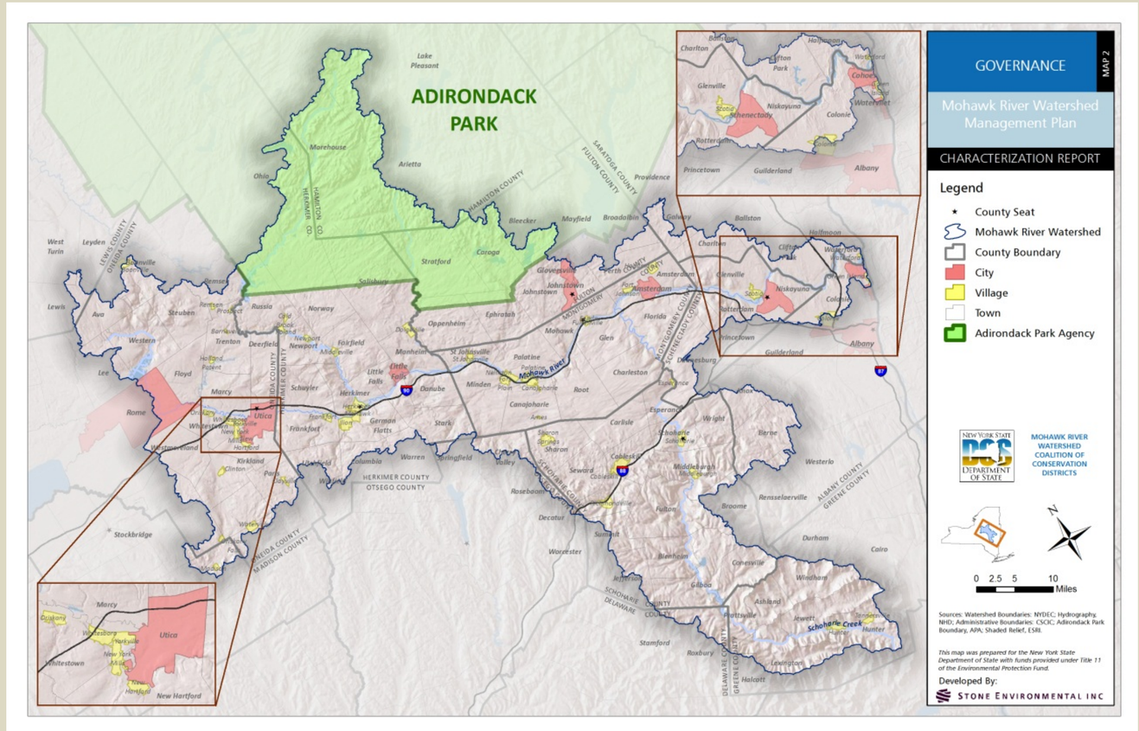
MOHAWK RIVER WATERSHED CHARACTERIZATION
ASSESSMENT OF SUB-WATERSHEDS

Win McIntyre and Dave Mosher
Mohawk River Watershed Coalition of Conservation Districts

MOHAWK RIVER WATERSHED COALITION

The Mohawk River Watershed Coalition is comprised of Soil and Water Conservation Districts from the following counties: Albany, Delaware, Fulton, Green, Hamilton, Herkimer, Lewis, Madison, Montgomery, Oneida, Otsego, Saratoga, Schenectady, Schoharie

