

The Upper Susquehanna Coalition

The Upper Susquehanna Coalition (USC), established in 1992, is a network of county natural resource professionals who develop strategies, partnerships, programs and projects to protect the headwaters of the Susquehanna River and Chesapeake Bay watersheds. The USC is comprised of representatives from 11 counties in New York and three in Pennsylvania.

The New York representatives are members of each county's Water Quality Coordinating Committee. These committees are multi-disciplinary groups consisting of local health, planning, and highway departments; cooperative extensions; environmental management councils; engineers; water purveyors; soil and water conservation districts; and citizens groups. The Pennsylvania representatives are members of each county's Chesapeake Bay Program (CBP) Committee. All USC members have signed a Memorandum of Understanding that reflects their endorsement of the development of non-point-source projects on a watershed basis. The USC has three standing committees: Executive, Education, and Planning/Implementation. Over the last ten years, USC has united its members in a genuinely coordinated effort. Through shared projects and regular meetings, the USC has maintained a remarkable degree of cordiality and cooperation between its members and its many partners.

Funding

Funding for the USC operations and projects is obtained from federal, state and local sources. The New York Department of Environmental Conservation supports the Coalition by funding the USC Watershed Coordinator position through the NYS Soil and Water Conservation Committee and NY Department of Agriculture and Markets. This is a very powerful partnership as it demonstrates trust by the state while providing control at the local level. Most funds for planning and implementation are obtained competitively. The funds at times are obtained on behalf of the entire USC or frequently on behalf of one or more of its county members for subwatershed projects. From its outset, the USC has sought to operate frugally by engaging local established sources of support, such as the Soil and Water Conservation Districts, to the fullest extent feasible. The USC tries to secure funds for staff only where there is a watershed-wide approach, such as the USC GIS Specialist, where one person can support many counties.

Strategic Support

The USC provides strategic support to county members, local watershed organizations, farmers, town and county public works and planning officials. It provides liaison support between state, regional and federal agencies and local planners and implementers. The USC has partnered with local, regional, state, federal, academic and non-governmental organizations to conduct projects on varying watershed scales. The USC strives not to duplicate work of others or compete with ongoing efforts at any level, but to integrate other programs into an overall basin strategy. The USC works on multiple scales: the river basin scale down to site scale depending on the project or program.

Strategic Planning

Water quality and quantity issues are described in the Chemung and Susquehanna Basin Watershed Restoration and Protection Strategy (WRAPS). The WRAPS was developed as a joint effort between the NYS Department of Environmental Conservation, USDA Natural Resources Conservation Service and USC to provide a basin-wide strategy to address nonpoint

issues, as requested by the US Environmental Protection Agency. The WRAPS is an overview document that summarizes important problems and potential solutions on a watershed scale. If there is a water quality/quantity issue in the Basin it will be described in the WRAPS document.

The WRAPS is an integration of County Water Quality Strategies, the NYS DEC Priority Waterbody List, NYS DEC and USDA NRCS natural resource concerns, NYS DOH Source Water Assessment priorities and the NYS Agricultural Environmental Management Program. The WRAPS is also the basis for developing New York's involvement in the Chesapeake Bay Program.

The USC uses a Multiple Barrier Approach (MBA) to watershed planning and implementation. The MBA addresses the issue (such as flooding, streambank erosion or degraded fish habitat) at the **source** (e.g., headwaters), **across the landscape**, and in the **stream corridor**, as well as **programmatically** (e.g., regulations, training). By developing multiple and possibly smaller projects to address problems, progress can continue and tangible results can be achieved over a wide range of funding levels. This approach *suggests* planning, education, implementation and regulatory solutions to local stakeholders for their consideration.

The USC uses the MBA concept when supporting strategic planning efforts at the subwatershed level and smaller such as on a single farm. Watershed strategies are being developed, refined and implemented in at least the following 11 digit HUC's: Bentley, Catatonk, Castle, Cayuta, Choconut, Meads, Owego, Satterlee, Seeley, Sing Sing and Snake creeks; Otsego and Lamoka/Waneta lakes, and Chenango, Otselic, Tioughnioga and Unadilla rivers.

