

**The Norwalk River Watershed Initiative:  
A Case Study of Collaboration In Partnerships**

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**Abstract**

Community-based watershed planning provides a locally-led process for identifying environmental problems; developing and evaluating community priorities; developing consensus for action; and seeking solutions through an open, inclusive process that is driven by places and the people who live in them. The Norwalk River Watershed Initiative began in Connecticut in 1996 as a community-based, locally led approach to comprehensive watershed planning and management. From the beginning, it was clear that there were several broad issues within the topic of watershed management that deserved special attention. Perhaps the most important of these was learning that social processes play an important role in community based watershed work. This paper discusses the activities associated with the Norwalk River Watershed Planning Initiative and the lessons learned from the process. The community-based, collaborative planning methodology used throughout the Initiative can serve as a model for adapting the process for use in other locations.

**Purpose of the Case Study**

This case study is presented to Natural Resources Conservation Service (NRCS) staff and partners as an example of a successful community-based approach to watershed management. The lessons and experiences learned from the Norwalk River Watershed Initiative (NRWI) apply nationally and are summarized in Appendix B as “Lessons Learned: Launching a Community-Based Watershed Initiative.” Community based watershed planning provides a locally-led process for identifying environmental problems; developing and evaluating community priorities; developing consensus for action; and seeking solutions through an open, inclusive process that is driven by places and the people who live in them. It integrates environmental management efforts through linkages among human activities, economic prosperity and environmental quality.

This collaborative approach involves place-based environmental management that is driven by the key environmental problems that occur or may be anticipated in particular ecosystems. Identifying, setting priorities and solving those problems rely on stakeholders who have an intimate sense of these places, and must integrate long-term ecosystem health and economic stability.

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## Norwalk River Watershed Case Study

### Introduction

The Norwalk River Watershed Initiative (NRWI) began in Connecticut in 1996 as a community-based approach to comprehensive watershed planning and management. From the beginning, it was clear that there were several broad issues within the topic of watershed management that deserved special attention. Perhaps the most important of these was learning that social processes play an important role in community based watershed work. Working relationships in collaborations must be understood prior to any effective implementation of watershed management protection or restoration strategies.

While this notion will not surprise people familiar with today's socio-political climate, government's, especially the federal government's, role in watershed management has had a long, somewhat conflicted history. In the past the role was largely defined as one of dominating local concerns on behalf of science and a greater 'national good.' The more contemporary role of government in watershed management is evolving to one that provides technical, scientific and sometimes financial support to carry out local programs derived from and defined by a locally led process. This evolution has occurred during the past decade or so for two primary reasons. First, scientists in the field of ecology increasingly emphasized the need to see the resources in watersheds as linked, complex environmental systems, rather than as individual components in a geographic setting. This view was institutionalized in many government policies during the 90's. Secondly, public support of environmental education and protection continues to grow and this sentiment has been a significant influence in sculpting a government role that is more responsive to local watershed conditions and management needs.

The public recognizes the necessity for government influence in watershed management, and clearly, the public believes that watershed management should be based on a broad spectrum of community participation to be effective and ultimately encourage stewardship. There is also broad belief that to successfully collaborate at the ground level and achieve results, all of the players must have a proper sense of their setting in the environment. These beliefs were especially strong among the Norwalk River Watershed constituents.

With this background, it became clear to all of the early participants in the Initiative that there was a fundamental need to understand and develop processes that built trust in relationships, reduced or minimized conflict, and set priorities that could be implemented. In effect, the Norwalk River Watershed Initiative became a learning process in social sciences as much as a project in environmental science.

All of these factors and issues influenced the primary players in the Watershed to formulate two goals in undertaking the Initiative:

- (1) To develop a Watershed Action Plan using a voluntary, collaborative locally based effort to restore and protect the watershed's resources; and
- (2) To enhance community capacity to implement the Plan.

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### Background

The Norwalk Watershed has several natural resource issues:

- Water Quality degradation from nonpoint source pollution
- Fragmented, degraded or lost fish and wildlife habitats
- High flood risk that continues to increase

These watershed concerns all require a more innovative approach than the traditional “top-down” redressment historically taken in large part because the watershed is “built-out”. Traditional solutions quickly become controversial since they directly affect so much privately owned land. The ability to integrate resource management objectives identified in the Long Island Sound Study Comprehensive Conservation Management Plan was also important to the watershed communities. The States of Connecticut and New York adopted the plan in 1994 as a framework to help clean up the Sound. State regulations were being adopted to control point source discharges into the Sound. The NRWI stakeholders recognized that the regulations were going to be applied. They also believed that by building appropriate social, economic and environmental capacity, stakeholders would assist in the long-term cleanup of the Sound. To build capacity successfully, they embarked on designing a place-based process so that all players could work collaboratively and bring their perspectives and interests to the table. The players included local citizens, town officials, state government representatives, federal agency representatives, local/regional scientists and a variety of others.

To facilitate the process and access the people power in the watershed communities, an NRWI Committee was formed in February 1997. This group set up four subcommittees that each focused on one major resource issue. The work of the Committee and the subcommittees resulted in the Norwalk River Action Plan, published in October 1998.

The completed plan provides for (1) goals and objectives developed by the subcommittees and refined by public review, and (2) identified tasks to accomplish the plan goals and objectives. The Plan provides a community framework in which stakeholders and interested parties may collaborate toward action. A copy of the plan is available from USDA-NRCS in Connecticut or the plan may be viewed at [www.ct.nrcs.usda.gov](http://www.ct.nrcs.usda.gov) in September of 2002.

### Location, Size and Introduction to Resource Concerns

The Norwalk River Watershed is about 40,800 acres located primarily within southwestern Connecticut with a portion of the watershed in New York. The watershed encompasses seven municipalities, six of them--New Canaan, Norwalk, Redding, Ridgefield, Weston and Wilton-- are in Fairfield County, Connecticut, and the seventh, Lewisboro, is in Westchester County, New York. The watershed population is about 66,000 (1990 census). Table 1 shows the breakdown of land according to political jurisdiction and proportion of towns within the Norwalk Watershed.

