



Trout Unlimited

Home-Waters Chapter #586

Conservation Plan

February 2021

Home-Waters Mission

To act in support of the National mission of Trout Unlimited - to conserve, protect, and restore cold water fisheries and their watersheds, through education and conservation efforts focused on Rensselaer County, New York State.

Purpose

Home-waters Chapter 586 of Trout Unlimited is creating this conservation plan to emphasize the Chapter mission and provide a flexible template for future adherence to The Chapter's stated goals. This plan is intended to be consistent with Home-waters Chapter, NY Council and Trout Unlimited mission statements.

This plan is also intended to inventory the major trout streams of the Home-Water Chapter territory, but does not include still waters, such as lakes and ponds. Also excluded is the mainstem of the Hudson. The Hudson is tidally influenced below the Federal Dam at Troy and contains a diverse community of warm water and diadromous fish, but few salmonids. The Hudson above the Federal Dam at Troy within the Home-waters territory is generally home to a warm water fish habitat, with few salmonids.

Abstract

Home-waters Chapter of Trout Unlimited encompasses the geographic area of the entirety of Rensselaer County and the southern portion of Washington County including much of the Hoosic River watershed,

plus northern Columbia County including a large portion of the watershed of the Kinderhook Creek. The Chapter expects to describe the watersheds, and waters within the Chapter’s geographic area, assess the current conditions of those waters, and develop priorities for conservation activities in the near and long term for those waters

Presently the priority activities expected to be addressed by the Chapter is the assessment of the waters chapter wide, with priority given to the Little Hoosic watershed and the associated brook trout population, the headwaters of the Kinderhook and tributaries to the upper Kinderhook, including the Black River, with the goal of protecting, reconnecting and restoring the native brook trout populations, while sustaining a vibrant Chapter. Other watersheds of interest include the Poesten Kill and the Hoosic River.

Inventory of waters

The waters in the Chapters’ geographic area are all part of the Hudson River Watershed. All data is from USGS StreamStats

Large Watersheds

Hoosic River

Length (miles)	Drainage area (sq. miles)	Percent forested	Percent above 1200 ft.	Slope (Feet/mile)	Slope upper basin (Feet/mile)	Slope lower basin (Feet/mile)	Annual rainfall inches	Bankfull flow CuFt/sec	June max temp deg F
78.6	714	70.0%	41.7	11.7	15.6	11.8	44.5	13000	74.3

At the far northern edge of the Home-Waters Chapter territory, The Hoosic (or Hoosick, sometimes Hoosuck or Hoosac) is a large river system that drains portions of three states into the upper Hudson River. As a large valley-bottom river, the mainstem does not have a significant slope, but due to the large drainage basin, receives a large volume of runoff from numerous tributaries. The Hoosic is fed from the cooler water emanating from Taconic Mountains (New York), the Berkshires (Massachusetts) and the southern Green Mountains (Vermont). The river has been used as a source for industrial power and for hydroelectric power generation for over 150 years. It has a legacy of pollution with industrial waste products (polychlorinated biphenyls, or PCB’s) downstream from the Sprague Electric site in North Adams, Massachusetts. Restrictions on fish consumption are therefore in place for certain species of fish taken from the Hoosic, including brown trout, and carp.

In July 1983, a fish kill affected at least 100,000 fish, also killing much of the plant and invetebrate life in the river, from Hoosic Falls downstream. The event was caused by a copper compound spill. The origin is unknown but was possibly attributed to a copper waste spill from an electronics manufacturer in Hoosic Falls, or to a malfunction of the village sewage treatment plant. Copper has no long-term effect on the river.

More recently, in 2016 the Village of Hoosick Falls drinking water was found to be contaminated with PFOA, a perflourinated industrial chemical. The public water supply has undergone extensive treatment. The source of the contamination is thought to be a plastic manufacturing company with

plants in both Hoosic Falls and North Petersburg. Samples taken from the Hoosic and Little Hoosic rivers indicated very low levels of contamination, with higher concentrations found in Thayer Pond and the Case Brook, both tributaries to the Hoosic River. Fish consumption advisories have been issued for those water bodies. Source elimination of this persistent chemical is ongoing.

There are several operational dams along the Hoosic that create large impoundments, and generally warm the water, as well as providing conditions that support warm water species, and a large infestation of invasive water chestnut.

In New York, the Hoosic is known to have wild populations of both brown and rainbow trout. Large fish of 20+ inches are not uncommon in the Hoosic, particularly in the cooler reaches near the Vermont border. Some of these fish are wild, and some are likely migrants from stocking programs in both Vermont and Massachusetts. There are some reaches with good access through NYS public fishing rights, but generally wade fishing is limited due to limited access and normal high flows and water depths. Float fishing on the Hoosic is a common method for covering water.

