



Reflections of Catchment Management in the Catskills New York

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Catskills Visit to Wales: March 2018

- 19th – 23rd March 2018
- NYC Department of Environmental Protection
- Watershed Agricultural Council
- Catskill Watershed Council
- Programme of events
- WaterSource18 Keynote





Catchment Management Driver: Filtration Avoidance Determination

Surface Water Treatment Rule (U.S. Environmental Protection Agency 1989)

- ◆ Required surface water supplies to be filtered

Systems eligible for waiver (FAD) if they meet certain criteria:

- ◆ Faecal or total coliform
- ◆ Turbidity
- ◆ Inactivation of giardia (later updated to include *Crypto*)
- &
- ◆ Maintain a watershed control program that demonstrates adequate control on activities liable to affect source water quality

**New York City is the largest unfiltered water supply in the United States.
It is one of only three large cities with an active waiver.**

Catchment Management for Multiple Benefits

Start of Programme:

- ◆ Single issue focus
- ◆ Faced community resistance

Now:

- ◆ Multi-objective, multi-partner, multi-benefit

Programmes include:

- Stream restoration
- Flood management
- Agriculture
- Forestry
- Land purchase (with willing sellers)
- Community schemes



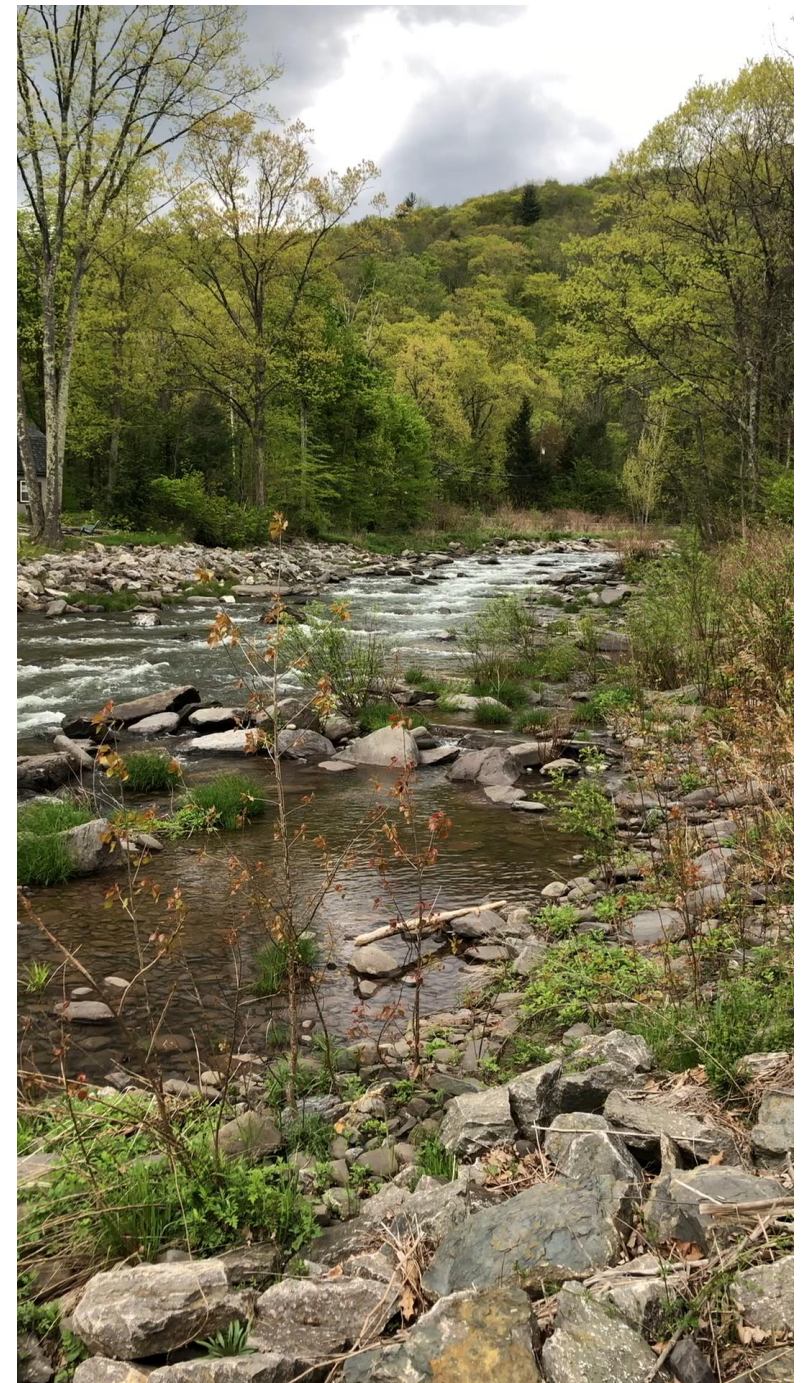


Bowl of Doom: During





Bowl of Doom: After





Watershed Agricultural Council

- ◆ Farmer-led
- ◆ Builds trust
- ◆ Single point of contact
- ◆ Whole Farm Plans
- ◆ Education programme
- ◆ Innovative approaches e.g. peer-reviewed credit reward system
- ◆ Model informed Beacons Water Group