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**Table 1 – LAND USE STATISTICS (By Town and Watershed Allocation)<sup>4</sup>**

	<b>Town Size In Square Miles</b>	<b>Town Area Within the Watershed</b>	<b>Percentage of Town Within the Watershed</b>	<b>Percent of the Watershed</b>
New Canaan, CT	23.3	5.9	25.3	9.1
Norwalk, CT	27.7	12.7	45.8	19.7
Redding, CT	32.2	3.4	10.6	5.3
Ridgefield, CT	34.8	13.7	39.4	21.2
Weston, CT	20.8	0.4	0.2	0.6
Wilton, CT	26.8	24.1	90.0	37.4
Lewisboro, NY	29.3	4.3	14.6	6.7
<b>TOTAL</b>	<b>194.9</b>	<b>64.5</b>		<b>100</b>

The Norwalk River Watershed is fairly typical of coastal watersheds in the Northeast. Initially the coastal area was developed with a harbor for commerce and the more inland portion of the watershed transitioned into agriculture. Over time, development patterns followed the river inland and now reveal that urban and suburban land uses have overtaken agricultural land uses.

Table 2 displays the land use/land cover now comprising the watershed.

**TABLE 2 - LAND USE/LAND COVER – 1997<sup>4</sup>**

<b>Land cover type</b>	<b>Acres</b>	<b>Percent of Watershed</b>
Residential development – high density	2,191.6	5.4
Residential development - other	20,793.1	51.0
Woodland	10,617.1	26.0
Commercial/industrial & railroad/multilane road	2,683.2	6.6
Wetland	1,898.3	4.6
Open land	1,463.7	3.6
Open water	1,154.6	2.8
<b>Totals</b>	<b>40,801.6</b>	<b>100.0</b>

These historical changes in land use led to typical resource impacts associated with land use modifications. The water of the streams, rivers and coastal area continues to degrade from nonpoint source pollution; fish and wildlife habitats have become fragmented, degraded or lost; and an existing high flood risk continues to increase. It should be noted

<sup>4</sup> Information developed by the NRCS New England Interdisciplinary Team

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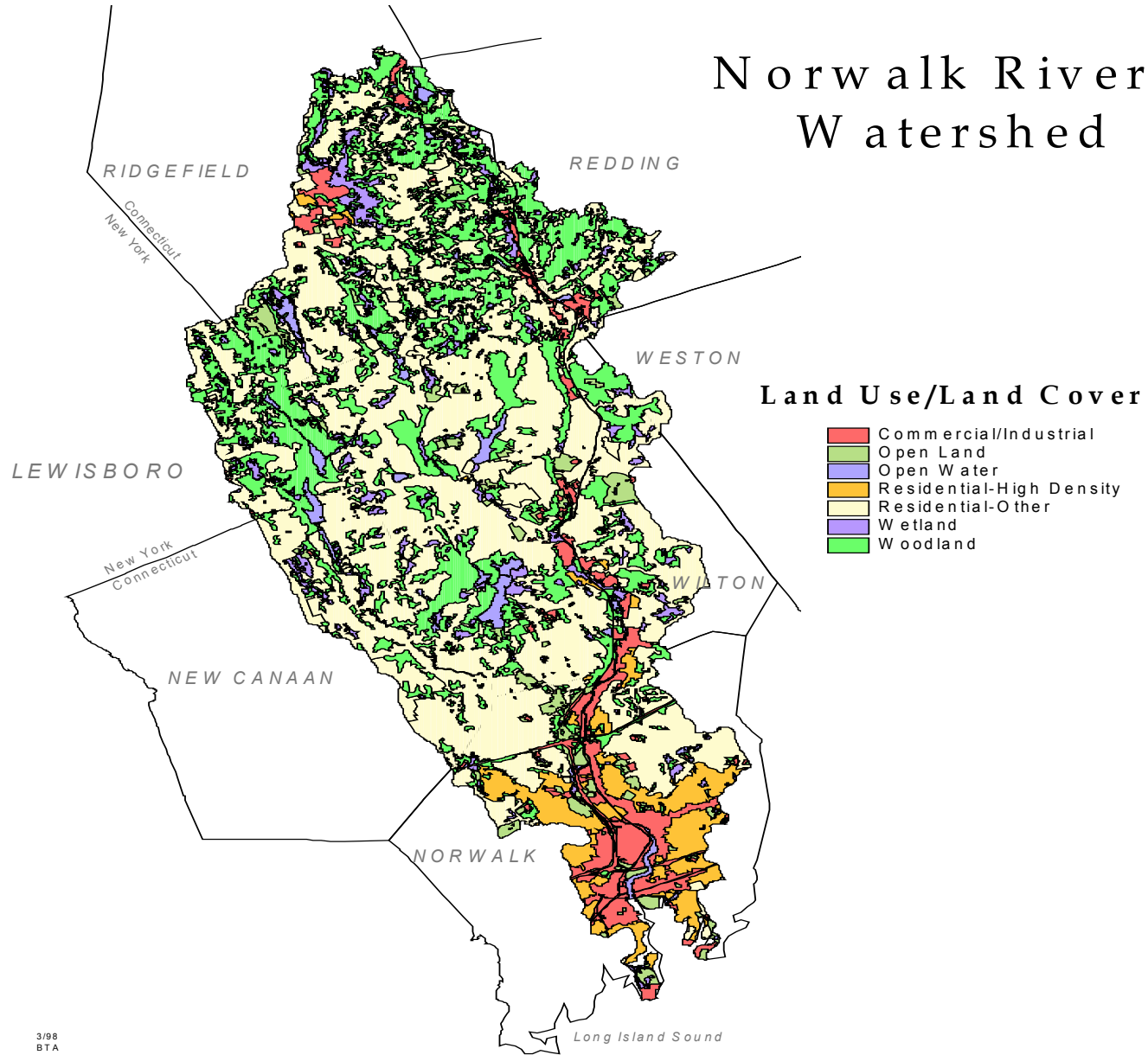
that these resource conditions are the result of cumulative actions that have occurred over space and time—perhaps 300 years. Likewise, improvements will be reflected over the same dimensions and visible evidence of progress may take years or decades to appear. The Norwalk stakeholders, however, knew that the process of improvement must start somewhere and sometime. They were ready to begin the process to bring about positive environmental change.