In Massachusetts there are several conservation organizations working to de-engineer the large-scale flood control measures that have been put in place on the Hoosic. These groups also intend to increase access to the river, monitor contaminations, reconnect the river to the historic floodplain and increase access for recreational uses, including recreational boating and fishing.

For 2021, The NYS DEC Trout Stream Management Plan, does not categorize the Hoosic River, so it will not be stocked.

The Hoosic has many tributaries, the more well-known are detailed below:

Walloomsac River (tributary to the Hoosic River)

Length (miles)	Drainage area (sq. miles)	Percent forested	Percent above 1200 ft.	Slope (Feet/mile)	Slope upper basin (Feet/mile)	Slope lower basin (Feet/mile)	Annual rainfall inches	Bankfull flow CuFt/sec	June max temp deg F
26.7	158	71.7%	49.2%	63.1	148	17.9	49.6	3650	73.2

The Walloomsac River is a large tributary to the Hoosic, with a confluence just west of North Hoosick NY. Much of the mainstem is located in Vermont, originating in the Green Mountains. It is heavily stocked in Vermont with brown and rainbow trout. Due to the cold water source and the limestone geology, there is a trophy section beginning west of Bennington, VT that ends at the NY border. There is only about a 4.5 mile stretch of the river in NYS, with several dams along its' course. There are no Public Fishing Rights, but there are several points of access along public roadway easements.

The 2020 NYS DEC Trout Stream management Plan categorizes the Walloomsac as a Stocked fishery for its' entire length in NY, from the confluence with the Hoosic River, east to the State border.

Little Hoosic River (tributary to the Hoosic River)

Length (miles)	Drainage area (sq. miles)	Percent forested	Percent above 1200 ft.	Slope (Feet/mile)	Slope upper basin (Feet/mile)	Slope lower basin (Feet/mile)	Annual rainfall inches	Bankfull flow CuFt/sec	June max temp deg F
20.9	75.1	92%	63.8%	45.3	81.2	34.1	42.9	1910	74.0

Another significant tributary to the Hoosic River, the Little Hoosic River is a relatively higher slope stream, constrained in a narrow valley between the Rensselaer Plateau and the Taconic Mountains. The very high gradient tributaries are a significant source of cold water with little or no storage potential. Due to this geomorphology, the Little Hoosic is prone to flash flooding during high rainfall events. Portions of the Village of Berlin have been historically damaged during periodic flooding events (1891, 1927, 1938, 1945, 1947 and 2011). There is an extended history of federal and State flood control efforts dating back to the 1940's. There are at least 10 flood control check dams along the river, of various ages and construction types. Most, if not all, are either poorly maintained or obsolete. The numerous flood control structures on the mainstem and the tributaries are significant obstructions to fish passage.

In 2011, excessive rainfall from back-to-back tropical storms, Irene and Lee, led to significant regional flooding, erosion and property damage, with the Little Hoosic subwatershed severely impacted.

Data from both Trout Unlimited and The Eastern Brook Trout Joint Venture indicate the existence of disconnected brook trout habitat in the Little Hoosic subwatershed. Reconnecting these habitat patches are a high priority for Trout Unlimited. Tributaries to the Little Hoosic provide a reliable source of cold, clean water from high elevation forested areas. A significant portion of the Taconic Range to the east is state owned land.

The Little Hoosic is a wild fishery, known for producing large brown and rainbow trout especially near the confluence with the Hoosic, near North Petersburg, as well as smaller wild brown, rainbow and brook trout in the upper reaches and numerous tributaries. There are limited Public Fishing Rights dispersed along the mainstem and one tributary. Recent acquisitions of land by NYS have significantly increased access in the higher tributaries especially in the Taconic Range. In 2020, the NYS DEC Trout Management Plan categorizes the river as Wild Quality, the second highest designation. As a wild fishery, it does not receive stocked fish.

Tomhannock Creek (tributary to the Hoosic River)

Length (miles)	Drainage area (sq. miles)	Percent forested	Percent above 1200 ft.	Slope (Feet/mile)	Slope upper basin (Feet/mile)	Slope lower basin (Feet/mile)	Annual rainfall inches	Bankfull flow CuFt/sec	June max temp deg F
21.2	69.7	63.6	10.1	42.7	106	35.5	40.4	1800	76.3

The Tomhannock Creek is arguably the most important watershed in Rensselaer County. The Creek has an impoundment forming the 5.5-mile long Tomhannock Reservoir. Owned and protected by the City of

Troy, NY, the reservoir is the primary source of drinking water for the City and large portions of western Rensselaer County, including East Greenbush, North Greenbush, West Sand Lake, Brunswick and a portion of Schaghticoke. The reservoir holds 12.3 billion US gallons (47,000,000 m³) when full, with a depth of 50 feet at the deepest point. It is a productive walleye fishery.

