A map of the Saugatuck River Watershed, showing the river and its tributaries. The watershed boundary is outlined in light blue. The main river channel is highlighted in a darker blue. The map is centered on the page.

# **An Introduction to the Saugatuck River Watershed and the The Saugatuck River Watershed Partnership**

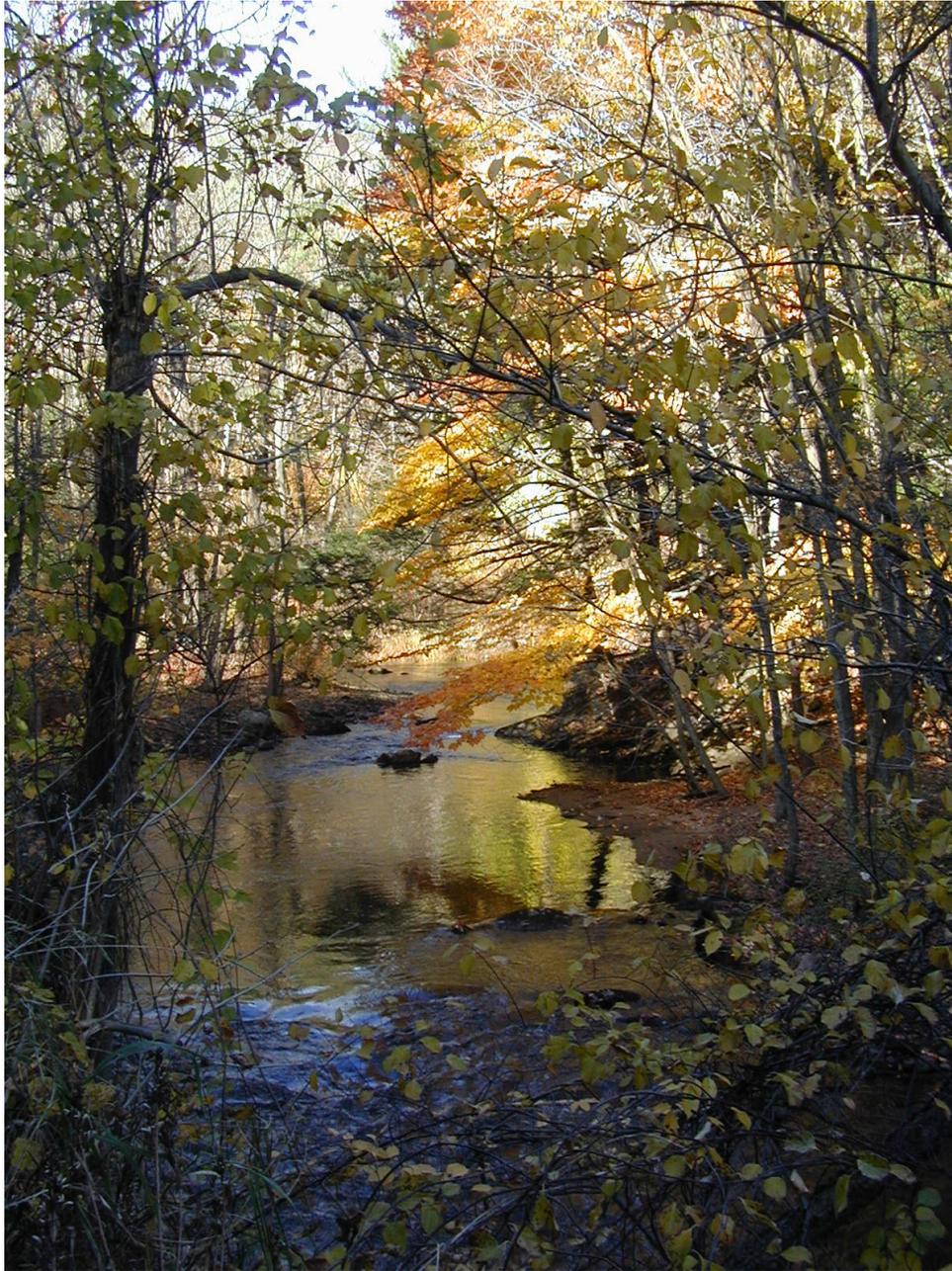
**Bethel, Danbury, Easton, Fairfield, Newtown, Norwalk, Redding,  
Ridgefield, Weston, Westport and Wilton**

**March 2006**

**Project Coordinator:  
Sally Harold, Conservation Manager  
The Nature Conservancy's  
Saugatuck Forest Lands Project  
(203) 226-4991 x207  
[sharold@tnc.org](mailto:sharold@tnc.org)**

## **Project Summary:**

Through a series of planning workshops and public meetings, and with the cooperation of municipal representatives, stakeholder groups, environmental experts and interested individuals, a conservation action plan has been drafted that presents strategies to mitigate threats to the health of the Saugatuck River system.



“When we save a river, we save a major part of an ecosystem, and we save ourselves as well because of our dependence - physical, economic, spiritual - on the water and its community of life.”

Tim Palmer,  
The Wild and Scenic Rivers of America

**Special thanks** to all who have helped to develop the Partnership. Thanks for your input, ideas, critiques, time, enthusiasm and encouragement. We've just begun this partnership and I look forward to continued collaboration and hard work in our pursuit to keep this watershed healthy.

To the attendees of the planning workshops, to those who came to public meetings, to members of local stakeholder groups, volunteers, citizens and my colleagues at The Nature Conservancy who have helped with this effort, I thank you.