### **Physiography**

The Norwalk River begins in the Great Swamp in Ridgefield and flows northerly then south into Norwalk Harbor and Long Island Sound. The River has two major tributaries, the Silvermine River and Comstock Brook. The highest elevation in the watershed is at 860 feet and the average gradient of the main stem is about one-half of one percent. The two tributaries have a gradient average of two to four percent. The main stem of the Norwalk is about 20 miles long; the Silvermine is about eight and the Comstock about three miles. There are numerous low-head dams along the tributaries installed by homeowners for view enhancement. These dams create shallow ponds, but provide barriers to migrating aquatic species. The predominant composition of soils is glacial till. Annual mean temperature is about 51 degrees F with frequent large daily fluctuations. Average annual precipitation is about 47 inches. Winter snowfall is about 25 inches on average. The harbor is an important wildlife habitat area, boating and recreation area, and its waters flow directly into the largest oyster production area in Long Island Sound.

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## Norwalk River Watershed



## Norwalk River Watershed Case Study

### State of the Watershed

Portions of the watershed exhibit poor water quality. These areas are associated with the more downstream, more impervious, more developed areas of the watershed. Habitat conditions vary from extremely good to severely disturbed. Impaired sites are found along watercourses on the adjacent developed land. Excessive algae growth occurs behind impoundments and dams during the summer months. Watershed flow is restricted in certain stream segments and streambank manipulation is common. These and other conditions affect the viability of fish species and populations.

Water quality monitoring of the Norwalk River is conducted eight times a year by River Watch/Harbor Watch, a citizens monitoring group. The River is tested for bacteria and pathogens, dissolved oxygen, conductivity, temperature and benthic invertebrates. Runoff through urbanized areas and nonsewered suburban and rural areas is a major source of fecal coliform. Excessive levels of bacteria probably originate from the several hundred pipes that empty pollutants from streets, failing septic systems, broken sewer lines, sump pumps, and other sources directly into the river.

In November of 1996 a group of volunteer stream-walkers identified numerous impaired sites along the stream corridors throughout the watershed. Such observations included excessive algae growth, impoundments, various streambank manipulations, lack of riparian zones, and problem sedimentation areas. Industrial water pollution point sources have been identified and remedial clean-up activities have either already been taken, or they are ongoing. Fifty-six percent of households dispose of wastewaters through public sewage systems, the remainder through on-site septic systems. Some sixty-six percent of households obtain their water from public systems and the remainder from wells. Connecticut is actively engaged in the coastal nonpoint source pollution management under Section 6217 of the Coastal Zone Reauthorization Amendment of 1990. The Norwalk River is an important watershed to help control coastal nonpoint sources of pollution.

The Norwalk River Watershed has a history of flooding with major events in 1938, 1953 and 1955. Flooding continues to be a severe threat and this danger increases annually as more and more of the pervious surfaces are converted to pavement. Floodplains are encroached upon and separate the stream system or river from its natural floodwater release system.

There are about 100 dams in the watershed that range in height from about 20 feet to one or two feet. The smaller dams are owned by homeowners or businesses desiring recreational use or for aesthetic purposes. Some of the larger structures and their impounded areas provide flood storage or water supply. From an ecological perspective, the dams are problematic as they are barriers to fish migration and promote conditions leading to eutrophication.

The watershed could support several species of both warm and coldwater fish and historically, the Norwalk River was an important habitat for anadromous fish species. The state and national governments have designated the River as a high priority for anadromous fish restoration, particularly for alewife. Stream impairments including reduced base flow impoundments and excess sedimentation negatively affect both the coldwater and anadromous fisheries. The coastal area provides desirable conditions for shellfishing. It is an important industry both from historic and current perspectives. However, pollution from fecal coliform threatens the industry and

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negatively impacts the entire harbor area where consumptive fishing is either prohibited or severely restricted.

The watershed has also been plagued with invasive plants introduced for ornamental purposes. These plants have aggressively moved outside their original intended areas and out-competed native plants. These robust competitors offer little habitat or food value to support wildlife.

An estimated 15% of the watershed is in wetlands, mostly existing either in the upper reaches of the watershed or as salt-water marsh. These wetlands provide valuable habitat, open space and stormwater storage. Still, they are constantly under pressure from development and adjacent incompatible land uses.

### **Past Watershed Activities**

In the early 1960's a watershed plan to reduce flooding was developed by the then Soil Conservation Service in cooperation with the Connecticut Department of Environmental Protection and the Fairfield County Soil and Water Conservation District. Congress authorized the plan in 1965 under the requirements of Public Law-566. Two of five dams planned for the watershed were constructed. Authorization remains for the construction of the other three dams and related plan elements. However, the project faces significant construction obstacles and public opposition. A U.S. Army Corps of Engineers channel exists in the lower reaches of the river in the City of Norwalk and development has encroached to the very edges of the drainageways. Additional work in this area would be severely constrained and expensive. In the early 1990's the USDA-Natural Resources Conservation Service (NRCS) revisited the structural approach to dealing with the watershed's issues. The agency's leadership found that the single-purpose approach of 'dam building' was no longer acceptable to many residents and other stakeholders in the watershed, although it remained a viable technical solution. NRCS decided to consider other approaches to flood mitigation in the watershed.

### **The Collaboration Process**

There is no 'magic' or 'cookbook' process that can ensure a successful collaboration in community-led watershed management efforts. There are, however, fundamental concepts that can be used in varying degrees to enrich any agreed-upon process. The Norwalk Initiative's process and concepts are illustrated in the graphic entitled "Conservation Planning Process," which follows. This serves as a "map" for understanding the subsequent journey described in the case study. The essence of the process is that stakeholders are the integral hub around which all activities flow and interact. The process is further outlined in Appendix C.