Watershed Agricultural Council
www.nycwatershed.org





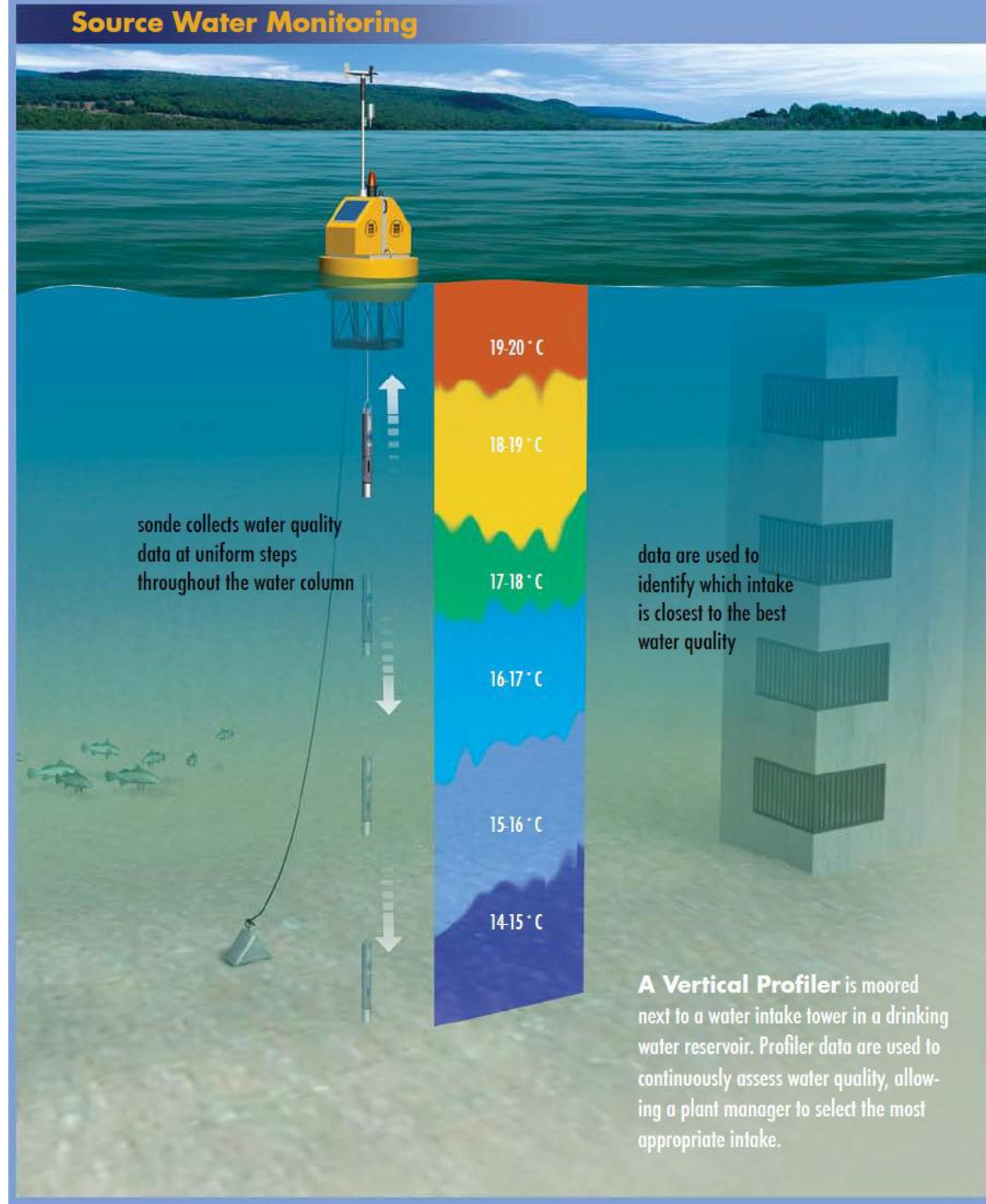
Catskill Watershed Corporation

- Community-led
- Rebuilds trust
- Septic repair, replacement and maintenance
- Stormwater controls
- Community wastewater systems
- Education grants to schools and organisations