Below the reservoir, the historic diversions of water cause the flow to be inconsistent. Above the reservoir are several smaller tributaries that may be worth assessing for salmonid conservation. The Sunsuissia Creek and the Otter Creek are both small streams that receive runoff from higher terrain on the Rensselaer Plateau.

The Tomhannock and its tributaries are uncategorized in the 2020 NYS DEC Trout Management Plan and are not stocked.

Kinderhook Creek *entire basin, including Stockport Creek

Length (miles)	Drainage area (sq. miles)	Percent forested	Percent above 1200 ft.	Slope (Feet/mile)	Slope upper basin (Feet/mile)	Slope lower basin (Feet/mile)	Annual rainfall inches	Bankfull flow CuFt/sec	June max temp deg F
53.8	518	70.7	17.1	18.5	30.4	15.5	37.8	5840	76.5

Kinderhook Creek * upstream of the village of Kinderhook, not the entire basin

Length (miles)	Drainage area (sq. miles)	Percent forested	Percent above 1200 ft.	Slope (Feet/mile)	Slope upper basin (Feet/mile)	Slope lower basin (Feet/mile)	Annual rainfall inches	Bankfull flow CuFt/sec	June max temp deg F
44.3	318	76.1	27	22.4	35.2	16.3	38	4190	75.5

Originating in Western Massachusetts the Kinderhook is arguably the most accessible, stocked fishery in Rensselaer County. The creek begins as a small stream in the vicinity of Jiminy Peak, a ski area in the Berkshire Mountains of Massachusetts. Seasonal drawdowns of water for snowmaking purposes, combined with seasonal return of the water as meltwater in the spring and early summer may be influencing the natural flow regime to an unknown degree. The creek receives a significant amount of its water from the Taconic Mountains and from the Rensselaer Plateau through numerous small and modest sized tributaries, including the East Brook, the West Brook, The Black River, the Roaring Mill Brook, The Black Brook, The Tsatsawasick, the Wyomanock, the Valatie Kill and numerous others. The creek drains a large portion of Rensselaer and Columbia Counties as it flows to the lower Hudson, eventually entering the short, tidal Stockport Creek.

The watershed has been historically home to water powered mills, logging and agricultural uses, leading to the existence of many small historic villages along the mainstem and tributaries. Historic uses of the

mainstem creek may have led to modifications of the original stream bed, such as straightening, deepening, diversions and impoundments.

The Kinderhook has extensive Public Fishing Rights, most notably along the upper reaches and tributaries. Recent acquisitions of State land, and publicly accessible community forests in the Taconics, on the Rensselaer Plateau and in the village of East Nassau provide good access.

The NYS DEC Trout Stream Management Plan categorizes a long reach, from Interstate 90 upstream to the Village of Stephentown as Stocked Extended, providing repeat stockings of brown and rainbow trout within the fishing season. One reach from Stephentown to the State line is categorized as Wild Quality, the second highest designation. This reach will not be stocked, as the categorization reflects the high-quality habitat of the upper Kinderhook.

The Kinderhook has many tributaries, the more well-known are detailed below:

Black River (tributary to the Kinderhook Creek)

Length (miles)	Drainage area (sq. miles)	Percent forested	Percent above 1200 ft.	Slope (Feet/mile)	Slope upper basin (Feet/mile)	Slope lower basin (Feet/mile)	Annual rainfall inches	Bankfull flow CuFt/sec	June max temp deg F
11.2	14.4	91	88.5	94.5	113	86	41.2	513	73.2

The Black River is a steep slope, cold water stream that originates near the Capital District Wildlife Management area. The headwater reach includes two significant natural fish barriers and flows through protected remote forest. Due to the isolated nature of the habitat, there is some potential for the existence of an isolated brook trout population. The creek eventually reaches a recreational impoundment created for the Cherry Plains State Park. The dam is a large overflow dam that significantly warms the water. The pond contains some trout in the deep areas, but also holds several warm water species including yellow perch, black bass, and chain pickerel.

Below the dam, the land is densely forested, allowing for the cooling of the water. Along with the addition of cooler surface water and groundwater, the stream again supports salmonids including brown and brook trout.

In November 2020, the Chapter organized a redd survey along several reaches of the Black River. In all, nearly two miles of the river were assessed for trout redds with over 50 identified. The Black River has a robust population of wild brook trout and brown trout with the largest population below the State Park dam.

The River does not have any Public Fishing Rights but can be accessed from State land for the upper reaches. The Black River is uncategorized in the 2020 NYS DEC Trout Management Plan, which means that it will not be stocked.