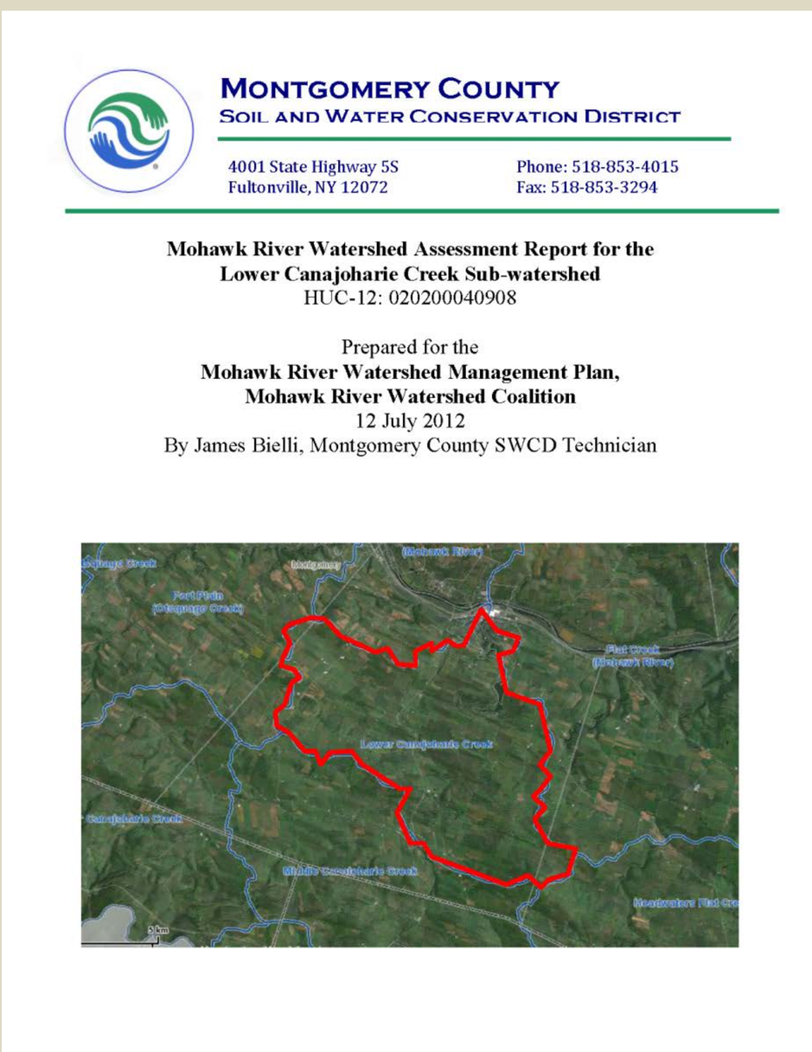


ASSESSMENT REPORTS

Watershed assessments for the Mohawk River watershed were done at the 12-digit HUC level (116 in the watershed). Each assessment included the following and will factor into a characterization report as a part of the Watershed Management Plan:

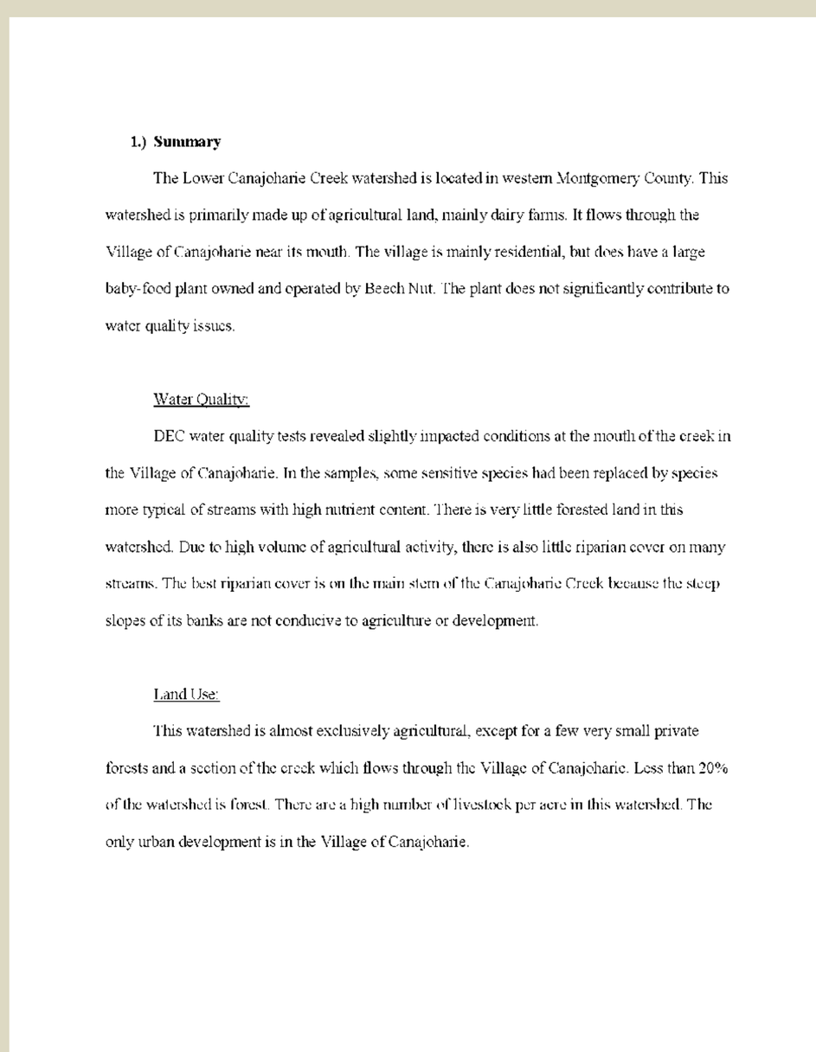
- Analysis of Assessment Scores
- Field Observations and Photo-Documentation
- Recommendations for Restoration and/or Protection
- Summary Narrative