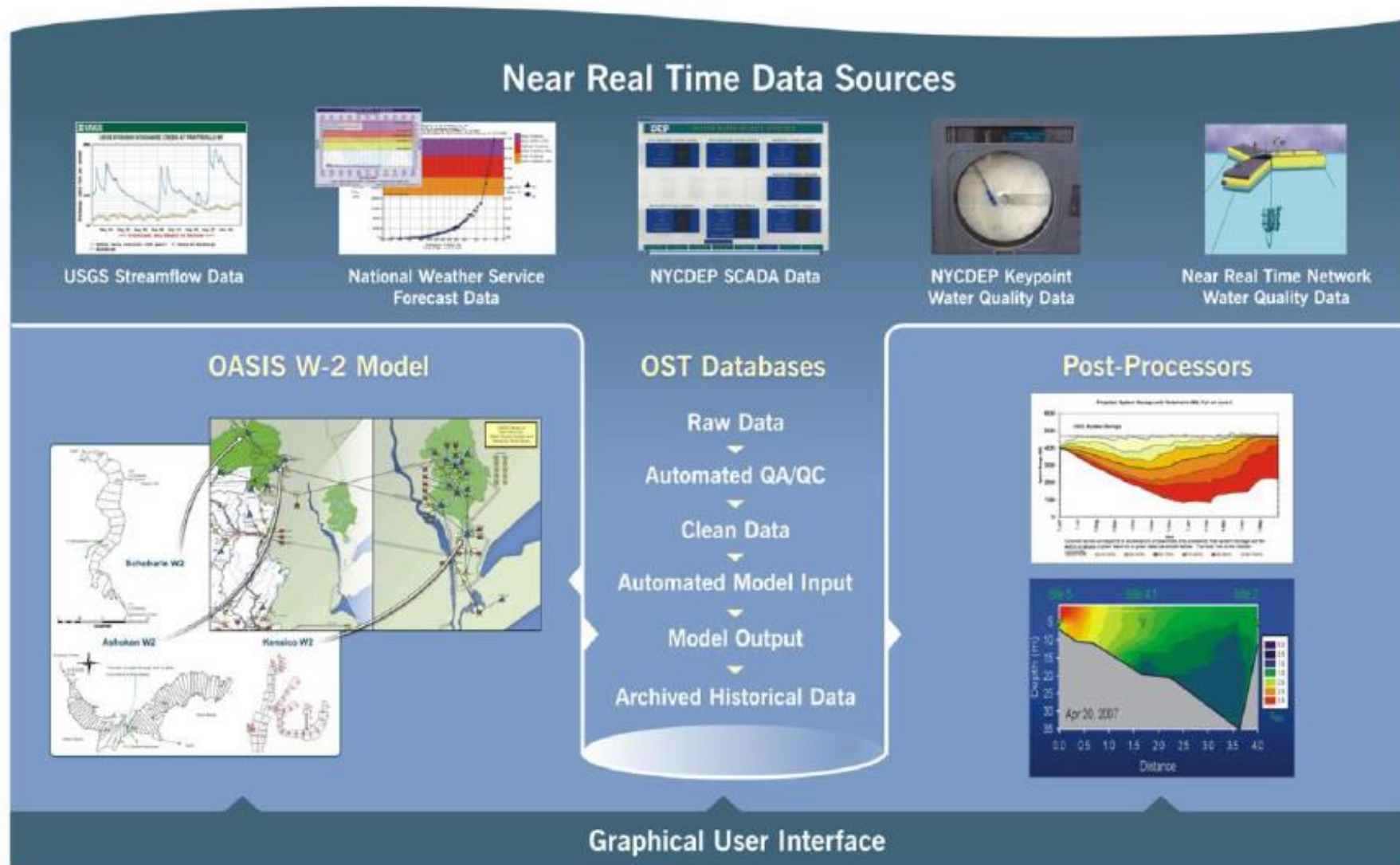
Water Quality Monitoring

- ◆ c. 53,000 samples/year throughout the watershed and NYC distribution system
- ◆ 654,000+ laboratory analyses/year
- ◆ Four NYS Certified Water Quality Laboratories
- ◆ Robotic monitoring = 1.3 million tests/year
- ◆ Grab samples
- ◆ River monitoring stations
- ◆ Reservoir buoys
- ◆ Street sample kiosks





Smart Data Management



Learning Points





Learning Point: People / Relationships

- ◆ Long history of water supply / community displacement
- ◆ Distrust of New York City
- ◆ Several legal challenges preventing NYC from implementing
- ◆ Forced engagement to find solutions - partnership approach
- ◆ Money / funding alone won't solve the problem
- ◆ People and relationships are fundamental

Watershed Issue

The CITY of NEW YORK is in the process of trying to pass regulations regarding the quality of water coming out of the DELAWARE/CATSKILL WATERSHED!

NEW YORK CITY HAS TWO CHOICES:
✓ Either strictly regulate the water flowing into the reservoir;
✓ or, spend \$4 Billion on a filtration system at the NYC end of the pipeline.

It is by far cheaper for NYC to regulate in the Watershed, BUT by implementing these regulations the City will place an economic burden on US, the people who live in the watershed.

These regulations will control the livelihoods of businesses, farmers, developers, landowners, and every resident in the watershed in one way or another.

THESE REGULATIONS ARE FOREVER!!

We, the people of the watershed are already subject to NY State water protection rules and have abided by them and will continue to do so. It is the law, and the law is very strict. To have NY City place their added regulations on us will hamper future development in this area and will change our very way of life.

SAY NO!
To NYC Watershed Regulations!