Wyomanock Creek (tributary to the Kinderhook Creek)

Length (miles)	Drainage area (sq. miles)	Percent forested	Percent above 1200 ft.	Slope (Feet/mile)	Slope upper basin (Feet/mile)	Slope lower basin (Feet/mile)	Annual rainfall inches	Bankfull flow CuFt/sec	June max temp deg F
13.2	30.6	80.9	24	46	118	18	41.1	855	75

The Wyomanock originates in the Taconic Mountains near New Lebanon, NY in Columbia County. The creek has a high slope, cold headwater section, divided into a North and South Branch, where brook trout are thought to thrive. The stream quickly reaches a longer, low slope area where it warms and meanders to its' confluence with the Kinderhook in West Lebanon.

There is limited public access to the stream, except for Public Fishing Rights at the confluence. Stocked fish from the Kinderhook predominate in this short reach. The Wyomanock is uncategorized in the 2020 NYS DEC Trout Management Plan and therefore, is not stocked.

Black Brook (tributary to the Kinderhook Creek)

Length (miles)	Drainage area (sq. miles)	Percent forested	Percent above 1200 ft.	Slope (Feet/mile)	Slope upper basin (Feet/mile)	Slope lower basin (Feet/mile)	Annual rainfall inches	Bankfull flow CuFt/sec	June max temp deg F
8.38	8.53	93.4	38.1	107	117	111	37.5	359	74.6

The Black Brook (not the Black River) is a high gradient cold water stream that originates on the Rensselaer Plateau. It is a short stream with a small drainage but supports a known population of wild brook trout. There are no Public Fishing Rights, but the Rensselaer Land Trust allows access and C&R fishing in the Robert Ingalls Preserve. The stream is not stocked.

Activity to improve road/stream crossings in the subwatershed are being discussed.

Valatie Kill (tributary to the Kinderhook Creek)

Length (miles)	Drainage area (sq. miles)	Percent forested	Percent above 1200 ft.	Slope (Feet/mile)	Slope upper basin (Feet/mile)	Slope lower basin (Feet/mile)	Annual rainfall inches	Bankfull flow CuFt/sec	June max temp deg F
25	40.3	60.8	0.3	19.9	41.2	12	35.9	1030	76.8

The Valatie Kill begins in the Town of Nassau with a short reach of steep gradient stream. The stream is shortly thereafter impacted by an EPA Superfund site known as the Dewey Loeffel Landfill. Historically the stream was contaminated by multiple hazardous industrial chemicals that were improperly disposed of at the landfill, including perchlorinated biphenyls, (PCB) an environmentally persistent, bioaccumulative carcinogen. The contaminants were transported in large quantity as far as Nassau

Lake, causing significant contamination of both the stream and lake sediments and a prohibition on fish consumption. Lesser quantities were transported as far as Kinderhook Lake in Columbia County, with consumption advisories extended to Kinderhook Lake. Extensive environmental remediation has been undertaken and continues into the present time.

There is little public access to the stream and no stocking all the way to the confluence with the Kinderhook in the Village of Valatie.

Tsatsawasick Creek (tributary to the Kinderhook Creek)

Length (miles)	Drainage area (sq. miles)	Percent forested	Percent above 1200 ft.	Slope (Feet/mile)	Slope upper basin (Feet/mile)	Slope lower basin (Feet/mile)	Annual rainfall inches	Bankfull flow CuFt/sec	June max temp deg F
16.3	22.1	89.7	57.4	71.2	79.8	50.2	38.6	686	74.3

The Tsatsawasick Creek (sometimes Tsatsawassa) is a steep gradient coldwater stream that originates on the Rensselaer Plateau and travels through largely forested private land. Because of its' steep course, the water has been used to power historic mill sites. For much of its' length it is confined to a narrow valley, and therefore is prone to flash flooding. After the stream passes through Hoags Corner, the terrain flattens somewhat and develops into a wider floodplain. The stream enters Tsatsawassa Lake, where the water warms in summer, shortly before it enters the Kinderhook in East Nassau. There is limited public access to the stream except at public roadway easements. Wild brown and brook trout are documented in the stream for much of its' length.

The stream is uncategorized in the 2020 NYS DEC Trout Stream Management Plan so is not stocked.

Medium Watersheds

Poesten Kill

Length (miles)	Drainage area (sq. miles)	Percent forested	Percent above 1200 ft.	Slope (Feet/mile)	Slope upper basin (Feet/mile)	Slope lower basin (Feet/mile)	Annual rainfall inches	Bankfull flow CuFt/sec	June max temp deg F
28.8	96.3	71.8%	50.2%	61.8	71.8	21.4	38.2	1890	75

The Poesten Kill watershed drains most of the Rensselaer Plateau, a large, forested highland in the east of the County, entering the lower Hudson in the City of Troy. Major tributaries include: the Quacken Kill, Bonesteel Creek, and Sweet Milk Creek. The Poesten Kill headwaters originate from Dyken Pond, high on the Rensselaer Plateau. The Creek has multiple natural fish barriers, two of them are quite formidable. Because of its generally steep gradient and abundant waterfalls, the Creek has a long history of use for water powered mills.