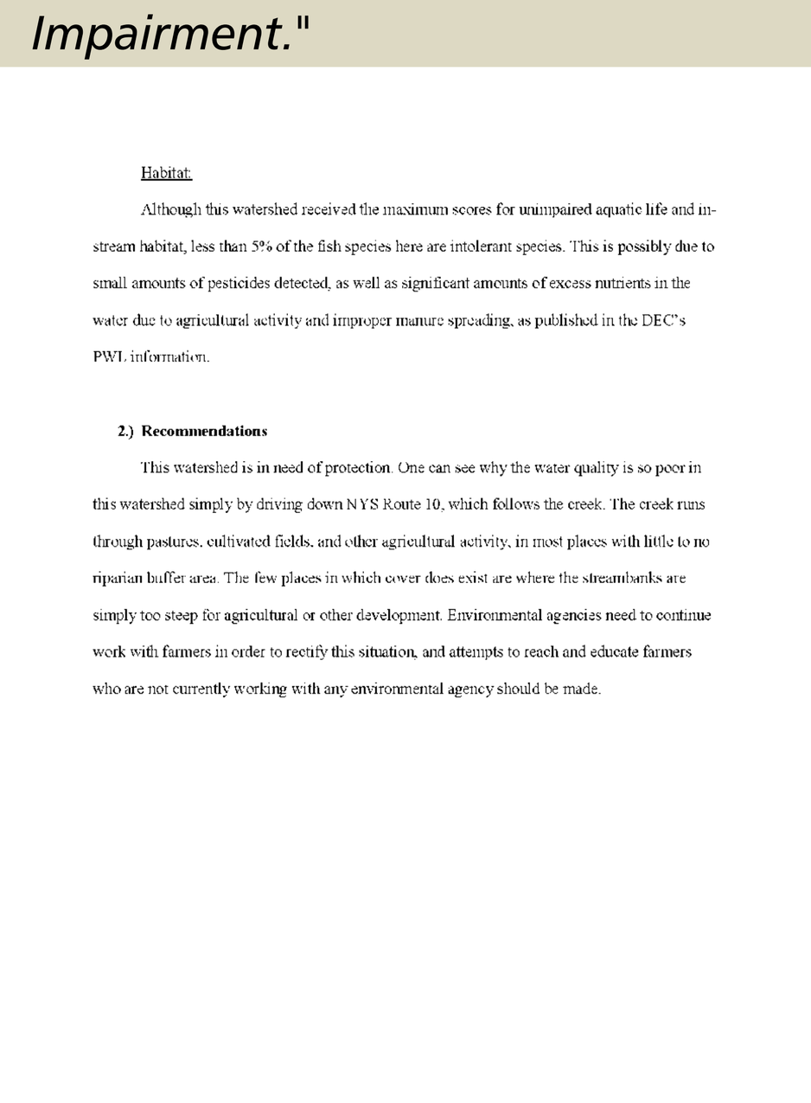
The adjacent is an example of an assessment report done for the 12-digit HUC "Lower Canajoharie Creek", which drains to the Mohawk River at Canajoharie, NY. The analysis, which is shown on the page "Watershed Assessment Scores", uses data from the GIS web map. To further understand the scores, additional maps can be used. For example, a low score under Water Quality for "% Impaired" could be analyzed for what uses are impaired by looking at the map layer "PWL Stream Impairment."

