SECTION 2
ECONOMIC DEVELOPMENT

GOAL: Capitalize on water resources as economic assets.

- Promote economic development strategies that protect the region's water resources and use them wisely because they are integral to the local economy.
- Foster regional collaboration to implement environmentally sensitive economic development strategies.

CHALLENGE

The Susquehanna-Chemung region is endowed with an abundance of environmental, scenic, historic, cultural, and recreational resources. Yet the economy continues to struggle. Steep slopes, floodplains, wetlands, and other environmental features limit the potential for economic development in many parts of the watershed. In fact, most of the region's best sites for development already support urban land uses or productive agricultural businesses.

Village of Owego (courtesy of STERPDB).

Water Resources: Water resources were the initial catalyst for development of the Susquehanna-Chemung Watershed and remain key factors in the region's economy and quality of life. Abundant surface waters and highly productive aquifers are generally able to meet residential, commercial, agricultural, and industrial demands. Preserving these resources will make this region highly attractive to water intensive industries, particularly if water shortages become more common. However, river valley aquifers are vulnerable to contamination by human activity (due to the permeability of overlying soils). And the quality of surface water is also a concern due to downstream impairment of the Chesapeake Bay. In December 2010, the US Environmental Protection Agency established a remediation plan (called a Total Maximum Daily Load or TMDL) that requires reductions in nitrogen, phosphorus, and sediment loads from throughout the Chesapeake Bay Watershed, including New York. This imposes significant challenges due to the anticipated costs of meeting higher standards for wastewater treatment facilities, agriculture (particularly livestock operations), and urban runoff. These costs may stifle economic growth.

Agriculture and Forestry: The region's climate, topography, and soils are able to support a productive landscape, with agriculture, forestry, and wood products comprising an important component of the regional economy. The importance of these industries is magnified by high economic multipliers. In addition, the ambiance of forested and agricultural areas supports the tourism industry. However, economic challenges threaten the viability of many farm operations and agri-businesses.

Tourism: Tourism sustains about 6% of all jobs in New York State (Tourism Economics, 2009) and is a key component of economic development strategies for the Susquehanna-Chemung region. This area is a perfect distance for "nearby tourists" – far enough to be a vacation yet close enough to use your own car. Watershed residents also boost the local economy when they stay near home, rather than traveling, for recreational activities. Rolling hills, scenic farmlands, rural vistas, and outdoor recreation are major contributors to the region's appeal. Tourism creates a financial incentive for maintaining and enhancing the region's charm, amenities, and environmental quality. Coordinated marketing could promote a shared identity for the Southern Tier as a vacation destination (more than just the gateway to the Finger Lakes).

Resource Extraction: The watershed has a long history of economic development based on extraction of natural resources, which has produced both economic benefits and adverse environmental consequences. Widespread logging of New York's hillsides in the 19th and 20th centuries resulted in significant soil erosion and increased runoff, causing long-term alteration of the region's hydrology. Oil and gas have been produced in

the western part of the watershed since early in the 20th century. The region is now anticipating increased development of natural gas resources from the Marcellus Shale and other deep shale formations. The hydraulic fracturing process used to produce the natural gas from shale formations utilizes large volumes of water.[4] Water that returns to the surface requires treatment or deep-well disposal. Many residents are concerned about the potential for contamination of groundwater and surface water resources. Natural gas drilling has become a very contentious issue due to the challenge of establishing the appropriate balance between short-term economic benefits and long-term protection of local assets, particularly water resources. As with any natural resource, the extraction of gas provides income for landowners, profit for companies, employment for laborers, and increased tax revenue for government. However, learning from past mistakes, resource development should be accompanied by policies to ensure that environmental impacts are not left for future generations. At the time of this writing, the NYS Department of Environmental Conservation (NYS DEC) is attempting to develop such policies. County task forces and other organizations are actively developing strategies for preventing and mitigating potential adverse impacts from increased development of the Marcellus Shale and other energy resources. In addition, landowner coalitions are attempting to ensure that property owners throughout the region are able to negotiate fair gas leases with protections for their property and water resources. In addition to the direct impacts that energy development may have on the environment are the potential indirect impacts on industries that rely heavily on the natural environment, such as tourism and agriculture.

"The quality of place is a state of mind – It has emerged as one of the most important ingredients in developing a successful, sustainable community."

\- Jack Benjamin, Three Rivers Development Corporation

RECOMMENDATIONS

Numerous local and regional organizations are actively engaged in business retention/expansion, workforce development, and other economic development issues. The following recommendations are intended to enhance these ongoing efforts by promoting increased communication, coordination, and collaboration to facilitate economic development that is compatible with protecting the economically and environmentally valuable functions of natural watershed systems.

Tourism: Enhance and promote the region's scenic beauty, charm, and recreational assets. (Additional recommendations regarding outdoor recreation are in Section 10).

2a. Identify who uses the river and other outdoor recreational opportunities and how the resource is used (hiking, boating, fishing, bird watching, etc.). Determine what amenities would facilitate additional use, such as: restrooms, parking, maps, campgrounds, and adjacent businesses. Develop a strategy for implementing improvements and attracting business that would enhance recreational use of water resources.

