



# **Watershed Watch Network**

**Danielle Donkersloot**

**Volunteer Monitoring Coordinator**

**Watershed Education, Estuaries,  
Monitoring Program**

**Division of Watershed  
Management**

**NJ Department of Environmental  
Protection**

Presented to: NJ Water Monitoring Coordinating Council - May 25, 2005

# Watershed Watch Network

## **Mission Statement:**

*“To foster and develop a sense of stewardship toward local waters that serves to remind or give warning of the health of the watershed.”*

# Watershed Watch Network Goals

- Provide support & training to citizens
- Offer a program that provides a *range of rigor* so that virtually everyone can participate at some level.
- Generate a on-line data management system

# Watershed Watch Network Goals

## cont.

- Recognition/registration of volunteer monitoring programs that complete a DEP training course and/or have a know level of quality assurance by DEP data user

# Watershed Watch Network Goals

## cont.

- Annual Volunteer Monitoring Summit for NJ monitoring community (Nov. 4&5, 2005)
- Provide monitoring updates and information through *Watershed Focus* newsletter & via email
- Create a Lake Monitoring Program

A group of people, including children and adults, are gathered in a field near a stream. They appear to be engaged in an outdoor activity, possibly related to water quality monitoring or environmental education. The scene is outdoors with trees and a stream in the background.

# Watershed Watch Network Goals, cont.

- Create a guidance manual specifically for defining possible data uses at the DEP
- Establish a consistent numbering system for stream segment identification
- Watershed Watch Network Councils
  - Internal Advisory Council
  - External Volunteer Monitoring Advisory Council

# WWN Internal Advisory Council

The background of the slide is a photograph of a body of water, likely a wetland or marsh. In the foreground, several dark, weathered wooden pilings or posts are partially submerged in the water. The water has a slightly rippled surface. In the background, there is a dense thicket of tall, green reeds or grasses, some of which are leaning over the water. The overall scene is natural and somewhat overgrown.

- Fresh Water and Biological Monitoring
- Division of Science and Research
- Division of Watershed Mgt
- Office of Quality Assurance
- EPA Region 2

# WWN External Advisory Council

- NGO, Volunteer Monitoring Coordinators
- Volunteers (paid and unpaid)
- EPA Region 2
- Office of Quality Assurance
- Bureau of Fresh Water and Biological Monitoring
- Division of Watershed Management
- Delaware River Basis Commission
- Others as needed



# Who is the Watershed Watch Network?

- 34 groups
- Over 770 volunteer monitors throughout the State
- Approximately \$460,400 is spent per year
- Average cost for a Watershed Association is between \$7,000 to \$10,000 per year (not including salaries)

# Organizations include:

- Delaware Riverkeeper Network
- Delaware River Basin Commission
- Hackensack Riverkeeper Network
- Stony Brook Millstone Watershed Association
- Pompeston Creek Watershed Association
- Great Swamp Watershed Association
- Pequannock River Coalition
- Pohatcong Creek Watershed Association
- South Branch Watershed Association
- Upper Raritan Watershed Association
- US EPA Region 2
- Wallkill River Watershed Management Group

# Myths of Using Volunteer Collected Data

- No or Poor Quality Assurance & Quality Control
- Volunteers have “hidden agendas”
- Volunteers are not scientists



# Reality of Using Volunteer Collected Data

- We need more data at a higher frequency of collection
- EPA has encouraged use of volunteer collected data
- Volunteers want to do it right



# The New Approach

- Allows for volunteers to pick their level of monitoring involvement based on:
  - Purpose for monitoring
  - Intended data use
  - Intended data users

# Options for Involvement

- Tier A: Environmental Education
- Tier B: Stewardship
- Tier C: Community Assessment
- Tier D: Indicators/Regulatory Response

