

CTDEP-Inland Fisheries Division
Housatonic River Natural Resources Restoration Project

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INLAND FISHERIES

Young's Field Park Riverwalk and Greenway



Submitted by:

Town of New Milford

10 Main Street

New Milford, Connecticut

June 20, 2007

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Housatonic River Basin Natural Resources Restoration Project
Natural Resources Trustee SubCouncil for Connecticut
Request for Supplemental Information (RSI)
INSTRUCTIONS

PART A: SPONSOR AND PROJECT SUMMARY FORM

Please read "Request for Supplemental Information (RFI) OVERVIEW" and this document, "Request for Supplemental Information (RSI) INSTRUCTIONS" before completing this form.

Part A must be completed using this "Sponsor and Project Summary Form"

SPONSOR INFORMATION

Type of Entity Check the box that best describes the sponsor.

- | | |
|--|--|
| <input type="checkbox"/> Private individual | <input checked="" type="checkbox"/> Municipal government |
| <input type="checkbox"/> Non-profit organization | <input type="checkbox"/> Corporation or Business |
| <input type="checkbox"/> State government | <input type="checkbox"/> County government |
| <input type="checkbox"/> Federal government | <input type="checkbox"/> Academic Institution |
| <input type="checkbox"/> Tribal government | <input type="checkbox"/> Other (explain) |

Authorized Representative of Sponsor

Name

Patricia Murphy

Title

Mayor

Address

10 Main Street

City

State

Zip

New Milford	CT	
06776		

Phone

860-355-6010

Email

Mayor@newmilford.org

Contact Person (if different from Authorized Representative):

Name

Title

Address

City

State

Zip

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Phone

Email

Project Name Provide a brief working name:

Young's Field Park Riverwalk and Greenway

Project Location

Attach an 8.5 x 11-inch map or copy of an aerial photograph showing project location and extent. Include pertinent topographic and geographic information, a scale, and north arrow.

State(s), Municipality/ies: New Milford, CT

Longitude for approximate center of project area:

W73 deg 25 min

Latitude for approximate center of project area:

N41 deg 34 min

NOTE: If a specific location(s) has/have not been selected yet, include in Part C a narrative describing how project location(s) will be selected.

Restoration Priority Category See Appendix C of these Instructions for Restoration Priority Category Descriptions

Primary Category. Check the restoration category that is the primary goal of the project.

Check one box.

- Aquatic Natural Resources Restoration/Enhancement
 Riparian & Floodplain Natural Resources Restoration/Enhancement
 Restoration/Enhancement of Recreational Uses of Natural Resources

Secondary Categories. Check all relevant boxes.

- Aquatic Natural Resources Restoration/Enhancement
 Riparian & Floodplain Natural Resources Restoration/Enhancement
 Restoration/Enhancement of Recreational Uses of Natural Resources

List Specific Injured Natural Resources and/or Impaired Natural Resource Services to Benefit from Project

Enhancement to the surface water quality and river habitat along the bank where plant and aquatic species habitate. This area has long been susceptible to embankment erosion due to the river alignment and the passive recreational usage causing excessive sediment runoff and turbidity in the river.

This project will also seek to restore recreational activities along the bank of the Housatonic River. It will allow pedestrians to safely enjoy the scenic views of the river and the habitat surrounding and across the river, both plant and wildlife, without further damaging the river habitat.

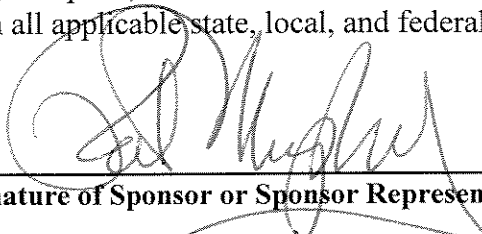
Project Budget Summary

Complete the table below to summarize the budget information that is detailed in Part D: Project Budget Narrative and Forms. Sponsors are advised to complete Part D (Project Budget Narrative and Forms) before filling in the table below.

Housatonic River NRD Funds – Requested	Other Contributions (Committed)	Other Contributions (Not Committed)	Total Project Cost (boxes 1+2+3)
1. From Part D, Table 2, Box 5 \$180,000	2. From Part D, Table 2, Box 6 \$69,000	3. From Part D, Table 2, Box 7 \$32,000	4. From Part D, Table 2, Box 8 \$281,000
Amount of Other Contributions to Be Considered as Cost-Matching to NRD Fund Request			
5. \$101,000			

Authorizing Statement

I hereby declare that the information included in this project submission and all attachments is true, complete, and accurate to the best of my knowledge, and that the proposed project complies with all applicable state, local, and federal laws and regulations.