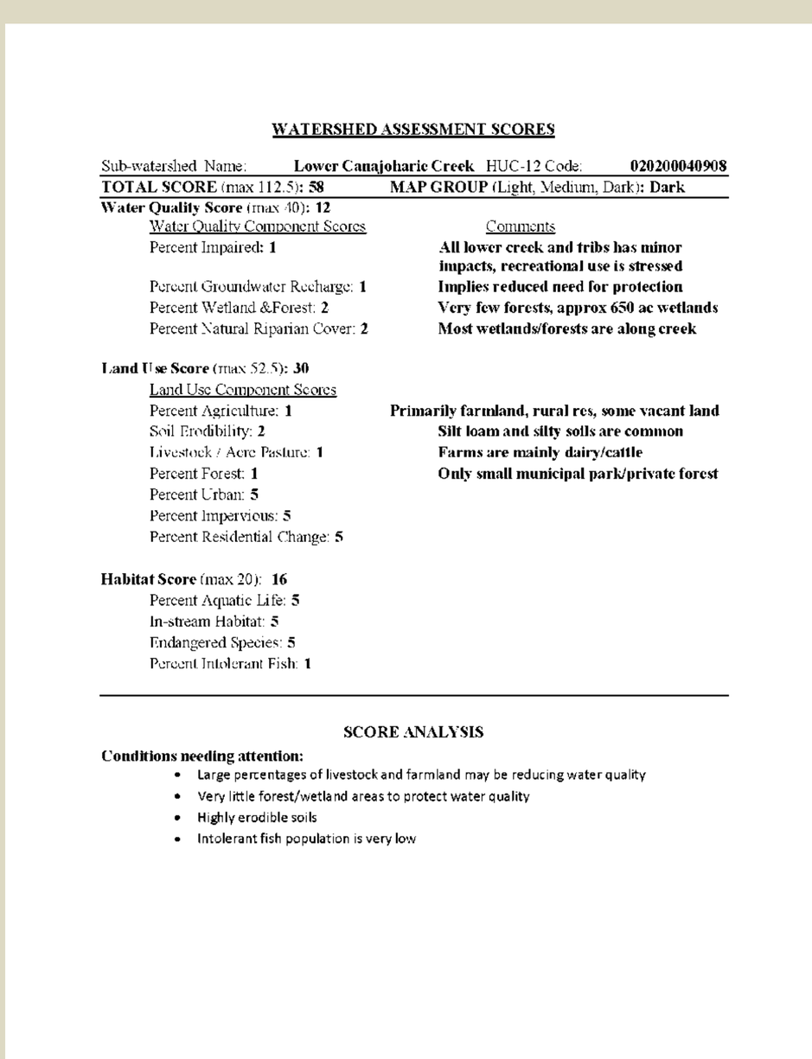

MONTGOMERY COUNTY
SOIL AND WATER CONSERVATION DISTRICT
4001 State Highway 5S
Fultonville, NY 12072
Phone: 518-853-4015
Fax: 518-853-3294