**Participants in the Saugatuck River Watershed Planning Workshops – 2005**

Andrew Morosky	Town Engineer	Bethel
Beth Cavagna	Inland Wetlands	Bethel
Jack Kozuchowski	Coordinator of Environmental and Occupational Health Services	Danbury
Scott LeRoy, MPH, MS	Sr. Inspector, Health Department	Danbury
Philip Doremus	Zoning Enforcement Officer	Easton
Tom Steinke	Conservation Director	Fairfield
Alexis Cherichetti	Sr. Environmental Officer	Norwalk
John Hayes	Planning Consultant for Easton and Redding	Redding Ridge
Dave Pattee	Chairman Conservation Commission	Redding
Scott Sharlow	Newtown GIS specialist, Ridgefield resident	Ridgefield
Tom Failla	Former Chair, Conservation Commission	Weston
Fred Anderson	Conservation Planner	Weston
Judy Nelson	Former Director Westport/Weston Health District	Westport
Alicia Mozian	Conservation Director	Westport
Patricia Sesto	Director Environmental Affairs	Wilton
Dick Bell	Pootatuck Watershed TU Association	Newtown
Michael Beauchene	CT DEP Bureau of Water Management	Hartford
Joe DeRisi	Southwest Conservation District	Wallingford
Roman Mrozinski	Southwest Conservation District	Wallingford
Carol Donzella	Community Planner USDA - NRCS	Woodbridge
Steve Gephard	CT DEP Diadromous Fish Program	Old Lyme
Dick Harris	Earthplace - Harbor Watch River Watch	Westport
Joe Hovious	Conservation Chair Candlewood TU	Sandy Hook
Bill Hyatt	CT DEP, Director, Inland Fisheries Program	Hartford
Jessica Kaplan	Coordinator, Norwalk River Watershed Initiative	Wilton
Michael Klemens	Director, Metropolitan Conservation Assoc. (MCA)	Rye
Chris Malik	CT DEP Watershed Management	Hartford
Guy Hoffman	CT DEP Water Resources	Hartford
Brian Roach	Aquarion Water Company	Easton
Brian Thompson	Aquarion Water Company	Easton
Dave Bjerklie	U.S. Geological Survey	East Hartford
Mark Carabetta	Director of Science TNC Connecticut Chapter	Middletown
Gavin Anderson	Westport Resident, member Westport Bd. of Finance	Westport
Julian Sproule	President, Saugatuck Valley Audubon	Wilton
Jennifer Pagach	CT Department of Public Health	Hartford

Paula Pendleton  
Bill Blaufuss  
Gian Andrea Morresi  
Greg Overton  
Steve Patton

CT Department of Public Health  
President, Nutmeg Chapter Trout Unlimited  
Member, Nutmeg Chapter Trout Unlimited  
Northwest Highlands Director, TNC  
Director of Conservation Programs, Director  
Saugatuck Forest Lands Project

Hartford  
Westport  
Fairfield  
Winsted  
Weston

## **VOLUNTEERS 2005**

### **Stream Walk**

Greg Donahue  
Claire Williams  
Heidi Erspamer  
Mark Conese and Cindy Fox  
Pamela Custode  
Julie Henderson  
Cheryl Groesbeck  
Katharine Molnar  
Roger King  
Donald and Bonnie Scarborough  
Carol Shufro  
Dave Brown, Betsy Royal and Family  
Helen Garten  
Janet Horowitz  
Alicia Mozian  
Sean Timmins  
Jean-Ellen Trapani  
Lula Matthei  
Joe DeRisi

Bridgeport  
Danbury  
Easton  
Easton  
Ridgefield  
Ridgefield  
Shelton  
Stratford  
Weston  
Weston  
Weston,  
Westport  
Westport  
Westport  
Westport  
Westport  
Westport  
Wilton  
Woodbridge



### **Macroinvertebrate Sampling**

Ellen Hardy, Peter Morse and Family  
Greg Donahue  
Jean Puchalski  
Joan Franklin  
Mary Hogue  
Jeanne Konecny  
Don Houston  
James Olsen

Ansonia  
Bridgeport  
Easton  
Fairfield  
Fairfield  
Fairfield  
Shelton  
Stratford



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## The Saugatuck River Watershed Partnership

During the past year, over eighty individuals, representing twenty-five organizations and all eleven towns within the Saugatuck River Watershed have assisted in developing a conservation action plan for the preservation, enhancement and protection of its health. In 2005, The Nature Conservancy, (TNC), held a series of three planning workshops to identify concerns about watershed health, select conservation targets and develop an action plan. Additional presentations at public meetings, to clubs, a local conservation commission and to other interested groups introduced the work of the Partnership to the public.

Fairfield County, just one hour east of New York City, is Connecticut's second fastest growing county. Development pressure in the watershed is intense. As the landscape absorbs more and more people and structures, development, water demand, and land and water use practices threaten surface and groundwater quality and the diverse habitats supported by a healthy watershed. The Nature Conservancy is leading the effort to establish the Saugatuck River Watershed Partnership with representatives from the eleven towns within the watershed, stakeholder groups, conservation organizations, town commissions, local businesses and interested individuals working together to develop and implement strategies to protect the health of this watershed.

The Saugatuck River Watershed Partnership will develop and implement projects and practices to protect and enhance the health of this valuable natural resource.