# Conservation Planning Process



## The Conservation Planning Wheel

Synergy creates energy to move.  
The lubricant is communication.  
The stakeholders are at the core.



*prepared by Philip J. Morneault, Community Planner*

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### Early Development of the ‘Initiative’

In keeping with the NRCS locally-led framework for natural resource conservation, the NRCS proposed a locally-led watershed approach to the Long Island Sound Office of the U.S. Environmental Protection Agency and the Connecticut Department of Environmental Protection. The intent was to see if the concepts would be appropriate for the watershed work that needed to be done in the Sound’s communities.

There was early consensus between NRCS, EPA and CT DEP that this model watershed “initiative” should demonstrate the following:

- A watershed approach with a goal to improve, protect, and restore the water quality, habitat, and condition of other resources contributing drainage to Long Island Sound;
- A voluntary, collaborative partnership effort among Federal, State, Regional and Local authorities;
- A high degree of public involvement;
- A comprehensive method to approach watershed management focusing on the resource needs of the watershed; and
- An emphasis on implementing solutions to high priority issues.

After discussions with local governments and local organizations, it was also agreed that there should be an emphasis on building local capacity to improve management of water quality in general, and, more specifically, to address polluted runoff as well as other resource concerns. Also, all agreed that it was important to ensure that an institutional structure exists to empower and enable municipalities, organizations and citizens to continue implementation after the watershed plan was developed.

### Building Trust In Relationships

With general consensus on the goals of the Initiative, NRCS, CT DEP, and EPA began a series of discussions with other federal, state, and local governments and regional agencies and citizens and groups interested in the watershed’s condition. The principle motif for these conversations was cooperation, stressing the collaborative nature of the proposal. It is probably best to highlight the central questions asked at these discussions. All conversations revolved around three questions to help define a level of interest:

- Would you be interested in working in a partnership effort to model collaborative, locally-led (community-based) watershed planning?
- Would you commit resources to the effort?
- What are your issues and interests relating to the watershed?

A variety of federal partners, state agencies, regional agencies, the Fairfield County Soil and Water Conservation District and other local conservation organizations expressed interest and agreed to participate. The CT Department of Environmental Protection and five of the seven municipalities in the watershed agreed to support the collaborative effort by directing staff to the effort. Two communities that could not provide staff support recruited a volunteer land use commission member for the effort. Also crucial to the Initiative was the agreement between NRCS and EPA to co-fund a coordinator to research, develop and coordinate a locally-led process for the watershed.

### Organizing for Collaboration: The Technical Advisory Group (TAG)

A Technical Advisory Group (TAG) was formed to lay the groundwork for a planning

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committee and to craft a draft framework for the necessary actions and timelines for the Initiative. Clearly the formation of a planning committee was the highest priority work for the TAG in the beginning. This committee would constitute the ‘locally-led’ part of the process and make all decisions regarding how the effort would proceed and ultimately define the role of the TAG. From the outset, it was clear that the TAG would be a scientific and technical advisory group to the Initiative Committee. Once the Initiative Committee was formed, the TAG would take on a secondary role. The final decision to form a committee and proceed with the effort resulted from the community response and willingness to participate in the process. Up to this point each step taken, including the development of the TAG, was a series of go/no-go determinations. Without a substantial partnership, and without local commitment, the Initiative would not have proceeded.

To kick-start the Initiative Committee’s formation, the TAG identified and contacted local leaders and organizations, which should be involved by virtue of their responsibilities and those that might like to be involved by virtue of their interest in natural resources or the watershed itself. The TAG also sought and obtained funding for a Public Outreach and Education Coordinator to work at the direction of the Committee.

An initial meeting was scheduled and the TAG handled all logistics and coordination to ensure that the meeting would demonstrate organization, structure and purpose. The TAG consolidated the list of issues and interests developed earlier and prepared a suggested outline of roles and responsibilities for partners and stakeholders in the process. This list and outline served as a starting point; the TAG fully expected the Initiative Committee to enrich these documents with their own unique perspectives and notions.

The TAG fulfilled seven objectives in the startup of the Initiative Committee:

- ◆ Gauged the interest of the community in proceeding with a collaborative watershed planning effort (a go/no go decision);
- ◆ Developed a list of potential participants and advertised for participation in the effort;
- ◆ Developed an 18-month adaptable planning process for the Initiative Committee to agree to or modify;
- ◆ Added to the list of issues and interests that had been developed over the initial discussion phase;
- ◆ Developed a set of meeting agreements for the committee to agree to or modify at the first meeting;
- ◆ Authorized the Stream walk and the hiring of a Public Outreach Coordinator; and organized the first meeting; and
- ◆ Set the tone for the collaborative, partnership approach the Initiative Committee would use.

### **Committee Process: Preparing to Minimize Conflict**

In February of 1997 at the initial meeting, the Norwalk River Watershed Initiative Committee (Committee) formed with over 40 members representing federal, state, and regional agencies, the seven municipalities, and community representatives from the general public and local organizations. Two people with strong ties to the communities agreed to co-chair the Committee. The Committee immediately committed to actions that would ensure completion of the process within a recognizable structure and time period. The Committee developed relationship agreements that would minimize conflict and agreed to have a facilitator for its meetings.

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It reviewed and adopted a draft work plan with a clear purpose statement and an 18-month planning process. The process essentially followed the NRCS Nine-Step Planning Process modified to fit the local situation. The Committee agreed to a consensus approach for its own decision-making to develop a watershed action plan. The Committee also agreed to meet monthly and approved meeting agreements for conducting business meetings. The Committee reviewed the initial list of issues and interests developed by the TAG and modified it to reflect their perspectives and the perspectives of their constituents.

The three phase nine step planning process used by the committee is spelled out in Appendix C.