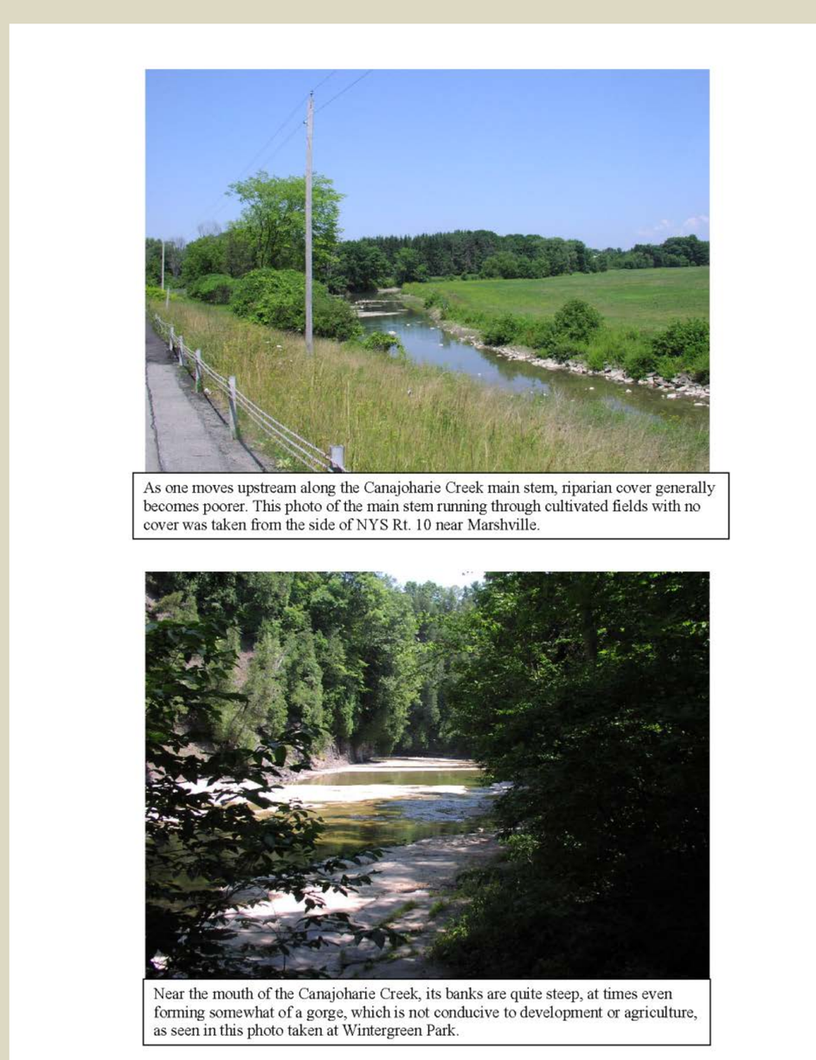
Mohawk River Watershed Assessment Report for the Lower Canajoharie Creek Sub-watershed
HUC-12: 020200040908

Prepared for the
Mohawk River Watershed Management Plan, Mohawk River Watershed Coalition
12 July 2012
By James Bielli, Montgomery County SWCD Technician