The creek can be roughly divided into three sections. The first is a below the impressive High Falls at the Poestenkill gorge, and it holds primarily Hudson river species, including alewife, and American eels. This section has been historically industrialized, is nearly completely channelized and runs through an urbanized area. High Falls is presently used for hydroelectric power generation.

The second is the reach from High Falls to Barberville Falls, an equally impressive cascade. This reach has a moderate to steep slope, drains primarily residential and agricultural lands, and rises sharply above the Village of Poestenkill. There is a smaller cataract in this reach in town of Eagle Mills that likely presents a barrier to fish migration at low to moderate flows.

The third section above Barberville is a smaller headwater stream, with a steep descent through less populous forested terrain. The upper Poesten Kill has potential for brook trout reproduction, as does the outlet stream for Davitt Pond, as well as Bonesteel Creek, however current fish population data is not available.

There are two locations along the stream that are held for community recreation; The Poestenkill Bends, and the Barberville Falls Preserve. Efforts to expand the Poestenkill Bends community forest and improve access are underway. At the Barberville Falls, the conserved area directly below the falls currently allows public access for recreation, and has recently been re-opened to fishing, except in the area of the falls pool. This restriction is to avoid interaction with swimmers in the pool. Some Public Fishing Rights are accessible in and near the Village of Poestenkill.

The Rensselaer Plateau Alliance has commissioned a comprehensive flood study of the entire watershed as a result of the significant erosional damage and localized flooding in the village of Poestenkill from Tropical Storms Lee and Irene. During the storms, the flood walls in Troy were nearly overtopped, posing a significant risk to a large urban area. The Chapter is working with the RPA and other agencies to secure funding for the flood study recommendations.

The NYS DEC Trout Management Plan for 2020 categorizes the Poesten Kill as Stocked from Heather Ridge Road in Brunswick to Eagle Mills. The reach from the confluence with the Quacken Kill to Dodge City Road in East Poestenkill is also categorized as Stocked, and usually receives brown trout.

The Poesten Kill has several tributaries, the most well-known one is detailed below:

Quacken Kill (tributary to the Poesten Kill)

Length (miles)	Drainage area (sq. miles)	Percent forested	Percent above 1200 ft.	Slope (Feet/mile)	Slope upper basin (Feet/mile)	Slope lower basin (Feet/mile)	Annual rainfall inches	Bankfull flow CuFt/sec	June max temp deg F
18.4	31.0	72.3%	54.4%	74.2	76.1	65.2	39.0	867	74.9

The Quacken Kill is a large tributary to the Poestenkill, also originating on the Rensselaer Plateau, from waterbodies in and near the Grafton Lakes State Park. The stream has a steep gradient through forested, sparsely populated lands, in general proximity to State Route 2 for much of its' steep descent. The creek slope flattens out in the vicinity of Clums Corners. Historically and currently, the stream is regularly impacted by hard rock and gravel mining operations that discharge waste wash water and sediment into the creek. Fish data are not available, but there is likely a small population of wild brown trout.

The stream suffered significant damage from Tropical Storms Lee and Irene particularly in the area of Clums Corners, where the steep gradient flattens.

The Quacken Kill is uncharacterized in the 2020 NYS DEC Trout Management Plan, so is not stocked.

Wynants Kill

Length (miles)	Drainage area (sq. miles)	Percent forested	Percent above 1200 ft.	Slope (Feet/mile)	Slope upper basin (Feet/mile)	Slope lower basin (Feet/mile)	Annual rainfall inches	Bankfull flow CuFt/sec	June max temp deg F
20.1	33.5	56.4	9.67	40	110	38	36.5	909	76.2

The Wynants kill originates at a lower elevation from Crooked Lake at the western base of the Rensselaer Plateau. It runs primarily through residential areas, with a relatively steep slope, past numerous small waterfalls and historic mill sites. Cooler water is received from several lakes including Crystal Lake, and Glass Lake. It receives warmer water from Burden Lake but still has some potential for wild brook trout below the lake due to the input of cooler groundwater from wetland and gravel deposit seeps. Brown trout are reported to spawn downstream of West Sand Lake, past the outlet from Reichards Lake, but fish data are not available. There are limited public fishing rights, with accessible areas along roads and public parking areas. Gravel mining in proximity to the stream likely has adverse influence on the groundwater input to the stream. The lower end of the Creek falls sharply to the lower Hudson and has a long history of industrial use. Hudson River species access the lowest reaches but are stopped below the steep areas. There is a small community forest and garden with stream access in the village of Wynantskill, along with a small area of Public Fishing Rights.

The Wynants Kill is uncategorized in the 2020 NYS DEC Trout Management Plan, so will no longer be stocked.