### Public Involvement

The committee also took steps to integrate strong public involvement in the planning process by incorporating actions into steps in the process. These actions are spelled out below:

The Norwalk River Watershed Committee will ensure that the general public is (1) informed of the progress of the Committee and, (2) has the opportunity to comment on the findings of the Committee. Public Outreach and Public Input will be necessary throughout the project. Save The Sound, Inc., has been contracted to provide assistance in this effort. The public will have the opportunity to participate with subcommittees or smaller workgroups to develop specific components of the watershed management plan. The Committee will:

- A. Review and Comment on Public Outreach Plan developed by Save The Sound, Inc.
- B. Hold Public Meetings To Solicit Comment On:
  - 1) Priority Issues and Interests for the Watershed;
  - 2) Goals and Objectives for the Watershed based on Priority Issues;
  - 3) Desired Future Condition for the Watershed;
  - 4) Achievable Conditions for the Watershed;
  - 5) Measures of Success To Evaluate Progress in Achieving Goals
  - 6) Draft Watershed Management and Implementation Plan

### Public Outreach As Public Participation

Public outreach is generally thought of as using available or new avenues for transferring information; increasing public awareness, or specifically, increasing the visibility of a certain activity. In this regard it is one way communication. Public participation, on the other hand, is a process through which stakeholder's influence decisions and share resources for community initiatives that affect them. This is two-way communication.

In the Norwalk Initiative, these concepts were effectively merged into the theme of "Public Outreach As Public Participation." This was a key component in keeping visibility within the community and ultimately gaining support for the implementation of the action plan. Outreach and participation were conducted simultaneously. Public participation meetings (there were three throughout the course of the process) became public outreach opportunities. Participation meetings were held to present draft information prepared by the Committee; to solicit feedback and comments and to identify additional issues and interests. TV, radio and print media were used effectively for outreach and participation. Each use of the media carried with it the message of how to get involved.

By joining the concepts of public outreach (one-way communication) and public participation (two-way communication), the planning committee effectively increased its size. It also

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obtained more community input. Perhaps more importantly, the planning committee increased its understanding that the watershed community understood and approved of what the committee was doing.

### Committee Process

Early on, the Committee decided to establish four thematic categories for exploring the identified issues and interests: Water Quality; Habitat Restoration; Land Use, Flood Protection, and Open Space; and Stewardship and Education. These four categories became the basis for subcommittee formation. It was the role of the subcommittees to make recommendations to the Planning Committee. Often, the subcommittees were asked by the Committee to rethink, strengthen or eliminate a recommendation in an effort to reach consensus about contentious issues. Ultimately, the Committee reviewed and approved all subcommittee recommendations. All subcommittee members were also members of the Initiative Committee.

### Subcommittee Process

The subcommittees were charged to further develop the issues and interests, set priorities, prepare goals and objectives for their thematic category; and then develop recommendations and action items to support the goals and objectives in the form of a plan. Each subcommittee was also asked to review their recommendations in light of three guidelines:

- Was it measurable?
- Was it achievable?
- Was it presented within a watershed context?

Subcommittees evaluated and rated their issues and interests in terms of achievability, prioritized them and proposed actions. The subcommittees presented their plan to the full committee for consensus. Even though the Committee reviewed the subcommittees' work in terms of reasonableness and comprehensiveness, they had fully empowered the subcommittees so modifications were minimal. Their primary charge was to ensure that there was cohesiveness and appropriate connectedness among the work of all four subcommittees. Ultimately each subcommittee's plan became part of the overall NRWI Action Plan.

### Parallel Partner Activities

It is important to note that partners were empowered to act at the same time the groups were developing the action plan. Their actions were in concert with and sanctioned by the Committee structure so that there would be demonstrated early successes. Additionally, each of the early activities was first identified as being needed by the community through its public outreach/participation. It was critical for the Committee members to show that actions were underway as a result of the Initiative, but that 18 months did not have to pass before 'real' activities could occur. This added fuel to the effort and energized more folks to become involved.

The following activities were completed during the planning associated with the Initiative:

- ◆ Riparian area restoration;
- ◆ Flood alert system approval and installation;
- ◆ A stream walk;
- ◆ Water quality monitoring;
- ◆ GIS mapping;
- ◆ A review of municipal environmental regulations in the watershed;

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- ◆ Brochures developed;
- ◆ A series of workshops for each watershed community from the NEMO (Nonpoint Source Education for Municipal Employees) Project; and
- ◆ A series of focus groups on community perception of riparian areas.

### The Crucible Concept

The process was originally conceived as collaborative. The initiating agencies (NRCS, EPA, CT DEP) did not direct a process, but rather provided a framework or crucible in which a process could operate. The crucible concept did not advocate for a top down or bottoms up process. The participants recognized that resource protection, to be effective, needed to use all the tools available and engage the stakeholders in the watershed. The crucible concept enabled all participants to have an equal voice (shared power) in the process. This led to a common understanding and agreement on what was necessary and achievable.

### The Norwalk River Watershed Action Plan

After 18 months of work, the formal Norwalk River Watershed Action Plan was released with a signing ceremony attended by federal, state and local officials and legislators. The plan originated directly from community-based planning and was directly aimed at actions to improve watershed conditions—some actions were oriented to local actions, some state, and some federal. The goals and objectives targeting watershed improvement include:

#### 1. **Habitat restoration actions**

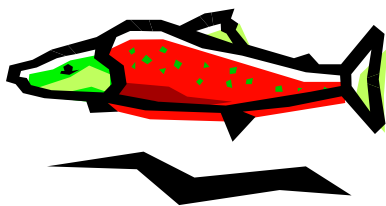
Preserve and improve wildlife habitat:

- ☑ Control or diminish prevalence of invasive species
- ☑ Minimize loss of habitat values coincident with land use practices
- ☑ Support the preservation of valued habitat
- ☑ Uniform adoption by municipal inland wetland agencies of a minimum 100 foot regulatory review area adjacent to wetlands and watercourse

Restore anadromous fish passage

Support for cold waters fisheries

- ☑ Reestablish and protect riparian zones
- ☑ Restore streambeds impacted by road sand deposition and seek solution to reduce future road sand sedimentation
- ☑ Enhance in-stream habitat conditions