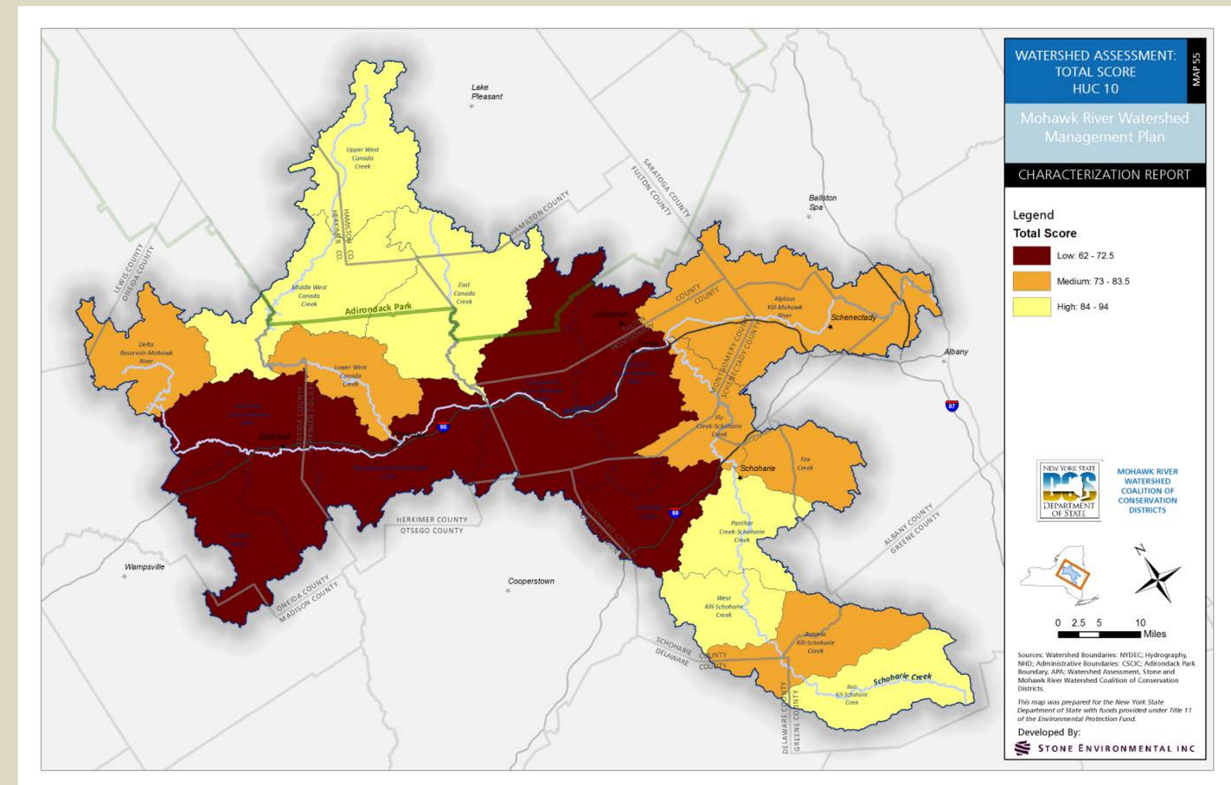


Scoring Categories:

Low Scoring	Medium Scoring	High Scoring
Poor Water Quality Impaired benthic habitat Low percentage of wooded cover Low percentage of riparian cover High agricultural land use, and/or High degree of development	Combination of high and low scoring	Good to excellent water quality Healthy benthic habitat High percentage of wooded and/or riparian Low % of agricultural and/or developed