Moordener Kill

Length (miles)	Drainage area (sq. miles)	Percent forested	Percent above 1200 ft.	Slope (Feet/mile)	Slope upper basin (Feet/mile)	Slope lower basin (Feet/mile)	Annual rainfall inches	Bankfull flow CuFt/sec	June max temp deg F
17.4	32.1	52.4	0	28	34.5	49.7	36.1	883	76.9

The Moordener Kill (from the Dutch, meaning Murder Creek) is a low elevation stream subject to seasonal warming. The headwaters begin near West Sand Lake and are relatively flat, with the slope increasing as the stream approaches the confluence with the lower Hudson. Flowing through a mix of forested, agricultural and residential property, the stream likely supports a small wild brown trout population in the upper reaches and anadromous Hudson River species in the lowest reaches.

The Moordener Kill is uncharacterized in the 2020 NYS DEC Trout Stream Management Plan and will not be stocked.

The stream is so named from the story of 7 men and 2 women Dutch settlers killed at the mouth of the creek by Native Americans in 1643.

Small Watersheds

Muitzes Kill

Length (miles)	Drainage area (sq. miles)	Percent forested	Percent above 1200 ft.	Slope (Feet/mile)	Slope upper basin (Feet/mile)	Slope lower basin (Feet/mile)	Annual rainfall inches	Bankfull flow CuFt/sec	June max temp deg F
12	32.1	39.7	0	16.3	25.7	19.9	34.7	660	77.8

The Muitzes Kill is a low elevation, low slope creek that runs through primarily glacial soils. It meanders its way to the lower Hudson confined by glacial eskers and fine soils. The water is warmed seasonally. No fish data is available, but anadromous Hudson species are likely present in the lowest reaches.

The stream is uncategorized in the 2020 NYS DEC Trout Management Plan and is not stocked.

Mill Creek

Length (miles)	Drainage area (sq. miles)	Percent forested	Percent above 1200 ft.	Slope (Feet/mile)	Slope upper basin (Feet/mile)	Slope lower basin (Feet/mile)	Annual rainfall inches	Bankfull flow CuFt/sec	June max temp deg F
14.5	16.1	48.4	0	24.7	30	35.7	34.7	553	77.3

The Mill Creek originates in East Greenbush and is another low elevation, lower slope stream that gains slope as it approaches the lower Hudson in the City of Rensselaer. The creek travels primarily through glacial soils and esker formations and is prone to warmer summer temperatures. The Creek may support a small wild brown trout population that are holdover stocked fish.

The Mill Creek is uncategorized in the 2020 NYS DEC Trout Management Plan and is no longer stocked.

Vlockie Kill

Length (miles)	Drainage area (sq. miles)	Percent forested	Percent above 1200 ft.	Slope (Feet/mile)	Slope upper basin (Feet/mile)	Slope lower basin (Feet/mile)	Annual rainfall inches	Bankfull flow CuFt/sec	June max temp deg F
9.44	7.55	62.1	0	57.8	68.2	58	35.4	331	77.5

The Vlockie Kill is a low elevation creek that runs through primarily glacial soils. It works its way to the lower Hudson confined by glacial eskers and thin, fine soils. The water is warmed seasonally. No fish data is available, but anadromous Hudson species are likely present in the lowest reaches.

The stream is uncategorized in the 2020 NYS DEC Trout Management Plan and is not stocked.

Deep Kill

Length (miles)	Drainage area (sq. miles)	Percent forested	Percent above 1200 ft.	Slope (Feet/mile)	Slope upper basin (Feet/mile)	Slope lower basin (Feet/mile)	Annual rainfall inches	Bankfull flow CuFt/sec	June max temp deg F
10.7	15.7	57	0	67.2	48.5	84.1	35.9	514	76.8

The Deep Kill originates near the Tomhannock Reservoir and flows westward directly to the upper Hudson, gaining a steeper pitch as it nears its' mouth. It is a relatively low elevation stream and is subject to warmer summer temperatures. No fish data are available.

The Deep Kill is uncategorized in the 2020 NYS DEC Trout Management Plan and is not stocked.

Unnamed 1st Order Streams Draining to the Hudson

Length (miles)	Drainage area (sq. miles)	Percent forested	Percent above 1200 ft.	Slope (Feet/mile)	Slope upper basin (Feet/mile)	Slope lower basin (Feet/mile)	Annual rainfall inches	Bankfull flow CuFt/sec	June max temp deg F
4.23	3.93	41.3	0	133	82.3	136	35.4	212	77.7

This watershed contains a series of unnamed very small streams that originate on the hilly terrain above the Hudson. They drop sharply to the lower Hudson. Subject to warmer temperatures, they pass through relatively finer soils and eskers before meeting the rocky shoreline of the Hudson. No fish data are available.

They are uncategorized in the 2020 NYS DEC Trout Management Plan and are not stocked.