 Signature of Sponsor or Sponsor Representative Date 6/20/07

 Patricia Murphy, Mayor
 Name of Sponsor or Sponsor Representative
 (Type or print clearly)

Part B
Young's Field River Walk

The Young's Field River Walk is part of a multi-faceted revitalization project focusing on riverine enhancement of the Housatonic River region. The proposed one half mile greenway project will enhance the Greater New Milford Greenway through re-establishment of native vegetative habitat and interconnection of two town-owned parks creating a scenic walking and biking path along the banks of the Housatonic River.

The proposed work at Young's Field will accelerate the natural recovery period and preserve the environmental quality of the Housatonic River and its surrounding habitat. The objective of this proposal is bank stabilization, re-establish the native vegetative habitat directly adjacent to the riverine system and ensure biofiltration of stormwater runoff prior to discharge into the Housatonic River. The ultimate goal is to preserve the riparian environment in perpetuity and improve the Housatonic River water quality.

Tasks included in the implementation of the action plan of this project are: reduction in impervious surfaces, installation of shoreline stabilizing riprap and plantings, construction of a Greenway trail and placement of barriers to prevent parking on the revitalized park areas.

It is anticipated that all physical construction can be completed within two years in phases one, two and three.

Part C – Project Narrative

1.0 GENERAL DESCRIPTION

1.1 Project Goals and Objectives

The primary goal of the Young's Field Park Riverwalk and Greenway project is to restore and enhance a vegetative buffer along the Housatonic River from Young's Field Park to Helen Marx Park, a distance of approximately ½ mile. This project will improve the riparian habitat, quell erosion and shoreline abuse, reduce the existing impervious surface and establish recreational area.

The objective is to re-establish native, vegetative habitat directly adjacent to the riverine system, ensure biofiltration of stormwater runoff prior to discharge into the Housatonic River, preserve the riparian environment in perpetuity, improve water quality, and allow the natural resource and the goals of economic development to work in harmony. All of these objectives can be accomplished using natural materials with modern bioengineering principals while working in concert with the landscape.

1.2 Project Scope and Project Implementation Plan

As with the global problems associated with the river, the lands around Young's Field Road and the Housatonic River have been neglected and abused by industry and patrons alike. For hundreds of years those communities along the river have failed to incorporate the Housatonic River into any plan of action as an attraction. This oversight has allowed for physical damage to the riparian floodplain along the Housatonic River. The Town of New Milford is proposing new solutions for a troubled past. Young's Field Park Riverwalk and Greenway is a project to refocus the community's attention on a great resource, provide for a means of reparation for past damage and a promise of protection for the future. Young's Field Park Riverwalk and Greenway is only a small part of the Greater New Milford Greenway Project. The long term goal is for almost 13 miles of riverine habitat to be enhanced, preserved and become available for proper, safe and environmentally friendly recreation.

- a. The Town of New Milford has approached this project as an environmental restoration plan that offers additional benefits for the general populous. Being an environmentally based plan, benefits will reach further than just the localized area of construction. Rather than shifting environmental problems, Young's Field Park Riverwalk and Greenway will be the source of a greater solution. To achieve this solution the Young's Field Park Riverwalk and Greenway project will improve water quality, increase an environmental buffer along the Housatonic River, stabilize the riverine embankment, provide for safe recreational access and offer new opportunities to enjoy the Housatonic River with picnic areas and a river side hiking trail.

- b. The three phase project is designed to be completed in three years with a two year construction period. The following table represents the general timeframe:

Project Schedule
Young's Field Park Riverwalk and Greenway

<u>Task</u>	<u>Total Task Timeframe</u>	<u>Year of Project</u>
1. Funds Secured – Agreement signed w/ SubCouncil	Start	Year 1
2. Prepare Design Plans for the entire project.	8 weeks	Year 1
3. Submit project designs to Inland/Wetland for approval	6 weeks	Year 1
4. Submit plans for River embankment stabilization and riverside trail to IW/ACOE/CTDEP* for approval	36weeks	Year 1
5. Install sedimentation control devices for the parking lot reorganization and Habitat restoration area -and maintain as needed during project	1 week	Year 2
6. Complete removal of impervious surface and parking lot reorganization	4 weeks	Year 2
7. Implement Habitat restoration area plant and stabilize. Remove and replace invasive species	4 weeks	Year 2
8. Complete Shoreline stabilization project including dock access platforms.	6 weeks	Year 2
9. Construct the Riverwalk Trail including boardwalk	8 weeks	Year 3
Total	73 weeks	3 Years

