastings

  Group 3: Conference Room Front – Patty Elkis

  Group 4: Conference Room Back – Chris Linn

Small Group Discussions #1

- One group for each of the top four tools
- Where is this tool most effective?
  - What type of municipality?
  - What part of the watershed?
- What needs to be included in this tool for it to be effective?
- Who provides technical assistance for this tool?
  - Information resource
  - Hands-on technical assistance

Please Join Us For Lunch!

http://espressoandcream.com/2012/08/vegetarian-lasagna-with-goat-cheese-and-summer-squash.html