Conservation Goals

Generally stated, the goals off Home-Waters Chapter 586 parallel the mission of Trout Unlimited's National Agenda. In addition, these broad goals strive to:

- Provide a professional environment that promotes robust Chapter engagement
- Assess water resources within the Chapters jurisdiction to identify high quality salmonid habitat
- Identify salmonid habitat that would benefit from conservation efforts
- Identify resources and partnerships that will lead to effective conservation projects
- Engage interested partner agencies to foster networked solutions to conservation challenges
- Develop Chapter members to apply a data-driven, science-based approach to conservation
- Prioritize wild fish populations while recognizing the need for fish stocking programs

Priority Actions and Recommendations

Despite the challenges associated with the COVID-19 pandemic in 2020 and 2021, Home-waters Chapter has been able to develop and deliver several successful conservation initiatives.

Tree planting

In early 2020 Home-water Chapter was scheduled to receive 200 bare root tree saplings intended for planting in riparian areas. Due to the uncertainties of organizing a Chapter event with partner agencies, the project was postponed indefinitely.

Recommendation

Re-schedule the planting for late spring 2021. The trees have been ordered from Trout Unlimited at no cost to the Chapter. Considering the substantial benefit of riparian tree plantings, this should be developed into a recurring Chapter endeavor, contingent upon successful implementation and identifying additional suitable locations through partnerships.

WAVE Program

In 2020, in cooperation with NYSDEC and Rensselaer County Soil and Water District, The Chapter completed macroinvertebrate samplings using NYS WAVE protocol in 9 streams. The program is beneficial as a Chapter building, educational method that also assists NYSDEC in prioritizing stream assessments.

Recommendation

Continue implementation of the WAVE program for 2021 and beyond. NYSDEC has loaned us the equipment for future use. Conservation Committee members have held a ZOOM meeting early this year to coordinate priority streams for macroinvertebrate sampling. Consideration should be given to obtaining additional data during WAVE samplings consistent with Chapter priorities.

Redd Surveys

In November 2020, The Chapter organized a redd survey on multiple reaches of the Black River in Stephentown. Over 2 miles of the river were visually assessed and over 50 potential redd sites were identified. Data was collected using Trout Unlimited's ARC123 GIS Redd Survey app. Participants received online training in redd identification and data collection prior to the survey. The data are extremely useful for assessing the quality of the habitat and are available for use by TU partners.

Recommendation

Continue and refine the Chapter activity in this effort. Periodically re-assess the Black River and consider including other priority locations if resources allow. Although labor intensive, the redd survey planning and implementation is beneficial as a Chapter building event. Collected data may prove to be very beneficial in future grant application activities.

Stream Crossing Surveys

In 2020, Chapter members completed nearly 30 culvert surveys using Trout Unlimited's ARC123 GIS RIVERS app. The app is useful for not only culvert surveys but also for geocoding many other types of conditions found on a stream. The data are useful for compiling a regional look at local stream conditions and may prove useful in acquiring grant funding.

Recommendation

Expand the use of the RIVERS app by providing training to willing Chapter members.

Temperature Data Logging

Conservation Committee Members have researched performance information and costs for acquiring equipment to monitor water and air temperatures in selected streams. The data loggers are small sensors that can be placed in streams to collect continuous temperature readings over an extended period of time. Establishment of a temperature data program will require a commitment of time and money over a number of years in order to collect sufficient data. Data can be used to quantify a critical environmental parameter for understanding habitat quality.

Additional sampling devices and sensors are being researched to potentially include other water quality parameters such as flow, depth and turbidity.

Recommendation

Request a determination from the Board of Directors when cost estimates and locations are finalized. There is a high likelihood of obtaining grant funding to cover 2/3 of equipment costs.

Priority Locations and Recommendations

All the trout streams in the Home-Waters geographic catchment area are worthy of protection. Each has its' own character and unique ecological value. There are several locations that Home-waters Chapter should focus on for assessment and priority conservation activities with regard to preserving, protecting reconnecting and sustaining wild and native salmonid. By prioritizing river systems and locations the Chapter intends to emphasize the importance of high quality coldwater habitat as the foundation of our conservation efforts.

Little Hoosic River

As previously described, the Little Hoosic has a robust population of wild trout including brown, rainbow and brook trout. The subwatershed has high quality high priority brook trout habitat in the high elevation, high gradient tributaries. These habitats are fragmented but are afforded some protections by the rugged nature of the terrain, and the existence of large tracts of State -owned land.

The mainstem is prone to periodic flooding with a history of damaging flooding in the valley communities. Long standing efforts to ameliorate the flood risk are antiquated and should be assessed

for current efficacy. Modern flood risk mitigation techniques may be applicable to both attenuate flooding and provide natural channel designs to eliminate existing habitat fragmentation.