*Inland Wetlands/ Army Corps of Engineers / CT Department of Environmental Protection

- c. To achieve the aforementioned goals and objectives, a multiphase project is proposed over successive years. During the first year of the project, design documents, easements and land use permitting will be completed. Land use permits from the New Milford Wetlands Commission, Army Corps of Engineers and CT DEP (Stream Channel Encroachment Limit Line) are anticipated to be required for the project. None of the activities proposed are inconsistent or prohibited by these agencies. We feel that the project as proposed is an environmental benefit and anticipate that the methods and goals of the project would be looked upon favorably by these adjudicating agencies.

Phase two, year two will be the start of the environmental restoration and improvement portions of the Young's Field Park Riverwalk and Greenway project. In this phase the existing parking area will be reorganized, significantly reducing exposed compacted soils along the river's edge and establishing a sustainable vegetated buffer along the river plateau. This will drastically reduce stormwater runoff from the existing riverside parking area and provide for habitat improvement along the Housatonic River's edge. Installation of a wooden guide rail and boulder placement is required to prohibit vehicles from parking on the newly restored riparian park area. The shoreline stabilization portion of the Young's Field Park Riverwalk and Greenway project will also be implemented during phase two. Utilizing the latest bioengineering methods, the shoreline stabilization will include the use of boulders with planting pockets, wattle logs and vegetative fascines to reduce the erosion and undercutting of the river embankment. As this section of the river is a very popular as a fishing and boating venue, two narrow catwalk platforms are proposed to access the shore line dock system that will allow for access to the river without traversing and continuing to damage the river embankment. These fully encapsulated, floating docks will be deployed from April 15 through November 15 of every year. The dock will have the ability to modulate a minimum of 8 feet to avoid flood damage and seasonal alteration of the river level.

Phase three of the project will include the development of the interconnecting shoreline pedestrian link from Young's Field Park to Helen Marx Park. The trail will require a set of stairs or a ramp at the north end of Young's Field Park and a short boardwalk section to traverse a floodplain wetland system.

- d. The pedestrian link portion of the project will require easements from two local businesses. These entities have been contacted with respect to the project in the past. They have represented that they are not against the proposal but will not sanction the pedestrian trail without a hold harmless clause and formal easement agreement. Because of the nature of their operations and security requirements, they have requested that the existing rear fences meet their security guidelines.

- e. It is anticipated that permits will be required from the following agencies:
1. New Milford Inland Wetland and Watercourse Commission – a schedule A permit will be required as part of this work is located within 200 feet of the Housatonic River.
 2. Army Corps of Engineer (ACOE) – Programmatic General Permit Category 2 permit (if necessary) – A category 2 permit will be required because the Housatonic River has been declared a study river under the Wild and Scenic River System in Connecticut.
 3. Connecticut Department of Environmental Protection Inland Water Resources Division (CTDEP) – A stream channel encroachment permit is required as part of the ACOE submission or as a stand alone permit if ACOE is not applicable.

2.0 EVALUATION CRITERIA NARRATIVE

2.1 Relevance and Applicability of Project

2.1.1 Location of Project

The project is located upstream of the Derby Dam on the east side the mainstem of the Housatonic River and west of Young's Field Road in the heart of New Milford, Connecticut.

2.1.2 Natural Recovery Period

The current status of the property is that of continued erosion and patron abuse resulting in no true natural recovery period. With the planned restoration we can define access to the river and stabilize the remaining riverbank while providing for recreational activities. As this section of the river is a very popular fishing and boating venue, two narrow catwalk platforms are proposed to access the shore line dock system that will allow for access to the river without traversing and continuing to damage the river embankment. Therefore, there will continue to be no natural recovery period without the implementation of this project.

2.1.3 Sustainable Benefits

The solutions to the problems that plague this section of the Housatonic River are fairly straight forward, easy to implement and can be achieved with relatively little disruption to the river ecosystem. The proposed parking reorganization and vegetative buffer is a permanent environmental improvement that will reduce unfiltered runoff, and stormwater infiltration

while enlarging the existing habitat area. Utilization of bioengineering practices to stabilize the eroded and abused sections of the shoreline will curb further erosion and rejuvenate the river embankment by reversing the damage that is evident by the undercutting of the river embankment and exposed soils slopes. Once completed, this project is designed to be a permanent solution not requiring reoccurring human intervention or significant maintenance.