# Tier A: Environmental Education

## Data Users

- Participants
- Students
- Watershed residents

## Data Use

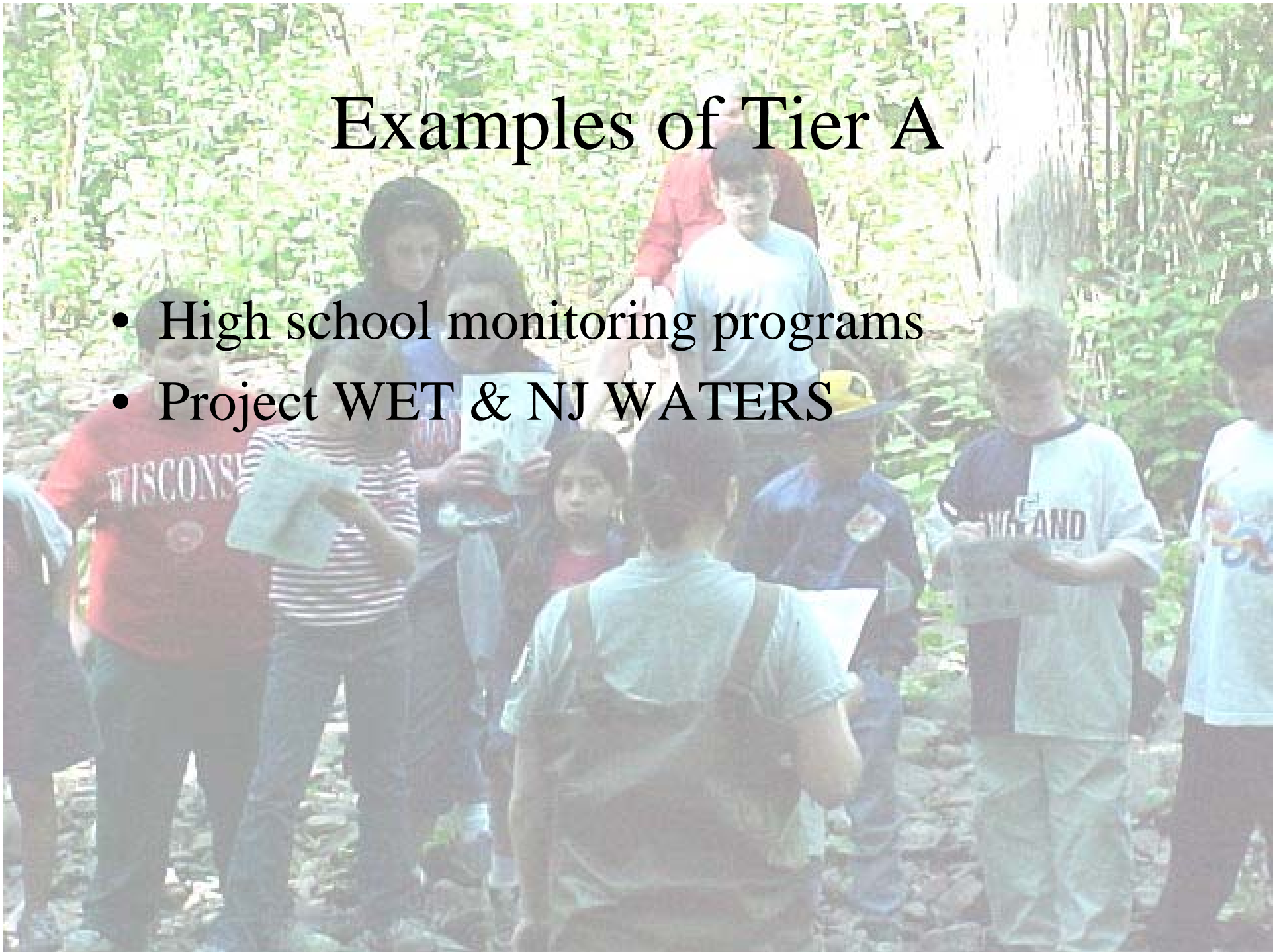
- Promote stewardship
- Raise their level of understanding of watershed ecology