5-year target: Conduct county or regional studies of recreational assets and needs. Implement improvements as resources permit.

Long-range target: Implement recreational improvement strategies. Update them every five years.

Measure: Number of new and updated studies. Amount of implementation.

2b. Promote increased communication, coordination, and participation among people, organizations, businesses, and groups across the watershed with an interest in protecting and promoting the region's water resources for recreational and tourist opportunities.

5-year target: Conduct regional tourism conferences on a variety of topics and in various locations.

[4] To-date the average water use for the drilling phase has been 5.5 million gallons of fresh water for each well. However, this amount is decreasing as more companies recycle flowback water.

5-year target: Increase the coordinated promotion of recreational opportunities and facilities through various media, including the Internet as a primary public information tool.

Measure: Number of conferences. Number of promotional campaigns.

2c. Identify creative ways to support historic connections to the region's rivers and streams, which were important assets to early developers but have more recently been viewed as liabilities due to flooding. Although levees are needed for flood control, they have become barriers that restrict views of the rivers and limit access to the water. Address legal barriers that limit temporary and compatible uses of floodplain and riverside locations.

5-year target: Conduct a conference for waterfront communities (modeled after the 2005 Riverfront Conference in Harrisburg conducted as part of the Susquehanna Greenways project).

Long-range target: Individual communities incorporate strategies for connecting to the river into Comprehensive Plans.

Measure: Number of training and networking sessions. Number of revised plans.

2d. Promote economic development strategies that revitalize downtown commercial districts through historic preservation. Potential resources and assistance may be available from the NYS Main Street program and the NYS Office of Parks, Recreation, and Historic Preservation.

Immediate action: Provide training about Main Street revitalization and historic preservation.

Long-range target: Individual communities incorporate strategies for Main Street revitalization into Comprehensive Plans.

Measure: Number of training sessions. Number of revised plans.

2e. Develop and promote a regional identity that is incorporated into local "brands" for tourist destinations in the Susquehanna-Chemung Watershed. Utilize a regional marketing strategy, signs, and other means to attract tourists and cultivate a shared identity among watershed communities.

Long-range target: Develop and implement a regional marketing strategy for tourism.

Measure: Extent to which a regional identity is incorporated into local tourism marketing efforts.

Sewer and Water Infrastructure: The undisputed economic consequences of impaired drinking water quality must be avoided.

2f. Secure the funding needed to maintain municipal water infrastructure, so that the region's abundant and high quality water resources can support economic development. Implement expansions, as needed, to support economic development and protect public health, with new or expanded systems designed to prevent sprawl. Identification of needs and priorities can be based, in part, on the inventory of "Water Supply and Sewage Disposal Systems in the Southern Tier East Region," "Tioga County Infrastructure Master Plan," and "Chemung River Valley Water Study."

Long-range target: Secure funding and implement as resources permit.

Measure: Number of water systems that have implemented improvements.

2g. Secure the funding needed to maintain and enhance municipal sewage treatment infrastructure in order to protect public health, protect water quality, and promote economic development. Work to eliminate Combined Sewer Overflows (in which wastewater is released during periods of high runoff) through implementation of Long Term Control Plans, Flow Management Plans, and other means. Take steps to reduce the damage and environmental contamination due to flooding. Promote construction of industrial pre-treatment facilities that can be used by multiple businesses. Identification of needs and priorities can be based, in part, on the inventory of "Water Supply and Sewage Disposal Systems in the Southern Tier East Region" and "Tioga County Infrastructure Master Plan."

Long-range target: Secure funding and implement as resources permit.

Measure: Number of treatment plants that have implemented improvements.

2h. Work to avoid adverse economic impacts from the proposed sewage treatment standards for Chesapeake Bay restoration, which exceed the standards required to protect local water quality in New York.

Immediate action: Support ongoing efforts by the Southern Tier Chesapeake Bay TMDL Commenting Coalition and others.

Measure: Changes to the NYS TMDL allocation.

Trickling filter for Village of Addison Wastewater Treatment Plant; ring levee (by the fence) provides flood protection (courtesy of Village of Addison).

Manufacturing/Commercial Development: Establish a balance between short-term economic development needs and the long term protection of rivers and natural resources.

2i. Because New York's new Smart Growth law now prohibits state funding of projects that contribute to sprawl, there is an immediate need to educate municipalities, developers, and economic development organizations about how to incorporate smart growth strategies into proposed development projects. Modification and tailoring of these principles will be necessary to accommodate the unique needs of the rural portions of the watershed. Develop educational resources and conduct training about applicable smart growth strategies. (Additional smart growth information and recommendations are in Section 3, Land Use).

Immediate action: Assemble and distribute resource materials. Conduct Smart Growth training in each county.

5-year target: Integrate Smart Growth principles into economic development priorities and infrastructure planning.

Measure: Number of educational resources and training sessions. Number of economic development strategies that incorporate smart growth principals.