2.1.4 Magnitude of Ecological Benefits

Numerous ecological benefits will be achieved through this restoration project. The parcel of land, though small in area, has the potential for significant ecological improvement that can demonstrate the benefits of human intervention upon a deteriorated environmental system. This parcel of land is contiguous to other riverfront property owned by the town that has benefited from human intervention in order to stave off the relentless erosion caused by the Housatonic River. It is only logical to continue these efforts so as to preserve and protect the riverine restoration and recreational area already completed. More specifically, the Young's Field Park Riverwalk and Greenway project will have ecological benefits that improve water quality, increase the environmental buffer along the Housatonic River, stabilize the riverine embankment, provide for safe recreational access and offer new opportunities to enjoy the Housatonic River with picnic areas and a river side hiking trail. The aforementioned benefits are achieved through a sequence of project designs to work in conjunction with each other to restore and stabilize the Housatonic River interface with Young's Field Park. Removal of a substantial portion of compacted impervious parking area and creation of a vegetated buffer will reduce the direct parking lot stormwater runoff. These measures will provide for stormwater infiltration and renovation, while promoting long term stability of the river embankment with the installation of floodplain trees and shrubs whose root systems will stabilize and hold the soils well into the future.

The shoreline stabilization portion of the project is designed to correct the embankment undercutting that has occurred in the past and continues unabated. A portion of the abuse in this area was due to a parking area being formed by patrons that extended to the rivers edge. The Town has recently reorganized the parking, implemented guide rails, and has planted the abused area with grass trees and shrubs directly adjacent to this proposed project.

In conjunction with the shoreline stabilization a narrow dock is proposed with two access points. This will provide for public access that does not require pedestrian interference with the newly vegetated embankment. Fishermen and children routinely scale the river embankment disrupting the vegetation and creating erosion pathways along the rivers edge. Accommodating this patronage is essential to the long term viability of the project.

The final phase of the project will be to implement a natural greenway path to interconnect Young's Field Park and Helen Marx Park. This will create an extension of the Greater New Milford Greenway. Although most of the path will be along sandy flood plain soils, a formal boardwalk is required because of the marsh like conditions. This path will provide for an educational opportunity for the community schools that already currently utilize the park at Young's Field Park for field trips.

The ecological benefits of this multiphase project will be an overall reduction in impervious parking area that is converted into a vegetative buffer along the Housatonic River embankment. The result will provide for additional wildlife habitat that is currently lacking along this section of the river. Increased patronage use with improved dedicated access to the river will curb the abuse to the river embankment that occurs currently. The new access and dock coupled with the river embankment stabilization project, will quell erosion along the river front providing for a long-term stable and sustainable river edge habitat.

2.1.5 Magnitude of Recreational Benefits

The proximity to a thriving recreational area and downtown lends itself to the expected success of the project in terms of recreational usage. The Town of New Milford has recently completed an extensive downtown restoration which is within walking distance to Young's Field Park. The park includes two softball fields, tennis and basketball courts, playground area, skateboard park and canoe/kayak launch. This area of town is a tremendous attraction, drawing people of all ages and from all economic and ethnic backgrounds. The Young's Field Park Riverwalk and Greenway project will complement the existing facilities, secure and stabilize the shoreline while blending into the tranquil harmony of the river area. We believe that the project will promote an increase in use of the existing recreational area because of the interconnected trail system, additional picnic area as well as the upgraded access to the water for fishing and canoeing/kayaking.

2.2 Technical Merit

2.2.1 Technical/Technological Feasibility

The project will be designed and implemented utilizing a combination of town resources and consultants. The Town's Public Works Department and the Parks and Recreation Department have worked in concert to organize and implement parking areas and restoration of abused park areas. It is in this area that their services will be required.

- a. The vision of the shoreline stabilization portion of the project is to utilize bioengineering methods to create a natural sustainable shoreline of the Housatonic River. It is with this aspect of the project that the Town will seek a professional environmental consultant with experience in shoreline restoration. The installation of the shoreline management portion of the project will also be contracted out to a qualified company. The Town knows that environmental restoration is part science and part art and that the installation is a critical component of the success of the project. The trail and boardwalk system portion of the project will be done utilizing volunteer help, town resources and some contracted services.

The Town of New Milford is proposing to use the latest bioengineering standards to create a stable, sustainable, natural habitat along the Housatonic River's edge. A combination of boulder placement, planting pockets, vegetation wattles, and plantings are envisioned in the final design of the shoreline stabilization project. Many lake edge restoration and stream side projects have been done across the country utilizing this technology with high degree of success.