## Quality Needed

- Low level of rigor, but use sound science
- Wide variety of study designs are acceptable
- Quality assurance (QA) optional

# Examples of Tier A

- High school monitoring programs
- Project WET & NJ WATERS





## Tier B: Stewardship

### Data User

- Participants
- Watershed residents
- Landowners
- Local decision makers
- Possibly DEP

### Data Use

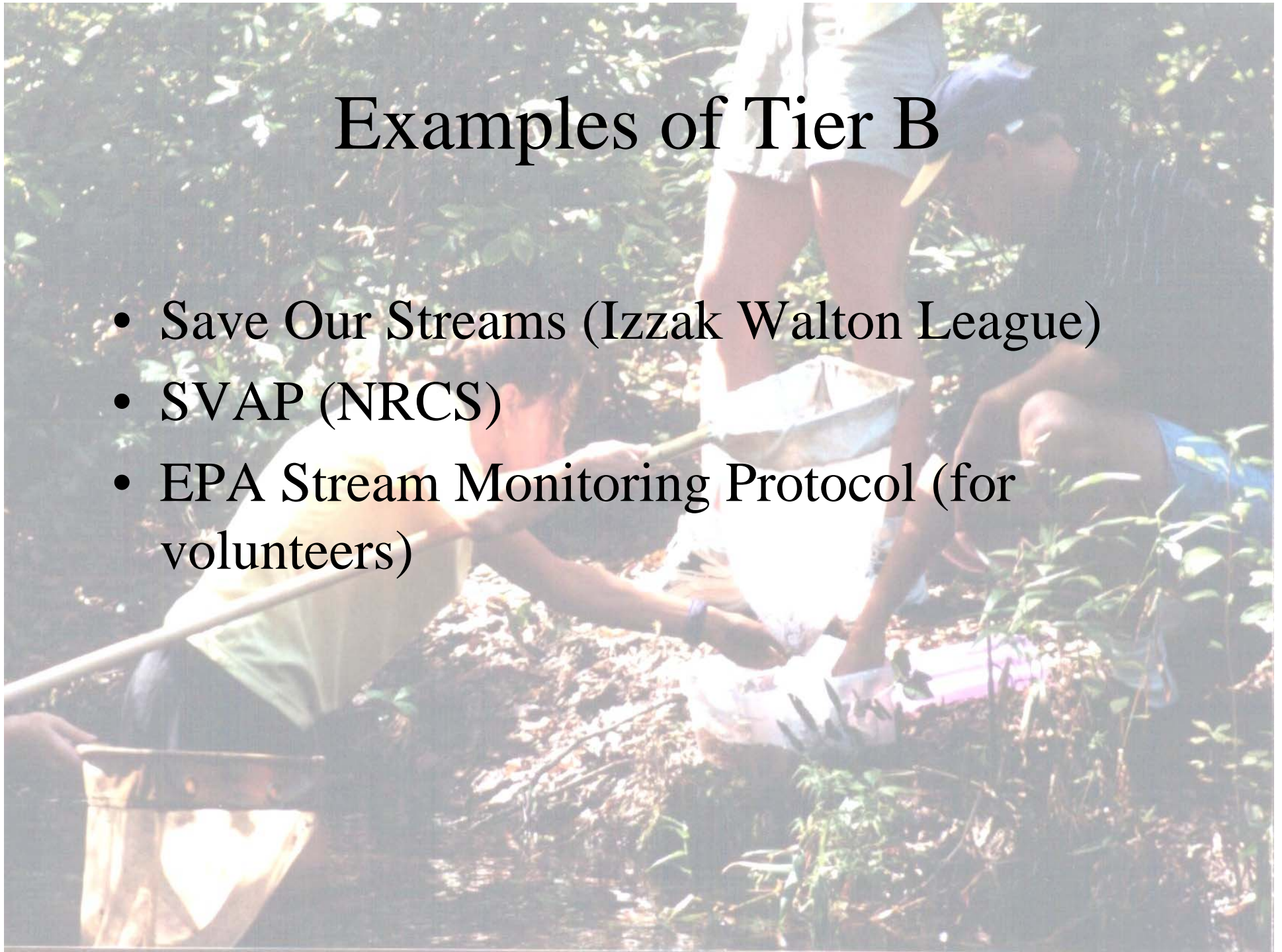
- Gain understanding of existing conditions & any changes over time
- Screen for & identify problems