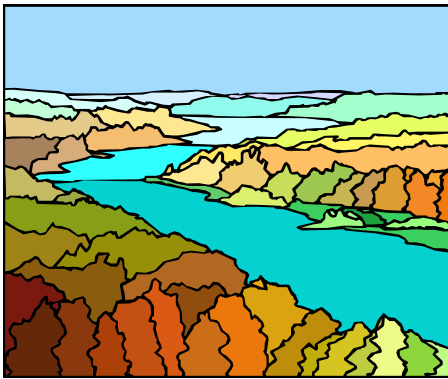
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### 2. Land use/flood protection/open space action items

Promote balanced growth which preserves property values and protects and enhances the watershed's resources for future generations:

- ☑ No net loss of wetlands and where possible, re-establish, restore, and enhance wetlands as part of new development or renovation projects
- ☑ Identify appropriate areas for public access to the rivers and streams and increase public access where appropriate
- ☑ Ensure that land use planning includes adequate water supply resources, storm watershed drainage systems and waste water treatment systems (both onsite and sewer)
- ☑ Have each town integrate the recommendations of the watershed plan into its land use regulations and design standards
- ☑ Minimize loss of life and property damage caused by flooding
- ☑ Ensure that all local regulations remain in compliance with FEMA regulations and investigate higher standards in response to high damage hazard
- ☑ Recognize, maintain and increase open space to ensure the proper functioning of the watershed
- ☑ Recognize that the streams, streambanks, and riparian areas within the Norwalk River Watershed are fragile places, which should be conserved restored and protected
- ☑ Establish conservation as an integrated functional part of the regulatory system of each watershed community, with each community supporting the same objectives and protecting the watershed from its origin in Ridgefield to its base where the river meets the Sound



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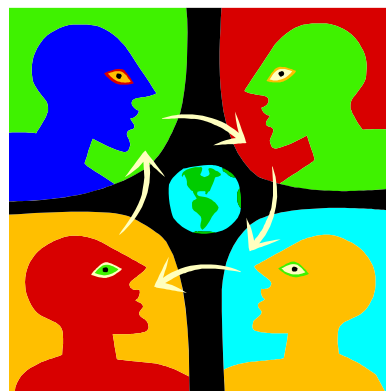
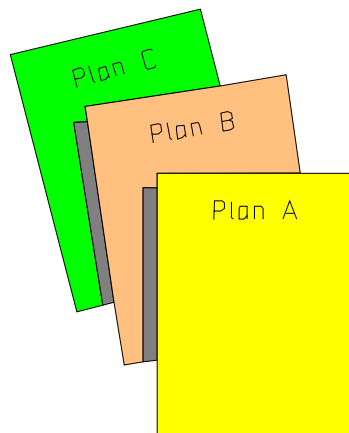
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### 3. Water quality action items

Restore and protect surface and ground waters to meet state water quality standards throughout the watershed such that the Norwalk River supports its designate uses (e.g., fishing, swimming, drinking waters), and

Determine if the extensive pond/lake eutrophication observed in the watershed is affecting instream water quality:

- ☑ Ensure adequate maintenance of septic systems
- ☑ Reduce the impact of road sand on watershed quality and stream habitat
- ☑ Maintain and increase riparian buffer areas
- ☑ Improve solid and liquid waste management at watershed business and municipal facilities
- ☑ Evaluate the cumulative effect of discharges permitted by both the Connecticut Dept of Environmental Protection and the New York Department of Environmental Conservation
- ☑ Maintain adequate base flows in the Norwalk River and its major tributaries
- ☑ Reduce the cumulative impacts of development and improve storm water management
- ☑ Continue water quality monitoring and data collection and assessment
- ☑ Ensure proper functioning of wastewater treatment plants



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### **Implementing the Plan**

The Planning Committee completed its work, but in many ways the completion just signaled a beginning. The plan needed implementation beyond what had been accomplished as early actions during the development of the plan. To accomplish implementation that followed the intent of the plan, adjustments had to be made to the structure and purpose of the locally-led process. The Initiative participants agreed that an advisory committee was needed to oversee the implementation of the Action Plan.

### **Advisory Committee**

An Advisory Committee was formed in February of 2000. It is comprised of representatives of the seven affected communities. This committee operates with a set of by-laws, meets monthly, and has hired a coordinator. The body is essentially a non-governmental governing body. It is a voluntarily assembled body. Its primary role is to oversee the implementation of the Action Plan.

**Implementation Challenges** Implementing a plan contains challenges that are substantially different from developing a plan. ‘Big’ picture thinking needs to give way to more project-oriented thinking. For a plan to be implemented successfully there are several steps that need to be taken. The Initiative is in the process of implementing the plan now. The following are some challenges faced by the Initiative in implementing the plan and what the Initiative is doing about it.

**Structural Organization:** The Initiative recognized the different nature of an implementing committee and recommended a new structure be developed for this. Since February of 2000, an Advisory Committee’ was been created to implement the plan.

**Coordination:** The Advisory Committee recognized the continual need for organization to implement the Plan. The committee found funds to hire a ‘Watershed Coordinator’ for this purpose.

**Resources:** While the focus on resources has traditionally been on funding and natural resources, the nature of the issues in the watershed indicated that the people who live in the watershed are a great resource. The people who act and make a difference in how the natural resources are managed and protected for the future are the stewards. The greatest aspect of that human resource is peoples’ ability to continue to advocate for the environmental future of the watershed as well as getting involved in activities and projects. The Action Plan is a substantial document for use in obtaining funding because it is a statement of the collective will of the watershed community. It is also creates opportunities for people interested in stewardship and conservation to get involved to help.

**Trust:** In order to implement the plan, the Advisory Committee focused on building and upholding community trust.

**Partnership:** The collaborative nature of the plan development highlights the concept of stakeholder participation. Each participant in the development of the plan was a stakeholder

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with an interest in the basin. The level of participation in the implementation of the plan must mirror the participation in the development of the plan. That is, those who developed the plan must, within their capability, also implement the plan.