- b. Defining the parking area, reducing impervious surface and installing vegetation has been successful further south of the proposed project. Reduced stormwater runoff, improved infiltration, and increased habitat diversity has already occurred by similar implementation of a smaller version on an adjacent section of the property. It is anticipated that these benefits will be repeated in this project only at a greater scale.
- c. A strong probability of success for the shoreline stabilization portion of the project is anticipated. Many projects have been designed and implemented have demonstratable environmental benefits. It is this portion of the project that is the most technically advanced and as such the Town is seeking the use of qualified design and implantation contractors to bring the project to fruition.
- d. All phases of the project will utilize standard design and construction techniques. The concepts and implementation methods offer no technical complications that would effect the project implementation schedule or completion of the project.

2.2.2 Adverse Environmental Impact

With the corrective measures to be taken at the Young's Field Park site there will be no adverse environmental impacts. During construction all best management practices for sedimentation and erosion control measures will be implemented and maintained. We anticipate that the restoration planned will only positively impact the site by increasing the buffer and re-establishing the natural ecosystem.

2.2.3 Human Health and Safety

There are no potential adverse effects on human health and safety with the implementation of this project. In fact New Milford has been struggling with the shoreline stabilization of the Housatonic along Young's Field Road for years. This project will allow for additional trees to be planted which will stop the erosion of the riverbank thus preserving the structural integrity of Young's Field Road. By securing Young's Field Road we are preserving the safety of the citizens of New Milford. There is no high-risk construction, nor potential mobilization of pollutants associated with the proposed activities.

2.2.4 Measurable Results

Once the corrective measures have been implemented we will see an immediate ecological result including the reduction of shoreline erosion, the eradication of invasive species and decrease in impervious area. Other monitoring measures will be more subjective and will need to be accomplished over a period of time.

- a. & b. The project, as designed, can be evaluated using four separate parameters. An evaluation by the New Milford Department of Public Works will evaluate the impervious surface parking area at the project beginning. Upon completion a second evaluation will be conducted in order to compare and contrast the reduction of impervious surface. Bird counts will be conducted at project initiation (year 1), construction completion (year 3) then one year post construction (year 4). By comparing and contrasting the base line study and the post construction study, bird usage can be tracked. New Milford residents participate in several bird studies each year. We would request that the local bird club consider this site as part of their yearly evaluation. Shoreline erosion can also be evaluated. An existing conditions profile (year 1) can be conducted to form a base line. A pre construction evaluation (beginning of year 2) can be recorded and compared to the base line that will show the annual erosion of the river embankment. A post construction survey (end of year 2) and a post project (end year 3) survey would be conducted to determine shoreline erosion over that period of time. These two studies can be compared. Finally, a volunteer survey will be conducted in conjunction with the Town Clerk's office when applying for a fishing license. This survey will aid in monitoring actual use of the site.
- c. In the event that the monitoring results do not meet the expectations of the project goals several options can be exercised. If the soils permeability and restorative habitat growth does not meet the desired goals, then the town can implement borings and aeration techniques to further loosen in the restoration area to promote plant growth. In the event the increase wildlife goals are not achieved, additional plantings specifically selected for desired species can be supplemented to the existing planting areas. Additionally, bird

houses or thickets can be created on the property to advance the wildlife habitat. If erosion continues in project area after completion, the erosion control methods will be re-evaluated and additional stabilizing techniques can be installed. Finally, if patrons do not complete the survey cards, then on site surveys for usage can be initiated during the fishing and boating season to track patron usage of the park, trail and river access.

- d. The proposed bird count will be included with the annual bird count conducted by the local bird clubs. Other monitoring results are site specific and to our knowledge not currently germane to any river study program. In the future patron or boater usage may be beneficial data for The Housatonic Valley Association or Department of Environmental Protection boating and fishing divisions.

2.3 Project Budget

2.3.1 Relationship of Expected Costs to Expected Benefits

Construction of the Young's Field Park Riverwalk and Greenway project will be considered a one time expense with little or no continued maintenance expense needed. From this perspective, the recreational and environmental benefits far outweigh the initial cost. This attraction of parks, trails and canoe/kayak ramps will continue to provide greater personal, social, environmental and economic benefits to the town. This Young's Field Park Riverwalk and Greenway project will complement the existing facilities, secure and stabilize the shoreline while blending into the tranquil harmony of the river area. We believe that the project will promote an increase in use of the existing recreational area because of the interconnected trail system, additional picnic area as well as the upgraded access to the water for fishing and canoeing/kayaking.