### Quality Needed

- Low to medium rigor
- Variety of study designs is acceptable
- Training is required
- QAPP desirable

# Examples of Tier B

- Save Our Streams (Izzak Walton League)
- SVAP (NRCS)
- EPA Stream Monitoring Protocol (for volunteers)



# Tier C: Community and/or Watershed Level Assessment

## Data Users

- Local decision-makers
- Watershed association
- Environmental organizations
- possibly DEP

## Data Use

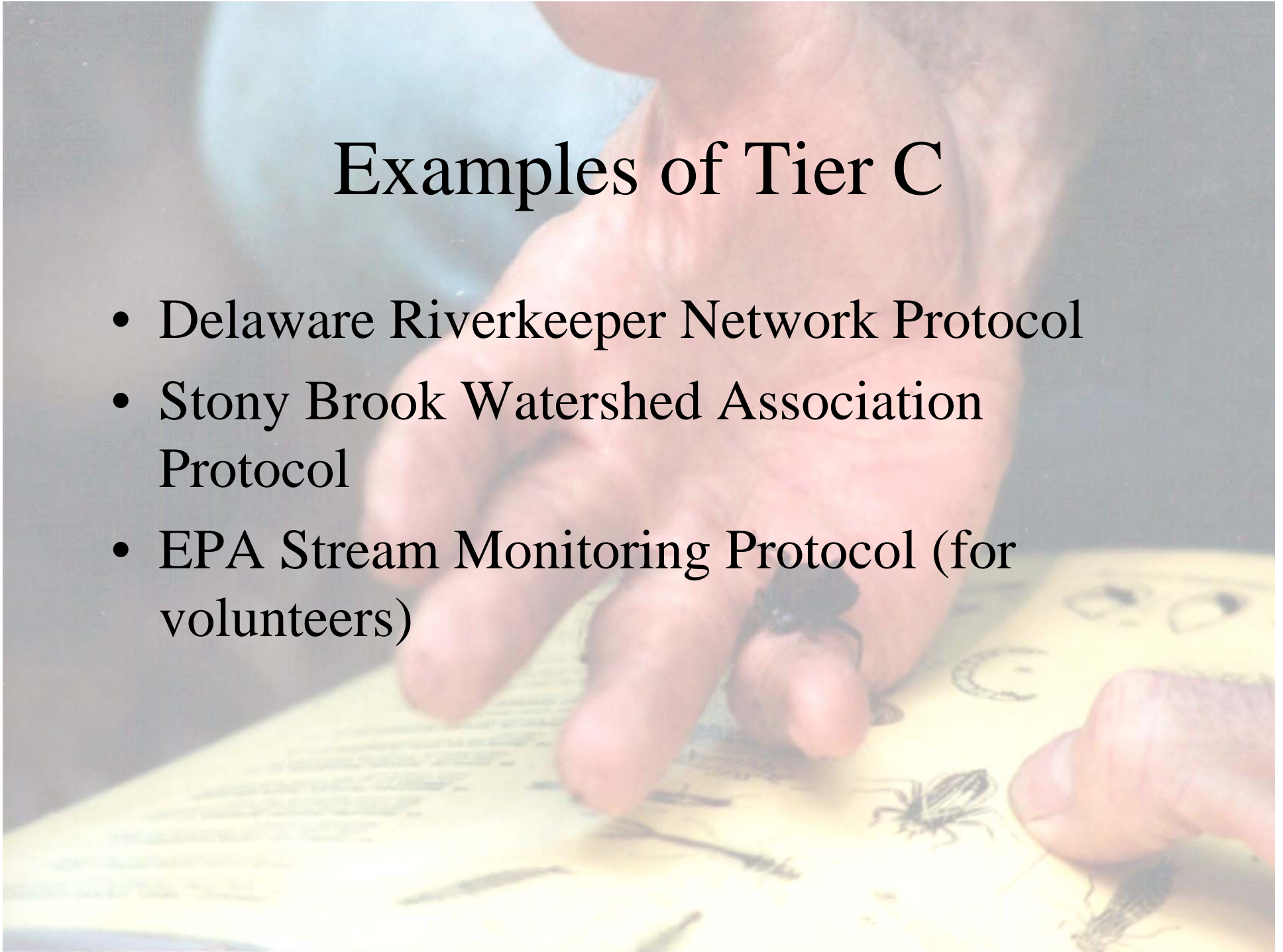
- Assess current conditions
- Track trends
- Source track down of Nonpoint source pollution