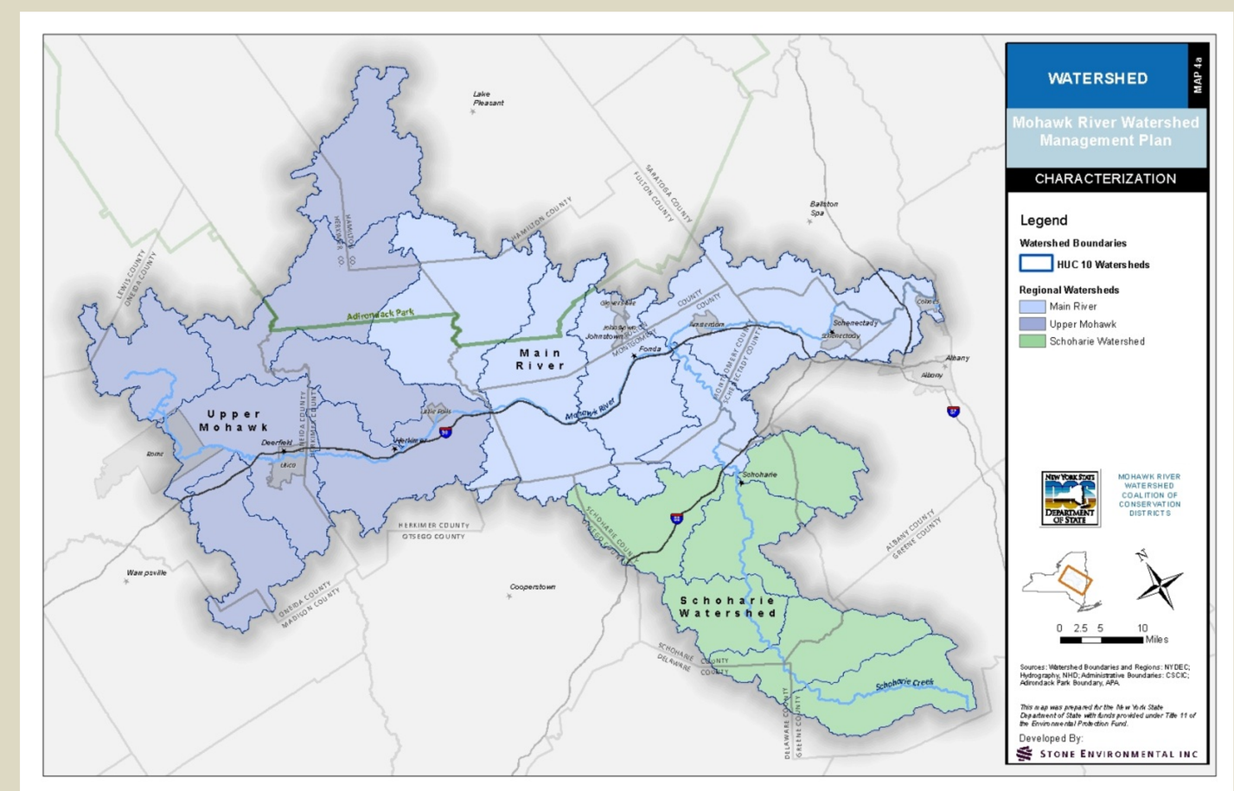
ASSESSMENT RESULTS

The assessment scores have been consolidated at the 10-digit HUC level. The following map shows the relative total assessment scores for the 18 10-digit HUC's in the Mohawk River watershed, with the



high-scoring healthy sub-watersheds light-shaded, low-scoring unhealthy sub-watersheds dark-shaded, and the mid-scoring sub-watersheds medium-shaded.

To reflect the wide ranging diversity in the watershed, three geographic regions have been established along 10-digit HUC boundaries. As shown by the following map, the regions are Upper Mohawk, Main River, and Schoharie Watershed.



The adjacent table summarizes the assessment scoring results for the 10-digit HUC's, grouped by region.

- Low-Scoring: 62 - 72.5
- Mid-Scoring: 73 - 83.5
- High-Scoring: 84 - 94

Region/Sub-watershed	Water Quality Score	Land Use Score	Habitat Score	Total Score
UPPER MOHAWK				
Oriskany Creek	24	30	13	67
Ninemile Creek	22	34.5	12	68.5
Nowadaga Creek	24	34.5	14	72.5
Lower W. Canada Ck.	26	34.4	14	74.5
Delta Reservoir	28	36	18	82
Middle W. Canada Ck.	30	40.5	26	87.5
Upper W. Canada Ck.	26	48	16	90
MAIN RIVER				
Cayadutta Creek	18	33	11	62
Canajoharie Creek	22	34.5	15	71.5
Alplaus Kill	24	34.5	15	73.5
Fly Creek	24	36	18	78
East Canada Creek	32	42	20	94
SCHOHARIE WS				
Cobleskill Creek	22	33	13	68
Batavia Kill	26	42	13	81
Fox Creek	28	36	18	82
West Kill	30	37.5	18	85.5
East Kill	28	45	14	87
Panther Creek	28	40.5	20	88.5

Low Scoring Sub-Watersheds

UPPER MOHAWK:	Oriskany Creek (67) Ninemile Creek (68.5) Nowadaga Creek (72.5)
MAIN RIVER:	Cayadutta Creek (62) Canajoharie Creek (71.5)
SCHOHARIE WS:	Cobleskill Creek (68)

These six sub-watersheds are mainly located in the lowlands along the Mohawk River. The Cobleskill Creek sub-watershed is adjacent to and south of Canajoharie and Cayadutta Creek.