### **Current Status**

Appendix A highlights activities and accomplishments of the Initiative.

### **Summary, Conclusions and Lessons Learned**

Collaboration in partnerships is a process—not a project. The development of an action plan results from a process that emphasizes early preparation and organization; recognizes and works to minimize conflict; and builds trust in relationships. The process of planning is an exercise in social activity and a measure of civility in reaching common goals and objectives to address resource or community issues. The plan and implementation of the plan results from the commitments made through the process. Collaboration focuses on building long-term relationships and working towards common goals that ultimately results in actions and changes by the community for the community. It takes an investment of time and commitment and patience. The investment is a long term one. Investments made to build and maintain relationships and to move the process forward will pay dividends in the implementation phase and the future.

Lessons learned from the collaborative planning activities characterizing the Norwalk River Watershed lead to universal viewpoints and guiding principles. They offer insights and encouragement to watershed practitioners everywhere. These viewpoints and principles are outlined with some discussion in Appendix B.

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### APPENDIX A

#### A Summary of Early Implementation Actions

- ✓ Residential Area Buffer Demonstration Project (Fox-Run Property)
- ✓ Commercial Area Buffer Demonstration Project (Perkin-Elmer Property)
- ✓ Brochures developed for each category buffer demonstration: Commercial and Residential
- ✓ Streamwalk: Every foot of perennial stream walked and streamside conditions recorded by volunteers
- ✓ Streamwalk data helps committee inventory and rank Stream Corridor Impairment
- ✓ Citizens Water Quality Monitoring and Reporting Continues
- ✓ First in a series of Annual Reports on the Operation of Watershed Sewage Treatment Plants prepared for the Initiative
- ✓ Municipal Stormwater Approaches tested: both for new development and for retrofit opportunities
- ✓ ALERT (Early Flood Warning) System Installed and Flood Audits conducted
- ✓ Nonpoint Education for Municipal Officials (NEMO) workshops conducted throughout the basin
- ✓ Watershed-wide review of town environmental regulations developed as gap analysis for Initiative decision-making
- ✓ Geographic Information System materials developed for planning
- ✓ Action Plan is used by local town boards to make decisions
- ✓ Trout Unlimited, NRCS and CT DEP partner to restore fish habitat: both anadromous fish restoration and cold-water fish enhancement. Three dams in process of removal, breaching or bypass for fish passage
- ✓ Local community Invasive Species Workshops conducted
- ✓ Local coordinator hired to assist advisory committee implement the Action Plan
- ✓ Watershed-wide Septic System Training underway
- ✓ Watershed-wide road-sand assessment and education underway.
- ✓ Initiative receives Southern New England Commendation Award from Soil and Water Conservation Society for the Streamwalk (1998)
- ✓ Initiative receives New England Region EPA Merit Award (1999)
- ✓ Initiative receives Connecticut American Planning Association Award (2000)
- ✓ Trout Unlimited receives National Recognition for the Initiative
- ✓ Norwalk River Watershed Action Plan adopted October 1998
- ✓ Norwalk River Watershed Initiative Advisory Committee formed February 1999 to oversee implementation and review of the Action Plan
- ✓ Initiative asked by National American Planning Association to present at a national annual meeting

**Note:** Funding for many of the projects are leveraged or partnership efforts. NRCS contributed funds through its programs and its technical assistance. EPA and CT DEP contributed funds through the Section 319 of the Clean Water Act grant program. Trout Unlimited provided grant funds for fish passage restoration. Local foundations played a financial assistance role, and local towns and their citizens contributed funds and time to make many of these projects come to life.

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### APPENDIX B

#### Lessons Learned: Launching a Community-Based Watershed Initiative

There are universal viewpoints and guiding principles from the Norwalk River Watershed Initiative that can be applied, to varying degrees, in other watershed initiatives. The acceptability of these guidelines depends on the watershed residents' culture, concern about their environment, economic challenges and many other factors. Gaining the attention, understanding and participation of the people living and working in the watershed is the most important key to any success.

#### Universal Viewpoints

Focus on People -- In environmental management, a major problem often is that people are not involved initially. Focus on development of collaboration to come up with real solutions to real problems. Then focus on the environmental concerns identified.

At every turn, listen and go with the sense of the group -- It is critical to listen with trust and respect and go with the sense of the group with which you have partnered. This doesn't mean to go against scientific reason or regulatory mandates. A part of the support provided must be expertise in technical and legal areas. That support must come at the appropriate time when the group is ready for it, not too early and not too strong since it may squelch creativity, but certainly not too late.

Provide plain language responses to all questions until the group is ready to go on -- There are really two issues here, one about communication and one about consensus building. Both are important. First, agencies often have the information needed to go on but if you move on before everybody is with you, whether it's because they were physically not present or because the discussion was in language they didn't understand, you will lose the group. You can't push a rope! Second, people are intelligent and well educated, either formally or informally, but they don't necessarily speak "science-ese" or "engineering-ese" or "regulator-ese". It is the responsibility of the scientist, engineer or regulator to communicate in the language of the stakeholder so that people understand each other.

Agencies must provide leadership in a supportive, facilitating role -- Stakeholders don't always know what they don't know, and may not even be sure how to ask, or what to ask? Be patient. This is a learning process for all participants. Staying adaptable to new directions is important. As soon as you start preaching or pontificating they'll jump ship. And if you are not responsive to their needs, they'll want to know why not! Alternately, agencies cannot be, and cannot appear to be, in charge. If they are, then either people will not collaborate in the first place or, rather than local people taking responsibility for their own environment, they will expect the Agencies to do it for them. Neither case works best in the long term.

Move ahead on whatever you can very deliberately -- Listen to people, build relationships, and learn what the issues are. When you know from the group that all have heard each other, then plan what to do and carry it out. Small pieces of a large effort may be carried out this way. Not doing anything will eventually lose even the strongest supporters.

Celebrate, whether it works or not -- It is important to celebrate success and genuine hard work.