Database Development

The USC has developed and is developing a series of data layers that were used in WRAPS and will be used for Chesapeake Bay Program modeling efforts to determine nutrient and sediment reduction allocations for New York. They are also used for local planning and implementation efforts.

The Database is at the 11-digit HUC level, and where possible we will subdivide those watersheds into smaller subwatersheds. Data can also be quantified and depicted by County or Town.

Data Layers being developed include:

1. Land use

- Including the typical categories such as agriculture, forest, wetlands, residential, commercial, etc.
- Impervious surfaces, including the area covered by all paved roads
- Water quality information from local monitoring efforts

2. Wetlands

- NWI wetlands
- NYS designated wetlands

- Ephemeral wetlands
 - Potential wetland sites
 - Wetlands restored since 1992 under all programs and funding sources
3. Topography – the most accurate digital elevation data available, and in addition:
- Land areas categorized according to percent slope (>1% and >3%), which is useful for finding potential wetland
 - LIDAR coverage, beginning with test watersheds (Seeley Creek and Sulphur Springs)
4. Stream Corridor
- Riparian buffers as depicted on available digital imagery
 - Riparian buffers restored since 1992
 - Eroding streambanks and their calculated sediment load
 - Stream blockages (i.e. dams)
5. Stormwater conveyances and infrastructure
- Salt storage structures (includes information on location and status)
 - Road ditch and road bank assessments, including potential sediment loading to streams
 - Culvert location and assessment
6. Agriculture
- Farm numbers and animal units
 - AEM Tier 2 assessment summaries
 - BMP's categorized and recorded according to CBP definitions, since 1992
 - In high priority watersheds the amount of manure produced and production acres

Watershed Modeling

The USC database represents a solid platform for creating a watershed accounting model (or models) that can be coupled with meteorological information particularly for extreme weather events in drainage basins. It can also determine water quantity and quality in the river system itself. Modeling could integrate USC's knowledge base in a way that would facilitate technical analyses, examination of prospective scenarios, identification of management options and evaluation of those options. Most importantly the models would also provide a basis for presenting watershed planning efforts to agencies and organizations as well as a vehicle for outreach to the watershed communities.

USC Initiatives Integrated on a Watershed Basis

A. Agricultural Sustainability – supporting practices that enhance the environment and farm economics;

1. Comprehensive nutrient management planning for farms, regardless of size
2. CAFO needs to meet statutory requirements and provide AFO's with plans needed as a prerequisite for funding of other BMP's.
3. Precision feeding and enhanced forage system management

4. Intensive rotational grazing
5. Other best management practices that are specific to farm needs such as critical area protection, milkhouse waste treatment, barnyard runoff management, pathogen management, heavy use area protection, riparian buffer designation, silage leachate management, streambank protection and the use of no-till drills for habitat enhancement.

B. Stream Corridor and Floodplain Restoration

1. Stream restoration and stabilization using natural stream design techniques
2. Riparian buffers
3. Wetland creation and restoration
4. House buyouts and/or relocation in the floodplain
5. Enhance groundwater infiltration

C. Stormwater Management

1. Road bank and road ditch stabilization (training and implementation)
2. Initiation a Stormwater Phase II support role, including public outreach and education, public participation and involvement, proactive involvement in helping communities eliminate illicit discharges, control of construction site stormwater runoff, long-term stormwater management support and helping municipalities prevent pollution. Integration of “Stormwater Phase II” regulations into existing watershed strategies may ease the burden on municipalities while strengthening the scope of the strategy.

D. Training/Outreach

1. Developing “Conservation Subdivision “ designs that support development, open space, water quality protection and traditional uses such as farming
2. Training highway superintendents on correct road maintenance procedures
3. Support of a College Internships to work on watershed projects
4. Form working relationships with other organizations, agencies including Ducks Unlimited, Izaak Walton, SUNY Oneonta, SUNY Binghamton, WRI at Cornell, Chesapeake Bay Program, NYS DEC