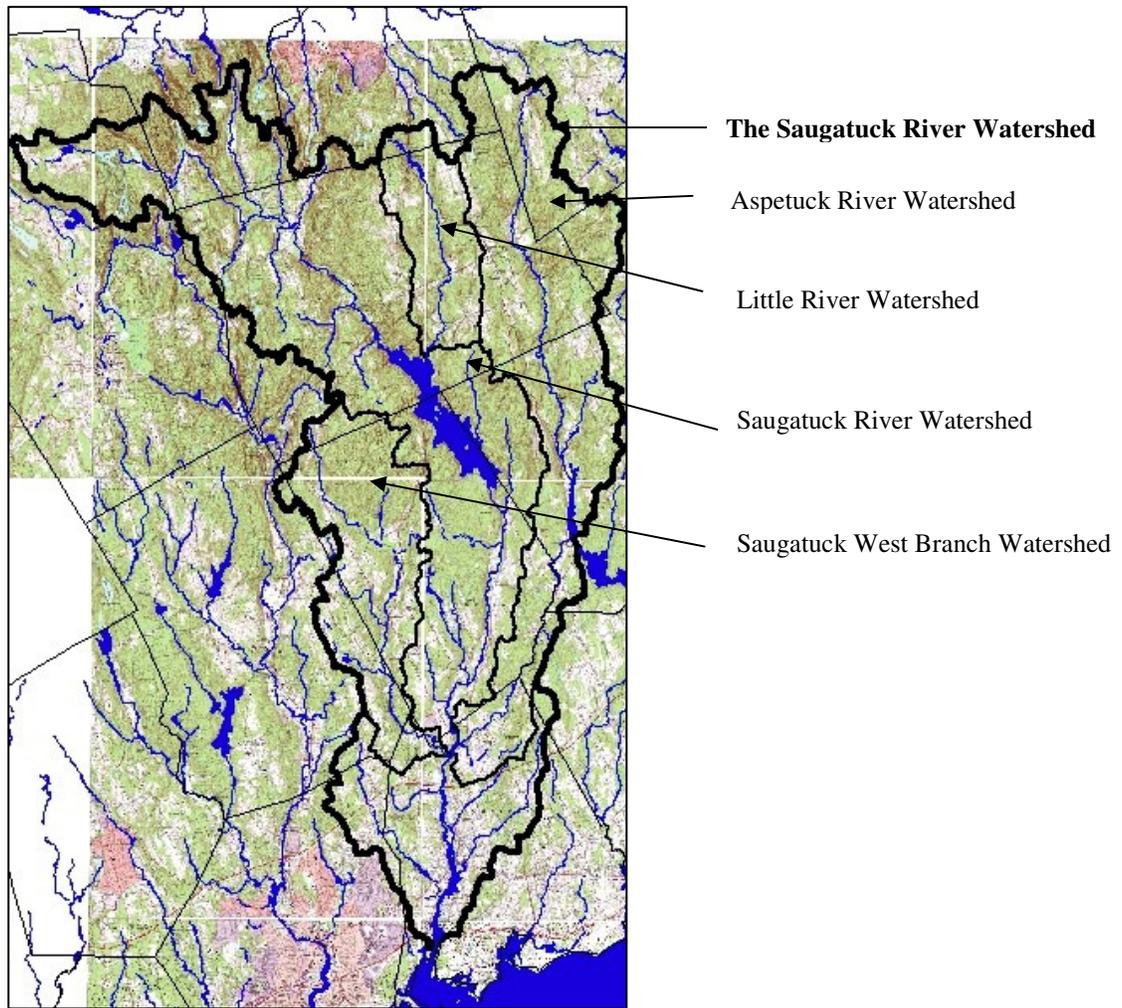
### **Mission Statement**

The goal of the Partnership is to protect and enhance the health of the watershed. The Partnership will work collaboratively to link, maintain and restore habitats which support healthy populations representing the natural biological diversity of the watershed system.

### **What is a watershed?**

A watershed is as an area of land within which apparent surface water runoff drains to a nearby stream or waterbody such as a pond or lake. The highest elevations surrounding a stream form the boundary between watersheds and are called divides. Rain falling outside a river's divide will drain into another watershed. All land on Earth is part of some watershed.

Smaller watersheds are found within larger watersheds, such as the thousands of smaller rivers surcharging to the Mississippi River Watershed. In this case, since they all contribute flow to the Mississippi River, they are all part of the Mississippi River Watershed System. Some watersheds are also quite small. Bogus Mountain Brook Watershed, Ballwall Brook Watershed, the Aspetuck River Watershed are all part of the larger Saugatuck River Watershed.



## The Saugatuck River Watershed

The Saugatuck River Watershed covers 89 square miles of land within the eleven towns of Bethel, Danbury, Easton, Fairfield, Newtown, Norwalk, Redding, Ridgefield, Weston, Westport and Wilton. Two main tributaries, the West Branch of the Saugatuck and the Aspetuck combine with smaller streams to form a rich network of 242 miles of perennial waterways which all discharge into the Saugatuck River and finally, into Long Island Sound.

Within the 57,264 acre watershed, conservation activities, particularly in the upper watershed, have protected over 17,000 acres (nearly one third of the watershed) from development.

**(Appendix A - Land in Conservation Ownership)** These protected lands contain habitats critical to the health of diverse species, habitats such as forests, streams, wetlands, hilltops and fields including those found in Devil's Den Preserve, Trout Brook Valley, Putnam Park, Huntington State Park, numerous town and land trust properties and within the 7,000 acre Centennial Watershed State Forest, (formerly water company lands). In fact, the largest continuous forest tract in southwestern Connecticut, over 15,000 acres, surrounds the Saugatuck Reservoir.