Characteristics of Low Scoring Sub-Watersheds:

Water Quality	Land Use	Habitat
• Poor water quality as measured by the percent impairment per the WI/PWL • Ten waterbody segments on DEC's 2012 Section 303(d) list	• Ninemile Creek and Oriskany Creek encompass the cities of Utica and Rome • Nowadaga Creek, Canajoharie Creek, and Cayadutta Creek include many river communities. • High agricultural and/or high development land use • High livestock density for agricultural areas	• Fish intolerant to pollution, like trout, below a healthy level • Many streams with impaired aquatic life

Low Scoring Sub-Watersheds, Cont.

Sources of pollution to low scoring sub-watersheds:

- 33 municipal wastewater plants (40% of total in Mohawk WS)
- Two EPA Superfund sites
- 16 "brownfield" sites in the Utica/Rome area
- High non-point source pollution from agriculture and developed areas

Recommendations to Restore Watershed Health:

Agricultural Areas	Developed Areas	Other
• Restore/increase riparian buffer zones. • Restrict animal access to streams. • Restore wetlands. • Continue AEM programs. • Expand nutrient management programs. • Promote prescribed grazing. • Improve animal feeding and waste operations. • Implement soil erosion BMP's.	• Implement storm water management plans for MS4 communities. • Implement green infrastructure initiatives in cities (Utica, Rome). • Preserve green space. • Restore brownfield sites. • Continue to address CSO issue. • Encourage "smart growth". • Increase pervious surfaces.	• Reduce streambank erosion through natural stream design. • Address failing septic systems near streams and lakes. • Encourage forest management planning. • Continue to address Superfund site issues (e.g. Griffiss AFB). • Improve DPW sand and salt storage facilities. • Protect drinking water supplies. • Protect wetlands and wildlife management areas. • Ensure that SPDES permits are being complied with. • Promote tertiary treatment to remove phosphorus at WWTP's. • Address Section 303(d) issues.

High Scoring Sub-Watersheds

UPPER MOHAWK:	Middle West Canada Creek (87.5) Upper West Canada Creek (90)
MAIN RIVER:	East Canada Creek (94)
SCHOHARIE WS:	West Kill (85.5) East Kill (87) Panther Creek (88.5)

These sub-watersheds are located in the northern and southern uplands of the Mohawk River watershed, which include the Adirondack Park and the Catskills, respectively.

Characteristics of High Scoring Sub-Watersheds:

Water Quality	Land Use	Habitat
• Impact of acid rain in Adirondack Park • High percent wetland/forest and riparian cover • Very good water quality, with low percent impairment	• Low percent agricultural land use • Low population density and small communities • Low commercial development	• Low pH affecting aquatic life in Adirondack Park • Relatively high in fish species intolerant to pollution • Healthy in-stream habitat

Sources of pollution to high scoring sub-watersheds:

- Only 13 municipal wastewater plants (16% of total in Mohawk WS)
- No brownfield or EPA Superfund sites
- Low non-point source pollution (low agriculture and development and high forest cover

Recommendations to Protect Watershed Health:

Developed Areas	Other
• Address failing septic systems along streams and lakes. • Manage stormwater in developed areas.	• Reduce streambank erosion through natural stream design. • Enhance in-stream habitat. • Protect forest riparian buffers and wetlands. • Manage timber harvesting. • Seed drainage ditches to prevent erosion. • Quantify impacts of hydrologic impacts (varying flows) from reservoirs. • Restore natural floodplains. • Manage invasive species.

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