



## Community Conservation Assistance

### Assessment Tool for Identifying and Prioritizing Natural Resource Concerns within a Watershed

New York Association of  
Conservation Districts



## **Introduction**

The attached watershed natural resources assessment tool provides worksheets for Local Working Groups and County Water Quality Coordinating Committees to use to identify priority natural resource concerns on a watershed basis. This assessment tool addresses the entire resource base (soil, air, water, plants and animals) for each predominant land use within a watershed.

The assessment tool can be used on a county (watershed) or community (sub-watershed) basis to identify geographic areas of concern and existing or potential natural resource impacts that need addressing. This assessment provides the foundation for a comprehensive evaluation of the condition of each watershed's natural resource base and thus can become the platform for making decisions about local priorities or policies for local delivery of conservation programs to landowners and communities within a watershed.

Watershed \_\_\_\_\_ HUC # \_\_\_\_\_ Date \_\_\_\_\_

**WORKSHEET FOR IDENTIFYING NATURAL RESOURCE CONCERNS**

IMPAIRMENTS / IMPACTS <sup>1</sup>	Significance Factors <sup>2</sup>			COMMENTS
	LEVEL OF CONCERN (H, M or L)	EXTENT OF IMPACT (H, M, or L)	RESOLV-ABILITY (H, M or L)	
<b>Floodplains</b>				
encroachment into flood plain;				
Increased threat of flooding (changes in land use & increase in % impervious areas);				
loss of flood plain functions (flood storage);				
changes in flooding frequency;				
other (list).				
<b>River &amp; Stream Corridors</b>				
loss/degradation of riparian buffers;				
excessive stream bank erosion;				
barriers to fish movements (dams, culverts);				
altered or unstable stream channel (channel deeply incised);				
change in stream characteristics (riffle embedded ness, loss of in-stream fish cover, loss of stream invertebrates);				
loss of sediment transport capacity (braiding);				
withdraws affecting low flow habitat;				
increased stream temperatures;				
uncontrolled livestock access to streams;				
litter/debris along stream/riverbank or in channel;				
lack of public access for water based recreational opportunities;				
other (list).				

<sup>1</sup>Includes impacts to soil, water, air, plants, and animal resources for each land use along with economic and social considerations

<sup>2</sup>See attachment 1 for explanation of the significance factors

<b>Wetlands (freshwater &amp; tidal)</b>				
degradation/loss of wetlands from filling;				
encroachment from incompatible land uses;				
loss of hydrology from draining or modification of adjacent uplands;				
fragmentation of landscape (loss of connectivity);				
invasive exotic plants (e.g. purple loosestrife);				
other (list).				
<b>Lakes &amp; Reservoirs</b>				
eutrophication;				
shoreline erosion;				
beach closures;				
failing onsite systems;				
loss of recreational opportunities;				
other (list).				
<b>Fish and Wildlife Habitat</b>				
loss of/fragmentation of habitats (loss of connectivity);				
loss of native species;				
loss of biodiversity;				
increase in invasive, exotic and/or nuisance species;				
loss or reduction of threatened or endangered species;				
loss of sustainable cold or warm water fisheries;				
restricted passage that limits migration/movement of fish/ aquatic species;				
other (list).				

<b>Agricultural Land</b>				
loss of prime, important, and unique farm land (critical mass concerns);				
urban/suburban infringement on farm land (neighbor relations, sound agricultural practices concerns);				
increasing numbers of CAFOs within watershed with inadequate land resource base;				
marginal farm profitability;				
inadequate water supply for farm needs;				
other (list).				
<b><i>Farmstead</i></b>				
odors from livestock operations (neighbor complaints);				
barnyards/feedlots close proximity to stream;				
lack of emergency spill response plans on farm (for manure, pesticides, petroleum products, etc.);				
poor herd health;				
inadequate pesticide mixing facilities.				
<b><i>Cropland</i></b>				
decline in soil quality;				
airborne chemical drift;				
pesticides being applied without regard to leaching or runoff potential;				
cropland erosion;				
excess nutrients;				
subsidence (oxidation of organic soil);				
application of bio-solids on cropland.				
<b><i>Hayland/Pasture</i></b>				
poor quality hayland or pastures (unmanaged sys.);				
lack of adequate livestock watering facilities.				