This watershed, despite being surrounded by the cities of Danbury, Norwalk and Bridgeport, and crisscrossed by Interstate 95, the Merritt Parkway and Metro North (including the Danbury spur) rail lines, is still a Fairfield County gem. The Saugatuck River retains a biological and

hydrological relationship with Long Island Sound and the forest lands retain a biological connection to the New York – New Jersey Highlands Region (**Appendix B – NY-NJ Highlands Region**), a green belt that extends from northern Connecticut to eastern Pennsylvania. Within this watershed we can still find cold water tributaries that support breeding populations of native brook trout, a species on the decline in New England. Dependent on clean, cold streams, this fish has become the focus of a regional Trout Unlimited campaign which seeks to restore brook trout and brook trout watersheds.

This watershed contains the Saugatuck and the Aspetuck reservoirs, supplying drinking water to the Aquarion Water Company's main Bridgeport System that supplies water to over 300,000 customers and through pipelines to customers in Ridgefield, Greenwich, New Canaan and Stamford. Most residents within the Saugatuck River watershed rely on private wells and clean ground water for their drinking water.

A water quality assessment of the Saugatuck River Watershed streams during the summer of 2005 indicated excellent water quality in the Saugatuck River, below the Saugatuck Reservoir to the confluence with the Aspetuck and West Branch tributaries. However, some smaller tributaries which run through developed and developing areas are already showing signs of stress with elevated indicator bacteria counts and fluctuating conductivity values. Poor property management in the residential areas, loss of riparian buffer, septic infiltration and over use of lawn chemicals and fertilizers are beginning to take a toll. The lower regions of the Saugatuck River, from the confluence with the Aspetuck and West Branch down to the estuary are showing high bacteria counts and elevated conductivity, especially during the summer months. (*Dick Harris River Watch/Harbor Watch*)

### **Why do we need a watershed partnership? Why plan at this scale?**

A watershed is like a body. The health of each part of the watershed system, from the smallest tributaries to the estuary is important to the health of the watershed system. Impairment of any part of the watershed will compromise the health of the system.

The way we live on the land and manage water influences the health of the watershed. Historic uses of the land and of our rivers have also influenced the health of the watershed. Although the Saugatuck River is known as one of the best quality short-stem rivers in southwestern Connecticut, the Partnership has identified numerous threats to its health including inappropriate land use, stream buffer loss and degradation, inappropriately managed storm water runoff, invasive plants and animals, potentially excessive water use, and artificial barriers to fish passage.

Watershed-scale planning, collaborative strategy development and multi-town cooperative conservation efforts are needed to protect and preserve this system for all of us who live, work and play in the watershed today, and for future generations who live here tomorrow.

## **Protecting our Health**

Numerous disease-causing microbes are carried by water and can cause significant health problems in human populations, from diarrhea to Legionnaire's Disease. Excessive nutrients in stream water can accelerate plant growth. This in turn speeds decomposition, depleting oxygen from the water, which in severe cases, kills fish. Storm water runoff may carry pollutants from roadways, chemicals from lawns, animal waste and excessive sediment to streams causing impairment of the resource. We are the stewards of our environment. Though our actions are often small and seemingly insignificant, the cumulative impact can be great.

Only a concerted effort by concerned citizens and interest groups, including municipalities, can assure protection of our fragile environment so that future generations have safe drinking water, edible fish and clean rivers to play in.

## **Action and Progress**

### **Workshop #1 – February 2005**

#### **Selecting Conservation Targets**

In fall 2004, leaders of all eleven towns within the watershed voiced their support for the creation of the Saugatuck River Watershed Partnership and appointed staff members to help with the development of a conservation action plan. Many volunteers from these towns had already participated in water quality monitoring, fish passage restoration, macroinvertebrate sampling and stream survey projects. A series of planning workshops for the formation of The Saugatuck River Watershed Partnership was initiated in February 2005. At the first planning workshop, The Nature Conservancy's 5-S process was used to develop the framework for the Partnership's Conservation Action Plan. (**Appendix C – The Nature Conservancy's 5-S Method**)

The 5-S process is an action plan for dealing with the health of specific environments.

The first step is to identify **systems**, or conservation targets. These may be as specific as a single endangered species or as broad as an entire ecological system. The health of these systems is assessed using reliable scientific data and expert knowledge.

The second step is to identify **stresses** or threats to the health of these targets, including anticipated future threats.

Next, the **sources** of the stresses are identified and their severity and scope are assessed. Is this a local issue slightly affecting water quality in just one neighborhood or is the degradation widespread and severe? Is the threat easily addressed, or beyond repair?

The group then works to craft **strategies** that will enhance or protect the health of the conservation target. These strategies are time-based, feasible and realistic.

It is crucial that strategies identify a desired outcome, or the project's **success**. The entire process may have to be re-assessed for alternate plans of action if the desired outcome is not achieved.

Five conservation targets were selected by representatives of the eleven towns and scientists in attendance. The selected targets, which serve to represent the diversity of habitats and species within the watershed, are:

1. the upper river system above the reservoirs,
2. the lower river system,
3. the estuary,
4. diadromous fish (*Diadromous fish depend on both fresh and salt water habitats for their life cycle. Diadromous refers to two types of fish: anadromous species, such as salmon, shad, and alewife, which spawn in freshwater and return to saltwater for their adult life: and catadromous species, such as American eel, which spawn in saltwater and return to freshwater for their adult life.*)
5. and the Saugatuck and Aspetuck reservoirs.

We can assess the current health of each of these targets by comparing historical and current data. For example, we know that the estuary once supported one of Connecticut's largest rainbow smelt runs (*Osmerus mordax*) and the river supported large migrations of river herring (Alewife- *Alosa pseudoharengus* and Blueback Herring- *Alosa aestivalis*). Rainbow smelt are no longer found in the estuary, and dams in the rivers and tributaries restrict in-stream movement for resident fish, and limit access to habitat for diadromous fish. In order to protect and enhance the future health of these targets, the Partnership must consider current healthy conditions that should be maintained and degraded conditions that require restoration. A list of concerns relating to each conservation target was also drafted at this meeting.