## Quality Needed

- Medium level of rigor
- Data needs to reliably detect changes over time & space
- Study design
- QAPP required

# Examples of Tier C

- Delaware Riverkeeper Network Protocol
- Stony Brook Watershed Association Protocol
- EPA Stream Monitoring Protocol (for volunteers)



# Tier D: Indicators/Regulatory Response

## Data Users

- NJDEP
- Local decision-makers
- Watershed associations
- Environmental organizations

## Data Use

- Assess current conditions & impairments
- Supplement agency data collection
- Research
- Evaluate best management practices (BMP) measures


## Quality Needed

- Medium to high level of rigor
- Study design and methods need to be equivalent and recognized by agencies using data
- Training required
- QAPP required

A blue damselfly nymph is shown resting on a light-colored, textured rock in a stream. The nymph's body is elongated and segmented, with a prominent blue color. Its legs are spread out, and its wings are folded. The background is a blurred view of the stream and surrounding rocks.

# Examples of Tier D: (NJDEP/USEPA QAPP approved)

- Pequannock River Coalition (Temp. Monitoring)
- Pompeston Creek Watershed Association
- Shark River Clean-up Coalition
- Wallkill Watershed Management Area 2



# NJ Water Monitoring & Assessment Strategy 2005-2014

Volunteer collected data is now integrated into the NJDEP Monitoring Matrix:

- Stream Monitoring
- Lake Monitoring
- Monitoring of Tidal Rivers & Estuaries
- Wetland Monitoring

# Uses for Volunteer Data Collected Data

- Education & Stewardship Building
- Problem Identification
- Local Decisions
- Research
- NPS Assessment
- Regulatory Response
- Screening Tool
- Monitoring the Success/Failure of Restoration Projects





# Who Will Use the Data in DEP?

- Watershed Area Managers
- Water Assessment Team
- Modeling Team
- NPS Program
- 319 Program
- TMDL Program
- Other Programs or Divisions

# Addressing Data Quality Issues

- The Program or Division will need to review and approve the QAPP of the monitoring group
- The Water Quality Collection Methods will be checked and audited by the Office of Quality Assurance and the volunteer coordinator
- The program will continue to work closely with Fresh Water and Biological Monitoring

# Addressing Data Quality Issues (cont.)

- **The volunteer coordinator will work closely with the volunteers to insure data quality**
- **Trainings & recertification trainings will be offered annually**
- **QAPPs will be updated and modified as needed**

# The Future

- 3rd Annual Monitoring Summit
- Training and workshops
- Close working relationship with current monitoring groups
- Coordination among NJDEP data users and the Network
- Lake Monitoring Project
- Data Management Project
- Laboratory for Volunteer Monitors