<b>Forest Land</b>				
loss of high value species;				
poor growth;				
lack of quality;				
disease and insect pests;				
encroachment/forest fragmentation;				
increased runoff from harvested areas;				
erosion from skid trails, landings, and logging roads;				
aesthetics of timber harvesting activities;				
overuse – recreation;				
loss of prime and important forest lands;				
loss of biodiversity;				
other (list).				
<b>Mined Land</b>				
visual blight/incompatible land uses;				
changes to surface and subsurface flow characteristics;				
surface water/groundwater impacts;				
other (list).				
<b>Open Space/Recreation Land</b>				
loss of prime, important and unique farmland to development;				
loss of special viewsapes;				
loss of culturally and historically significant areas;				
limited land-based or water-based recreational opportunities;				
loss of old growth forests				
reduction in rare or unique habitat (Pine Barrens, bogs);				
other (list).				

<b>Suburban/Urban Lands</b>				
lack of town or village comprehensive land use plan that addresses natural resource protection and enhancement needs;				
lack of safe disposal/recycling of waste;				
inadequately sited salt & sand storage facilities;				
inadequate water supplies (rural fire protection or drinking water concerns);				
landfill leachate enters ground or surface water;				
inadequate plant cover (shade tree/urban forestry concerns);				
soils contaminated from heavy metals/toxins;				
odors from landfills/sewage treatment plants;				
other (list).				
<b><i>Urban Runoff</i></b>				
soil erosion from disturbed areas;				
road bank erosion;				
increase in storm water runoff (due to increasing % impervious areas);				
inadequate storm water management controls;				
lack of O&M existing storm water BMPs;				
inadequate site design requirements for developments;				
urbanized streams;				
combined sewer overflows to surface waters;				
inadequate street maintenance (street sweeping, clean out of catch basins);				
inadequate storm water management;				
other (list).				
<b><i>On-site Wastewater Treatment Systems</i></b>				
systems failing due to improper siting, design or installation or due to a lack of maintenance;				
lack of access to or limited capacity of local waste treatment facilities results in illegal dumping of septage				
other (list).				

<b>Drinking Water Sources</b>				
public and/or private drinking water source contaminated;				
source water assessment completed, source (spring, well, river, lake or reservoir) susceptible to possible contamination;				
inadequate or nonexistent local source water protection program;				
other (list).				
<b>Coastal/Marine Resources</b>				
nonpoint source pollution from marina operations				
deteriorating waterfronts;				
coastal dunes/shoreline erosion;				
direct discharges (direct dumping or pipeline discharges);				
beach closures;				
shellfish contamination;				
brown/red tides;				
hypoxia;				
thermal pollution;				
marine/beach debris;				
other (list).				

**SIGNIFICANCE FACTORS FOR ASSESSING THE CONDITION OF  
NATURAL RESOURCES WITHIN A WATERSHED**

Level of Concern	Extent of Impact	Resolvability
<ul style="list-style-type: none"> <li>• degree of problem identification &amp; documentation</li> <li>• level of public concern/support for action</li> <li>• potential for offsite impact</li> <li>• value of the resource to be protected</li> <li>• public health or safety concern</li> </ul>	<ul style="list-style-type: none"> <li>• watershed-wide, municipality-wide or localized</li> <li>• % farms or land use category impacted</li> <li>• severity of natural resource or water quality impact</li> <li>• degree of threat or sensitivity (vulnerability) of resource</li> </ul>	<ul style="list-style-type: none"> <li>• level of understanding of extent of problem, cause &amp; effect relationships</li> <li>• degree of complexity</li> <li>• availability of programs to address</li> <li>• institutional constraints</li> <li>• local capacity to address</li> <li>• commitment from community to address problem</li> <li>• available technologies and methodologies</li> <li>• cost effectiveness (benefit/cost ratio)</li> <li>• level of management required</li> <li>• history of O&amp;M on previously applied</li> <li>• BMPs/conservation practice</li> </ul>