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### Guiding Principles

Stay flexible/adaptable, collaboration is not directed. -- Keep the process open. Be receptive to new ideas when they are introduced as the process progresses. As lessons are learned, adjust the process for success.

Trust the process. View it as a continuing process not a project. -- there will be many times when stakeholders are frustrated, and the committees are challenged to gain results. Trust the process and in the long run things will work through to conclusion. Keeping the process open will lead to positive results from the people.

Work to build trust. Avoid and prevent turf battles. Keep your promises. -- Trust building is a never ending activity. Keeping promises builds trust, the breaking of them simply implodes trust. Turf protection is often a barrier to the gaining effective results. Work the process to bring stakeholders together, and find common ground in which to work. As trust builds turf barriers will diminish.

Be clear about what you are doing, and where you are going. -- Open frequent communication is essential to the planning process. Clarity in that communication is just as essential. Communicate what activities are happening or going to happen and why. Discuss expectations and don't forget to pay attention to feedback.

Recognize that there is no one process for all collaborative efforts; no "cookbook." -- While the Norwalk River Watershed was planned using the NRCS three phase, nine step process, any good planning model can be used. Also, throughout the process use an adaptive management approach. Keep an eye out on what is working and what is not. Make adjustments as needed to keep the process effective.

Identify key leaders. Empower each participant to operate in this collaborative process. Local community leadership is crucial. -- Regardless of how the need for planning comes about and activities begin, those involved in initiating and energizing the process should work to identify local leadership to thoroughly engage communities in the process. Federal agencies should provide leadership through a supportive and facilitative style. Top-down driven activity should be avoided.

Ensure that a coordinator is available to keep the process moving.

Use a trained facilitator this can be crucial to resolve conflicts. -- It is important that the facilitator function as an independent party. Use of interested stakeholders as facilitators should be avoided. Neutral facilitation will go a long way to helping groups work through their differences.

Always strive to get something done.

Keep communications open at all levels, including the political level.

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Honor the work of all involved.

Set priorities. --\_priority setting is important to allocate scarce resources to gain effective resolution to problems. Also, prioritization may be helpful for identification of the proper sequencing of specifically identified actions to gain needed results. Stakeholders and interested parties can be identified and encouraged to come together, find common ground, and begin to resolve issues together.

Recognize that these processes succeed largely due to social interactions rather than environmental science.

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### APPENDIX C

#### Norwalk River Watershed Initiative Process and Work Plan

##### Phase I: Data Collection and Analysis

###### **1. Perform Resource Inventories**

The Norwalk River Watershed Committee will identify issues and interests, prioritize them, and conduct resource inventories to help in making decisions. Existing information will be collected for evaluation and new information will be developed as needed and as resources allow.

- A. Identify community social, economic, environmental and cultural characteristics.
- B. Identify Issues and Interests
- C. Prioritize Issues and Interests
- D. Collect existing federal, state and local data to address identified issues.
- E. Collect Existing Watershed Municipal Rules and Regulations
- F. Conduct on-site resource inventory of physical and ecological conditions through use of volunteers (Stream walk).
- G. Collect Existing Geographic Information System (GIS) data and Develop A Land Use/Land Cover Coverage layer of the Watershed
- H. Identify other necessary information.

###### **2. Analyze Resource Data**

Decisions on watershed management will need to be made based on best available information and analyses of that information. The Committee will:

- A. Compare Municipal Regulations and Present Findings.
- B. Establish types and intensity of analyses to be completed based on priorities and resources of the Committee.
- C. Conduct analyses and prepare recommendations on priority issues:
- D. Priority Issues Will Be Determined by the Committee. Example Priority Issues Include:
  - 1) Water Quality
  - 2) Flood Control
  - 3) Habitat Restoration and Enhancement
  - 4) Local Development Trends & Practices and Zoning Regulations
  - 5) Stewardship
  - 6) Open Space, Access, Recreational Use

##### Phase II: Develop Watershed Plan

###### **3. Develop Goals Based on Priority Interests**

Goals should describe a desired future condition (a vision) for the watershed. They should be inclusive as much as possible and reflect the interests and capability of the community and the Committee.

(An example goal statement: Improve resource conditions within the watershed for a coldwater fishery.)

###### **4. Develop Measurable Objectives To Accomplish Goals**

Objectives should identify options available to meet the goals.

(An example Objective Statement: Increase habitat quality in \_\_\_ miles of stream.)



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### 5. Develop Tasks to Accomplish Objectives

Tasks are the action items that the group and others agree are achievable and will result in accomplishing goals and objectives. These should identify specifics such as timing, commitment or source of resources, and roles and responsibilities.

(An example Task Statement: Increase shading to river.)

- A. Propose measurable options to meet goals.
- B. Identify implementation roles and responsibilities
- C. Develop schedule of implementation
- D. Establish Monitoring Program to Measure Progress

### 6. Prepare Watershed Plan and Hold Public Review for Comment on Proposed Plan

The Norwalk River Watershed Committee will prepare an achievable watershed plan and ensure the public has the opportunity to comment.

- A. Prepare Draft Management and Implementation Plan
- B. Hold public information meeting(s).
- C. Incorporate comments.
- D. Finalize Plan

### 7. Adopt Plan

The Committee will formally adopt the plan and request adoption by watershed municipalities, county and other organizations as appropriate.

## Phase III: Implement Plan

### 8. Implement Norwalk River Watershed Initiative Action Plan

Implementation of the plan will focus on the tasks identified. It is likely that the partnership developed for implementation of the plan will be a broad community based effort. The Partnership implements the plan by identifying roles and responsibilities.

### 9. Monitor and Evaluate Progress In Reaching Goals.

The watershed plan should be a dynamic, not static, document. It should be revisited and evaluated to determine progress and make necessary changes if conditions change or obstacles prevent the implementation of items in the plan.

- A. Conduct Monitoring Program
- B. Evaluate Progress
- C. Revise Watershed Plan As Needed

## Norwalk River Watershed Case Study

### APPENDIX D

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