2j. Unilaterally support the reuse of existing structures rather than new construction. Create an inventory of vacant or under-utilized industrial/commercial structures and actively market and/or seek alternative uses for these buildings. Promote revision of the Leadership in Energy and Environmental Design (LEED) certification system to adequately reward re-use of existing structures.

5-year target: Conduct inventories of buildings and sites that represent redevelopment opportunities. Integrate these opportunities into county and regional economic development strategies.

Measure: Number of communities with inventories. Number of economic development strategies that incorporate redevelopment opportunities.

2k. Promote and facilitate re-development of existing brownfield areas. Create an inventory of brownfield sites that may offer opportunities for redevelopment (such as the Broome County inventory developed by the County Environmental Management Council). Support new and continued community involvement in the NYS Brownfield Opportunity Areas (BOA) program.

5-year target: Inventory brownfield sites and incorporate brownfield redevelopment opportunities into county and regional economic development strategies.

5-year target: Complete the feasibility studies and attract tenants for each BOA project in the watershed (Brandywine Corridor, City of Norwich, Endicott-Johnson Industrial Spine, and Erwin-Painted Post-Riverside BOAs).

Measure: Number of economic development strategies that include brownfield redevelopment opportunities. Number of BOA projects advancing to the next BOA 'stage.'

2l. Site selection and design for new industrial, commercial, and infrastructure development should minimize adverse impacts on drainage systems, river corridors, stream processes, floodplain functions, wetlands, and critical environmental areas. Public and private utility uses and rights-of-way should be concentrated to minimize impacts.

Long-range target: Develop and implement strategies for evaluating proposed economic development projects that identify the impact on significant resources and compare the environmental impacts with the economic benefits, particularly in relation to water quality.

Measure: Number of economic development projects evaluated for environmental cost vs. economic benefits.

2m. Integrate the region's abundant and high quality surface and ground water resources into "asset based" economic development strategies that capitalize on these resources, while also providing long-term protection.

5-year target: Conduct an Asset-Based Economic Development conference.

Measure: Number of training and networking sessions.

2n. Promote Leadership in Energy and Environmental Design (LEED) certification for retrofitting, design, and construction as a means for promoting water efficiency, stewardship of resources, and other "green" objectives. (See also Recommendation 3o in the Land Use section.)

Immediate action: Educate the business community and the public about what LEED certification is and how buildings can be certified. Publicize LEED training events.

Long-range target: Surpass LEED standards in promoting the re-use of existing structures.

Measure: Number of training resources and events. Number of LEED certified projects and projects that exceed LEED standards.

Natural Resource Utilization: Industries that utilize or extract natural resources (stone quarries, oil and gas wells, wind farms, etc.) can be expected to utilize and impact the region's water resources. "Reasonable use" by these businesses (like other industries) involves operating in a manner that enables long-term protection of groundwater and surface water resources.

2o. Facilities associated with resource extraction industries (storage sites, wellheads, roads, pipelines, surface mines, tower sites, etc.) are typically located in rural landscapes, rather than in industrial parks, and thus require project-specific assessment of location and site design issues. This development should be located in a manner that minimizes fragmentation of habitat, avoids adverse stormwater impacts, does not encroach on floodplains, and minimizes impacts on the view shed.

Immediate action: NYS DEC and local task forces develop and share strategies for preventing environmental impacts from land use changes and restoring the environment after any such impacts.

Measure: Number of new low-impact strategies developed and promoted.

2p. The Susquehanna River Basin Commission (SRBC) has regulatory authority over water withdrawals and use. All projects subject to Commission approval are required to follow water conservation standards. The Commission maintains information about pending applications and approved projects on their Water

Resource Portal.[5] Local stakeholders should monitor this information and provide input regarding pending applications or possible violations when warranted.

Immediate action: NYS DEC and local partners coordinate with and provide information to SRBC to promote effective implementation of regulations.

Measure: Amount of agency and public involvement in SRBC regulatory program.

2q. Promote beneficial use of uncontaminated byproducts, treatment of contaminated wastes, and safe disposal of all waste materials from resource extraction. Due to safety and environmental concerns related to the storage of contaminated liquid wastes from hydraulic fracturing processes, recycling and/or treatment facilities should have sufficient capacity prior to generation of such wastes.

Immediate action: NYS DEC works with the natural gas industry, waste treatment facilities, and others to develop, finance, and implement effective waste management practices and requirements.

Immediate action: SRBC continues to encourage water conservation and water reuse practices for all projects (in addition to water conservation requirements for approved projects).

Measure: Number of new waste management requirements from NYS DEC. Number of new waste management practices implemented in the region.

2r. As gas drilling and other extractive industries move to new areas or utilize new technologies, local communities should work with the industry to identify potential spill locations (on-site, along transportation routes, etc.) and put in place systems for containing spilled materials and procedures for rapid response and clean up.

Immediate action: NYS DEC and local task forces develop and implement strategies for minimizing environmental contamination from spills.

Measure: Number of mitigation strategies developed.

[5] SRBC Water Resource Portal: www.srbc.net/wrp