### **Upper River Systems**

The upper watershed rivers -- including the Saugatuck, Aspetuck, and Little Rivers -- flow into the public water supply reservoirs owned and managed by the Aquarion Water Company of Connecticut, Inc. Small dams, bridge abutments and culverts disrupt the movement and distribution of fish in the upper watershed, and can affect water quality and temperature. Natural falls prevent anadromous fish from reaching most of the upper watershed, but these small streams support a variety of aquatic species including fresh water mussels, American eel and many native fish species. The upper reaches are generally in good condition because major portions of their watersheds have been under conservation ownership by Aquarion, municipalities, and conservation organizations for many years and therefore have escaped intensive development.

### **Lower River Systems and the Estuary**

The lower stream reaches and the estuary have not had the benefits of protection from development. Most of the lower watershed is developed with low-density primary homes. The health of the lower watershed system has been compromised by increased impervious surface, sea walls, loss of natural stream buffers and native plant cover, increased storm water runoff and discharge from the sewage treatment plant. A well-developed business district, I-95, railroads and a sewage treatment plant all either cross or are located adjacent to the estuary. These lower

stream reaches and the estuary suffer from conditions of low oxygen and elevated indicator bacteria counts in summer and early fall.

### **Diadromous Fish**

Diadromous and resident fish populations are being stressed by the reduction of available spawning habitats, increased water temperature and degraded water quality that have occurred especially during the last one hundred years. Their future in the watershed depends on our efforts to improve water quality, river flows and access to high quality habitat. The Partnership will also work to restore diadromous fish passage to improve access to habitat and increase the number of miles of unimpeded stream reaches throughout the watershed, benefiting all aquatic species and riverine processes. It is estimated that presently there is one dam for every 2.3 miles of stream in the watershed. (**Appendix D – Dams in the watershed**)

### **Reservoirs**

The Saugatuck and Aspetuck Reservoirs provide drinking water to Aquarion Water Company's Main system and through interconnections also serve parts of Ridgefield, New Canaan, Stamford and Greenwich. Forests surrounding these reservoirs help to mitigate potentially erosive storm water runoff and absorb pollutants. State fishing programs and the water company provide opportunities for fishing in the reservoirs and resident fish populations help to maintain high quality water by reducing algae. The efforts undertaken to maintain clean drinking water supplies in the reservoirs should be practiced throughout the watershed to protect the quality of water in our streams throughout the watershed.

### **Water Use**

Operation of the Saugatuck and Aspetuck reservoirs, diversions for irrigation and drinking water withdrawal from private and public wells can affect downstream water quality, temperature and flow. Alterations in the natural stream-flow pattern affect our native aquatic biodiversity. The Partnership will work to better understand the environmental impact of water withdrawal and diversions throughout the watershed and work to balance public and environmental needs. Representatives from Aquarion have been active participants in the Partnership's planning workshops. (**Appendix E- Withdrawals and Diversions**)

## **Workshop #2 – July 2005**

### **Identifying Threats to the Health of the Watershed**

At the second planning workshop in July 2005, threats to the Saugatuck River Watershed's freshwater system were discussed. Threats include existing conditions (for example, dams), which affect the health of the watershed, and ongoing practices and anticipated threats that are likely to affect the watershed in the next ten years (i.e. increasing wetland loss, increased impervious surface, increased demand for water, increased threats from invasive aquatic plants and animals, and habitat loss.)

## **Development**

The most frequently cited concern during planning workshops and public presentations is the impact of development on the health of the watershed. Most people are only partially aware of the loss of natural vegetation, loss of forested areas and increased impervious surface. (**Appendix F – Impervious Surface map**) These activities increase erosion, storm water runoff loading, may alter natural sediment, chemical and temperature regimes in the rivers and tributaries which can and does endanger species and their habitats. Recent studies indicate that degradation of watershed condition occurs with as little as 12% impervious surface. According to the US Census bureau, the amount of acreage being developed is steadily increasing. From 1982 – 1987 land developed per person increased over 300%, from .68 acre per person to 2.33 acres per person. This trend is still accelerating. The watershed can accommodate additional population growth and development if it is planned carefully with respect to watershed health.

## **Dams**

Most of the towns within the watershed grew up around industries that relied on water power. Throughout the Saugatuck River watershed, over 100 dams affect stream flow and movement of aquatic species. Dams in the lower watershed prevent anadromous species, such as blueback herring and alewife, from reaching much of their historic spawning grounds. Most are run-of-the-river dams which do not impound large areas. Culverts and bridge abutments can also act as stream barriers for fish and other aquatic organisms - these barriers also trap sediment and can alter the thermal properties of streams and rivers. Fortunately, polluted sediment does not appear to be a major concern as many of these dams served saw mills, forges, and grist mills rather than larger industries that released pollutants into the system.

The Partnership will work closely with the CT Department of Environmental Protection, (DEP), and dam owners throughout the watershed to develop access to stream reaches for diadromous species through installation of fish ladders, modification and/or removal of dams. These actions will also serve to improve river function, (sediment transport and temperature) and improve resident fisheries' health by increasing their range. Many species of freshwater mussels rely on fish for dispersal throughout the river system. Freshwater mussels spend most of their lives partially buried, filtering water with their gills to remove food particles and pumping the rest back into the environment. These "living filters" play an important role in natural ecosystems by helping to restore water quality, filtering algae and zooplankton, and in turn providing food for many types of fish and mammals.