Recommendation

The Chapter should continue engagement with NYSDEC, US Fish and Wildlife Service, Rensselaer County Soil and Water Conservation District and Trout Unlimited staff to pursue funding for a feasibility study to redevelop a flood mitigation scheme along the length of the Little Hoosic River and its tributaries.

It may be worthwhile to make efforts to acquire existing data on fish populations, or to promote the collection of data on fish populations to better understand the extent of wild fish populations in the upper basin.

Upper Kinderhook Basin

The Kinderhook Creek watershed is the most accessible water in the Home-waters catchment area. The Creek is categorized as Stocked Extended from the Interstate 90 crossing in Columbia County all the way to the village of Stephentown. Upstream of the Hankey Mull Bridge in West Lebanon, however the slope of the creek steepens, and the Creek receives a significant amount of cold water from small tributaries originating from higher forested terrain on the Rensselaer Plateau. It is likely that this long reach has conditions suitable for a reproductive, wild fishery. From the Village of Stephentown to the State Line, the creek is categorized as Wild Quality, providing further evidence of the quality conditions in the creek. Chapter members report catching wild brown trout in the mainstem, and wild brook and brown trout in the tributaries. There is one report of a tiger trout from the Roaring Mill Brook, one of the tributaries to the upper basin.

There is good access to the creek via a long stretch of Public Fishing Rights, extending nearly continuously for several miles from Malden Bridge to the State Line.

Recommendation

Consideration should be given to establishing a temperature monitoring program in the upper Kinderhook Creek basin. Collected data would be useful in determining the accuracy of the existing stocking categorization. Considering the length and accessibility of the creek, water quality data may be useful to recalibrate the stocking plan along the length of the Kinderhook.

Geomorphological assessments of identified areas of excessive erosion (i.e at the confluence with the Tsatsawasick Creek) may be beneficial to develop projects to improve fish habitat in the most popular and pressured reaches.

It may be worthwhile to make efforts to acquire existing data on fish populations, or to promote the collection of data on fish populations to better understand the extent of wild fish populations in the upper basin.

Poesten Kill

The Poesten Kill watershed is prominently located and completely contained within Rensselaer County. Recently, two local land conservancies have acquired significant parcels of land along the Poestenkill, dramatically improving public access to portions of the creek. The Rensselaer Land Trust (RLT) and the Rensselaer Plateau Alliance are energetic partners with a strong conservation ethic. Currently they are working to connect multiple parcels of land at a site known as the Poesten Kill Bends to provide access to over two miles of stream partially located in the City of Troy. The Rensselaer Plateau Alliance (RPA) has acquired and opened a conservation easement at the Barberville Falls with significantly improved access, including new fishing access.

The RPA has also commissioned a comprehensive flood mitigation study for the Poesten Kill watershed. The study contains several conceptual solutions for improving flooding and erosion along the creek.

Recommendation

Maintain the strong partnership with the RPA and the RLT. Participate in the flood management activities conceptualized in the Poestenkill flood mitigation study. Maintain linkages with the Rensselaer County Soil and Water Conservation District, US Fish and Wildlife Service and Trout Unlimited to identify sources of funding for a priority remediation project near the Poestenkill Fire Company property.

Priority Topics

Access

Homewaters Chapter is fortunate to have several quality trout streams within its' boundaries. However, for most there is only limited access to the water for fishing. This creates excess fishing pressure on these locations and on other nearby waters.

Recommendation

Efforts to recruit property owners to create or expand Public Fishing Rights should be promoted at every opportunity. Eventually a program should be developed to canvass riparian owners for interest in this opportunity, especially along the Hoosic, Little Hoosic and Walloomsac Rivers, and the Tsatsawasick Creek.

Mining and Development

Development issues, especially hard rock and gravel mining create heavy pressure on fragile stream habitats. Housing and industrial development require development of potable water resources and wastewater disposal systems. Clearing of forested areas can create or exacerbate habitat fragmentation. Improper infrastructure siting can increase flood risk. All these factors need to be well understood to avoid unnecessary impacts on riparian areas.

Mining is especially impactful. Removal of rock and gravel overburden can eliminate forest, lower the water table, cause sedimentation and erosion, and may require water drawdowns or introduction of wastewater to streams and rivers.

Recommendation

The Chapter should participate in local planning and zoning activities regarding development and mining issues to provide information, education and insight into local development issues. It is unreasonable to resist all development, but the Chapter can participate in discussions to inform policy makers regarding best practices for protecting sensitive riparian habitats.

Land Conservation

Local land conservancies are making great strides in acquiring both property and conservation easements for the purposes of allowing public access to natural resources into the distant future. These efforts create a legacy of conservation with incalculable benefit.

Recommendation

The Chapter should make every effort to support and promote the activities of local land conservancies through planning, cooperation and program assistance.

Respectfully submitted,

Tom Carroll, Conservation Committee Chair

Amy Dellio, Conservation Committee Member