☛ Be Aware ☛ Be Concerned ☛ Get Involved

**Donate To The
Coalition Of Watershed Towns**

Make checks payable to:
Coalition Account
Delaware County Treasurer

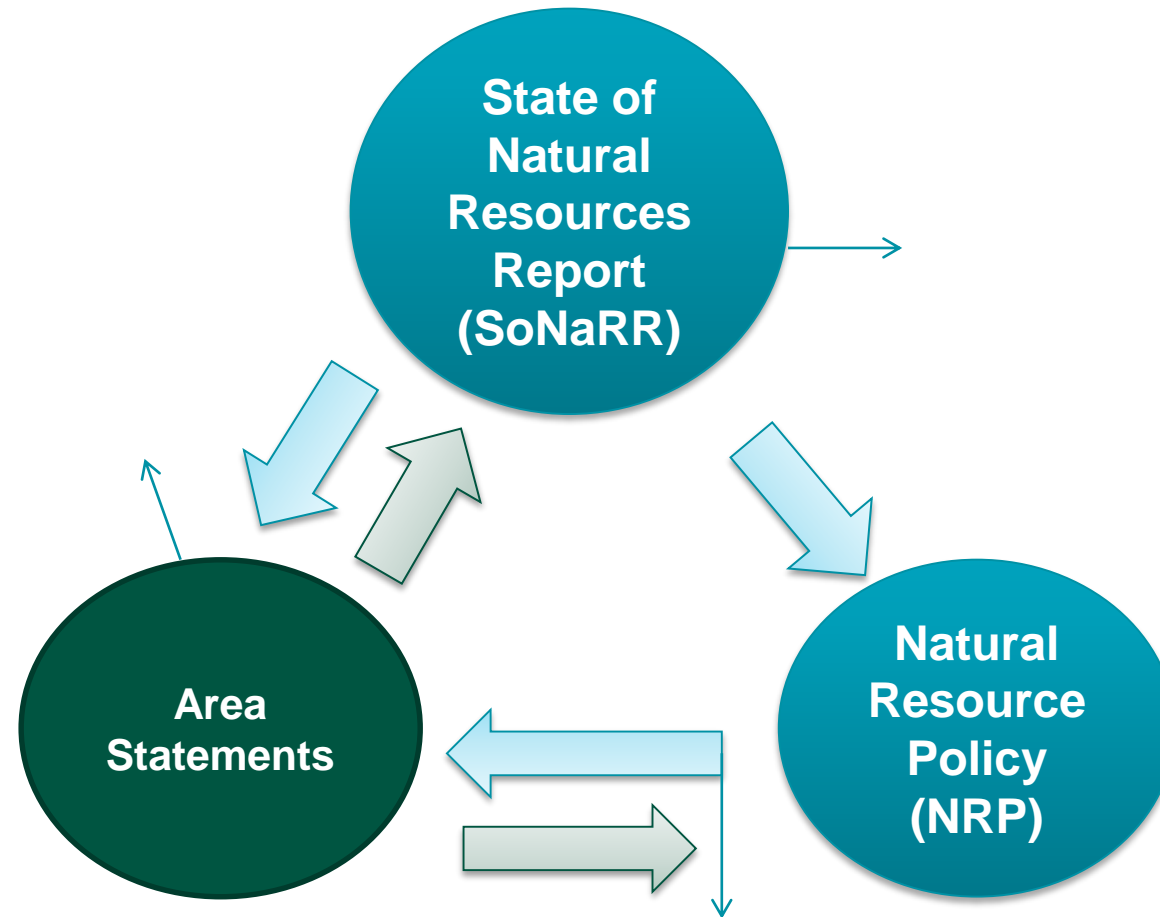
Mail your donation to:
The Coalition of Watershed Towns
PO Box 367, Delhi, NY 13753

Learning Points

- **Clarity on challenges we face**
- **Flexibility: Real-time widespread monitoring**
- **Developing the right delivery model**



Sustainable Management of Natural Resources





Llywodraeth Cymru
Welsh Government

Learning Points: Similarities & Differences

- Differences include intensity of land management and its relationship to objectives
- The use of data and its integration to decision making at a field level – not rule bound – defined at field level based on evidence
- Builds trust based on evidence
- Working relationship with agricultural community – capital investment provided by Water Supply Bureau after consultation with farmer (NYC Water Supply Bureau is a Government Department)
- Intensive monitoring and evaluation

Next Steps

- 💧 Spread the word, learn the lessons, implement the ideas
- 💧 Beacons Water Group Catskills Trip - 19th October 2019
- 💧 UK Drinking Water Quality Conference - 27th November 2019





WaterSource

Facing the Future Together

#WaterSource19