## **Land Management**

What goes on the land affects the water. Pollution degrades water quality and habitat. Runoff from farms that carries nutrients from manure, that wash into our streams during rains, fertilizers and chemicals which are not absorbed by our lawns, bacteria and nutrients from pet waste, road sand, salt, oil, and litter impair water quality and are stressful to aquatic organisms. Discharges from the sewage treatment plant and septic infiltration may also compromise the health of the rivers. Environmentally sound land management practices, catch basin cleaning and well-timed road sweeping can help to reduce or eliminate these stream inputs. In compliance with EPA's Clean Water Act, passed in 1972, the CT DEP developed regulations requiring municipalities with urbanized areas having population densities exceeding 500 people per square mile, to develop a comprehensive plan for managing stormwater runoff. Currently, 125 of Connecticut's

169 towns, including all eleven within the watershed, are required to issue annual reports on their plans which must be implemented by December 2007.

### **Reservoir Management/ Water Withdrawal**

Excessive diversion of water from streams, rivers and groundwater aquifers -- primarily for the purpose of drinking water supply but also for industrial, agricultural, and recreational uses -- alters the timing and magnitude of stream flow. Timing and quantity of releases from the Aspetuck and Saugatuck Reservoirs may not provide seasonal low and high flows, which rivers and river species depend on. Attention to the quality of water being released requires careful monitoring as macroinvertebrate populations and fish are sensitive to water temperature and water quality. The Partnership supports The Conservancy's study of the watershed's hydrology to enable development of strategies to protect or restore natural flow regimes and the health and longevity of groundwater supplies, while maintaining water supply for consumers. Most of our drinking water within the watershed comes from private wells served by aquifers. We must continue to protect these storage systems and ensure that we do not disrupt their ability to recharge.

### **Invasive species**

Invasive plants and animals can alter the species composition of our freshwater systems by out-competing native species and forming monocultures that reduce biodiversity. The Partnership will work to mitigate the stresses on freshwater systems caused by invasive species by seeking funds to work with public and private landowners to gain permission to control invasive species and seek funding for eradication efforts. We will also work with municipalities to prevent the sale and use of invasive plants within the watershed, and work to develop early detection and rapid response programs for newly discovered outbreaks of invasive species.

## **Workshop #3 – October 2005**

### **Developing Draft Strategies to Address Threats**

The goal of the third meeting was to identify the most significant threats to the conservation targets and develop strategies to address them. Each strategy should ensure restoration and/or conservation of the rich and biologically diverse Saugatuck River Watershed System. Strategies require planning, feasible solutions, and economically realistic interventions. Where practical, strategies need to demonstrate alternative practices and solutions that directly address system threats.

Each objective must be measurable, actionable, realistic and time-based. Each objective will answer the question, "What will be achieved and how?" One draft objective is to increase access to stream habitat for fish and aquatic species. The Partnership will work with CT DEP to determine a realistic goal in number of stream miles, and a completion date for this strategy. Given the density of dams in the watershed, a goal of restoring access to five miles of stream in five years might be appropriate.

The second planning step is to develop strategic actions. These are high-level efforts which accomplish the objective. A strategic action to follow the first objective is to modify or remove dams to allow fish access to habitat previously out of reach. (Anadromous fish, such as alewife, are unable to jump more than six inches and therefore cannot access stream reaches upstream of even the smallest dams.)

Finally, planning participants must outline the action steps or supporting activities which will accomplish the objective. Most objectives will have multiple steps. In order to successfully meet the objective of increasing access to stream habitat for example, the Partnership will need to undertake the following,

- secure dam owners' permission to develop opportunities for providing fish passage over their dams,
- select mutually agreeable solutions,
- work with CT DEP and hydraulic engineers to design appropriate fishways, modifications or dam removal plans.
- secure necessary state and local permits for the work,
- secure funding to complete the project,
- coordinate work days, materials, contractors and volunteers to complete the project and
- monitor project results to measure success.

A list of the Partnership's draft objectives, strategic actions and action steps is included at the back of this report. (**Appendix G - Saugatuck River Watershed Partnership Action Plan**)

## **Support**

The partnership has a goal of becoming self-sustaining by 2010 or before. Until then, The Nature Conservancy will lead the effort to manage the Partnership and seek public and private support necessary to make is a self-sustaining organization.

The Long Island Sound Futures Fund, a newly established federal multi-agency fund, provided a grant of \$25,000 last April to support planning workshops for the Saugatuck River Watershed Partnership. This grant required an \$11,000 match which was provided by the towns of Redding and Weston, (representing 32% and 23% of the watershed respectively) (\$5,000 each) and the Nutmeg Chapter of Trout Unlimited (\$2,000).

During 2005, The Nature Conservancy received over \$5,000 in private contributions to support the Saugatuck River Watershed Partnership. Additionally, The Nature Conservancy has supported Sally Harold through her position as Conservation Manager and she has devoted approximately 80% of her time to the Partnership.

In late December, the town of Easton (representing 13% of the watershed) granted \$3,000 with a pledge of an additional \$5,000 in support from their FY 07 budget and the town of Fairfield (1% of the watershed) granted the Partnership \$1,000 in support.

Funds received in support of the Saugatuck River Watershed Partnership provide a match for future grants and allow the Partnership to plan and undertake projects throughout the watershed.

Four grant proposals totaling \$134,500 have been submitted to various 2006 grant competitions for watershed projects and Partnership support.

In February, The Partnership was awarded \$25,000 from the American Rivers / National Oceanic Atmospheric Administration Partnership for an important analysis of site restoration options at a property in West Redding, where there is potential to restore a natural pond of which there are few in Connecticut. This study provides the Saugatuck River Watershed Partnership a significant opportunity to work with Yale University students and The Redding Land Trust.

Increased participation and support from all eleven municipalities, local conservation organizations, such as land trusts and stakeholder groups, and identification of other potential funding sources will be part of our planning efforts in 2006.

**Financial Summary**

<b>May 2005 - Long Island Sound Futures Grant -</b>	\$25,000
<b>Required grant match</b>	<u>\$11,000</u>
	\$36,000

**Funds raised in support of the partnership:** Each of the eleven towns within the Saugatuck River Watershed has been asked to support the efforts of this partnership while it gets established. It is hoped that in the future, the work of the partnership will be funded through private donation, grants and perhaps a membership.

\$ 5,000	Town of Redding
\$ 5,000	Town of Weston
\$ 2,000	Nutmeg Chapter, TU
\$ 5,000	TNC private supporters
\$ 3,000	Town of Easton
<u>\$ 1,000</u>	Town of Fairfield
\$21,000	

Ten thousand dollars already raised will serve as match for future grants and projects within the watershed. The Nature Conservancy is committed to the success of the Partnership and will continue to provide technical expertise, staff time and funding to the effort.



## **Grants submitted in 2006**

*Match can be volunteer hours, dedicated professional staff time or services, and donated materials or travel. Most grants require 1:1 grant/match ratio.*

### **1. National Oceanic and Atmospheric Administration (NOAA)/American Rivers Partnership**

Funding to support environmental assessment and proposals for restoration of Poliak Pond, a 32 acre Redding Land Trust Property with a 2 acre pond on the Umpawaug Pond Brook, a tributary to the Saugatuck River in West Redding, CT

Applied for and received \$25,000

### **2. NOAA/Open Rivers Initiative**

Funding to support assessment of alternatives and construction of fish passage at two privately-owned lower-watershed dams, on the Aspetuck and the Saugatuck Rivers

Applied for \$38,947.28

### **3. NOAA/Restore America's Estuaries (RAE)**

Through Save the Sound, we are seeking funding to enhance operation of an existing fishway at the first dam on the Saugatuck, at head of tide in Westport, installing an in-stream diversion screen during spawning season to direct anadromous fish to an existing bypass channel in the Saugatuck River above the confluence with the Aspetuck and installation of an eel pass over a dam in the upper Saugatuck River.

Applied for \$25,070

### **4. Long Island Sound Futures Grant**

Funding to support continued efforts of the Saugatuck River Watershed Partnership including monitoring programs, project development and coordination and hiring a part-time coordinator.

Applied for \$45,492

Presently – Sally Harold coordinates the meetings, communications, and public presentations. Her salary is paid in part by The Nature Conservancy and in 2005, was partly covered by the LIS Futures Grant. Each grant applied for in 2006 will cover some salary expenses and if the LIS grant is received, the Partnership plans to hire a part-time project coordinator.

## **How Can You Help? Get Your Feet Wet!**

Attend a Partnership meeting, volunteer to help with data collection or write us a note to tell us what you're interested in and/or concerned about. Contact Sally Harold at The Nature Conservancy, (203) 226-4991 x207 or by e-mail: [sharold@tnc.org](mailto:sharold@tnc.org).

### **Volunteer to help collect data Stream Surveys**

Volunteers using the Natural Resource Conservation Service's program have been conducting visual surveys of stream reaches in the watershed for the past two summers. Training for volunteers will take place from 8:30 a.m. to Noon on **June 24 at the Easton Public Library**. No prior experience is necessary. Volunteers working in teams are asked to survey a 2-3 mile stream stretch at any time during the summer months. Each survey takes about one day to complete. (**Appendix H - Sample survey form**)

### **Insect Sampling**

On **October 14**, Michael Beauchene of the CT DEP Water Resources Department will train volunteers in aquatic insect identification. Mike's list of the "Ten Most Wanted" makes bug sampling fun and easy. In-stream sampling follows a morning training session, location to be announced. No prior bug collecting experience is required! Volunteers' data from surveys in the Saugatuck River Watershed for 2004 and 2005 can be found on the CT DEP's website <http://www.dep.state.ct.us/wtr/volunmon/rbv.htm> (**Appendix I - Program description**)

### **Fish Trap and Fish Counter Monitors**

The Saugatuck River was the first in Connecticut to have three fishways built on existing dams. These fishways enable anadromous fish passage to habitats previously out of reach. Efforts continue to improve access to upstream habitat in the Aspetuck and the Saugatuck rivers. Volunteer monitors are needed to check fish traps and counters placed in the river during spring spawning runs to help document the success of the fishways.

### **Partnership Participation**

The Partnership is nothing less than a declaration that we all use, enjoy and share our precious water. Effective communications, collaboration and participation by stakeholders, municipalities and residents are critical for coordinated stewardship.

Tell us what interests you! We would love your help. Become a partner in protecting this beautiful watershed.

Contact the Project Director, Sally Harold by phone at (203) 226-4991 x207 by e-mail at [sharold@tnc.org](mailto:sharold@tnc.org) or write to:

The Saugatuck River Watershed Partnership  
c/o The Nature Conservancy  
P.O. Box 1162 Weston, CT 06883

**Resources:**

A Field Guide to Freshwater Mussels of Connecticut, CT DEP Bureau of Natural Resources-Wildlife Division

Massachusetts Stream Crossings Handbook, Massachusetts Riverways Program, Commonwealth of Massachusetts, Executive Office of Environmental Affairs, Department of Fish and Game, June 2005

The New England Brook Trout: Protecting a Fish, Restoring a Region Trout Unlimited 2005

Connecticut Fish Distribution Report 2005 – State of Connecticut Department of Environmental Protection Inland Fisheries Division

Diadromous Fish Enhancement and Restoration - 2004 - State of Connecticut Department of Environmental Protection Inland Fisheries Division Gephard, Stephen, Tim Wildman, Bruce Williams, and David Ellis

Water Quality Data Reports for the Saugatuck and Aspetuck Rivers – May 2005- September 2005 The Harbor Watch/River Watch Program of the Earthplace-The Nature Discovery Center-Westport, CT Harris, Richard B. and Peter Fraboni

Dam Removal, A Citizen's Guide to Restoring Rivers River's Alliance of Wisconsin and Trout Unlimited 2000

The River Book MacBroom, James Grant Natural Resources Center, Connecticut Department of Environmental Protection DEP Bulletin 28, 1998

### **Web Sites of Interest:**

American Rivers – [www.americanrivers.org](http://www.americanrivers.org)

Appalachian Mountain Club – [www.outdoors.org](http://www.outdoors.org)

Aquarion Water Company – [www.aquarion.com](http://www.aquarion.com)

Connecticut Department of Environmental Protection – great site with information on water quality protection, state laws, monitoring programs, fisheries, etc. - [www.dep.state.ct.us](http://www.dep.state.ct.us)  
Volunteer macroinvertebrate testing data from the Saugatuck River Watershed can be found at <http://www.dep.state.ct.us/wtr/volunmon/rbv.htm>

CT. Department of Public Health – [www.dph.state.ct.us](http://www.dph.state.ct.us)

Earthplace – [www.earthplace.org](http://www.earthplace.org)

National Audubon – [www.audubon.org](http://www.audubon.org)

River's Alliance of Connecticut - [www.riversalliance.org](http://www.riversalliance.org)

Southwest Conservation District – [www.conservect.org/southwest/index.shtml](http://www.conservect.org/southwest/index.shtml)

The Nature Conservancy – [www.nature.org](http://www.nature.org)

Trout Unlimited – [www.tu.org](http://www.tu.org)

UConn Cooperative Extension Project- Non-point Education for Municipal Officials, NEMO-  
[www.nemo.uconn.edu](http://www.nemo.uconn.edu)

U.S. Department of Agriculture's Natural Resources Conservation Service –  
[www.ct.nrcs.usda.gov](http://www.ct.nrcs.usda.gov)

US Environmental Protection Agency – Surf your Watershed. Find out more about the Saugatuck River Watershed - [http://cfpub.epa.gov/surf/huc.cfm?huc\\_code=01100006](http://cfpub.epa.gov/surf/huc.cfm?huc_code=01100006)

US Geological Survey (USGS) – [www.usgs.gov](http://www.usgs.gov)

USGS Watershed Glossary - <http://water.usgs.gov/wsc/glossary.html>

## **Saugatuck River Watershed Partnership Planning Committee**

### **Co-Chairs Planning Group:**

Sally Harold, Conservation Manager, The Nature Conservancy, Weston

[sharold@tnc.org](mailto:sharold@tnc.org) 226-4991 x207

Gavin Anderson, Board of Finance - Westport

[Ganderson13@earthlink.net](mailto:Ganderson13@earthlink.net) 227-8902

### **Members Planning Group:**

Fred Anderson, Conservation Planner, town of Weston

Bill Blaufuss, President, Nutmeg Chapter Trout Unlimited, Westport

Helen Garten, Board of Finance - Westport

Dick Harris, Earthplace - Harbor Watch/River Watch Westport

Chris Malik, Environmental Analyst - CT DEP Watershed Management, Hartford

Patricia Sesto, Director Environmental Affairs, town of Wilton

Julian Sproule, President, Saugatuck Valley Audubon, Wilton

## **Saugatuck River Watershed Partnership Technical Advisors**

Michael Beauchene CT DEP Water Resources

Dave Bjerklie USGS

Todd Bobowick USDA's Natural Resources Conservation Service

Joe DeRisi Southwest Conservation District

Carol Donzella USDA's Natural Resources Conservation Service , Community Planner

Steve Gephard DEP Inland Fisheries

Guy Hoffman CT DEP Water Resources

Bill Hyatt CT DEP Director, Inland Fisheries

Michael Klemens Metropolitan Conservation Assoc. WCS

Paula Pendleton CT Department of Public Health

Brian Roach Aquarion Water Company

Brian Thompson Aquarion Water Company

## **Saugatuck River Watershed Partnership Town Representatives - 2005**

Bethel Mr. Andrew Morosky, Town Engineer

Ms. Beth Cavagna, Inland Wetlands

Danbury Mr. Jack Kozuchowski, Coordinator of Environmental and Occupational Health Services

Mr. Scott LeRoy, MPH, MS, Sr. Inspector, Health Department

Easton Mr. Philip Doremus, Zoning Enforcement Officer

Mr. John Hayes Consultant for Planning, Easton and Redding

Fairfield Mr. Tom Steinke, Conservation Director

Newtown Mr. Scott Sharlow, Newtown GIS specialist, Ridgefield resident

Norwalk Ms. Alexis Cherichetti, Sr. Environmental Officer

Redding Mr. Dave Pattee, Chairman Redding Conservation Commission

Ridgefield Mr. Scott Sharlow, Ridgefield Resident

Weston Mr. Tom Failla, Former chair, Conservation Commission

Mr. Fred Anderson, Conservation Planner

Westport Ms. Judy Nelson, Westport/Weston Health District

Ms. Alicia Mozian, Conservation Director

Wilton Ms. Patricia Sesto, Director, Environmental Affairs