2.3.2 Implementation – Oriented

The three phase Young's Field Park Riverwalk and Greenway project is considered an implementation oriented project. The parking lot reorganization, reduction in impervious surface and habitat buffer enhancement does not require extensive design or permitting. The stream embankment restoration portion of the overall project will need to be designed by a professional with expertise in the field. Design drawings that meet the permitting requirements of the Town, DEP and ACOE as well as filing fees are incorporated into the budget for this project. The trail phase of the project only requires that the boardwalk be specifically designed. The remainder of the trail is a free flowing trail through the woods that is designed to avoid trees and be environmentally friendly. Construction of the buffer area, shoreline stability, river access dock and trail system is considered a one time expense with little or no continued maintenance requirements. From this perspective, the recreational and environmental benefits

outweigh the initial cost of the projects. This attraction of parks, trails and river access will continue to provide greater environmental, social, personal and economic benefits to the town.

2.3.3 Budget Justification and Understanding

The project team has carefully created a project budget based upon current costs. Below is the budget justification broken down by year listing first the NRD funds followed by other contributions.

Year 1

Design (\$10,000) – The project requires design drawing to town of New Milford Inland Wetlands Regulations, DEP requirements and ACOE requirements. The use of an outside consultant familiar with stream channel stabilization restoration is required for this portion of the project. It is anticipated that the initial design drawings will cost \$8,000 with an additional \$2,000 if modifications to the plan are necessary.

Permitting (\$12,000) – This funding would be used for filing fees to the DEP and ACOE as well as for consultant representing the stabilization restoration in front of these adjudicating agencies. The DEP fees are estimated at \$5,000 and the ACOE fees are estimated at \$7,000 inclusive of consultant representation.

Other contributions (\$70,000) – These contributions include surveying of the project area, creation of existing condition plans, engineering associated with the parking lot reorganization, planting plan for the habitat restoration area and municipal representation throughout the permitting process. The total cost for engineering and permitting is approximately \$20,000. These will be performed as in-kind services. We have included in our proposal matching contribution funding to cover any and all costs associated with obtaining a right to pass and re-pass over two commercial properties. Both entities have indicated in the past that they would donate this easement to the town as the land is not otherwise usable provided that the town provides a hold harmless agreement and provides adequate security updates. In the event an easement must be purchased \$50,000 of other contributions would more than cover the legal, survey and purchase costs associated with the easements.

Year 2

Contracted Services (\$35,000) - River restoration including all elements associated with the shoreline stabilization as outlined in the project narrative.

Supplies, Materials and Equipment (\$88,000) – These items are required for two separate phases.

Parking area reorganization and habitat enhancement – This phase will require the following materials and supplies:

- Guiderails \$8,000
- Topsoil \$6,000
- Gravel \$5,000
- Plantings \$4,000

River embankment restoration and access – This phase will require the following materials and supplies:

- Fascines and wattles \$8,000
- Plantings \$3,000
- Plant medium \$2,000
- Docks, catwalks and hardware \$30,000
- Guiderails \$2,000
- Dock headers (2@\$10,000) \$20,000

Other contributions (\$15,000) – The Town of New Milford will be providing the labor and machine time involved in the reorganization of the parking area and the habitat restoration area. They will also be responsible for watering the newly installed plant. These are considered as in-kind services.

Year 3

Contracted Services (\$10,000) – It is anticipated that the proposed boardwalk will be required to be properly anchored because of its presence in the 100 year floodplain. Our town engineers have indicated that the contractual services will be approximately \$10,000.

Supplies, Materials and Equipment (\$25,000) – The materials necessary are associated with the boardwalk. More specifically, pylons, support beams, decking and if required railings are included in this estimate. This figure is based upon internet search of pedestrian walkways compliant with best management practices for installation within wetland systems.

Other contributions (\$16,000) – The Town of New Milford in conjunction with scout troops and other volunteer organizations will provide the labor to implement the riverside trail. Monitoring as specified in the narrative will be conducted by the Town of New Milford. These are considered as in-kind services.

2.3.4 Leveraging of Additional Resources

The Town of New Milford is committed to finishing this project if funded through the NRD. Several town departments have pledged in kind services, from design engineering to permit application and bid specifications necessary to bring the project to fruition. The Town of New Milford anticipates volunteer assistance will be received from local civic groups to help with clearing and planting of native plants. In addition, Eagle Scout candidates will be constructing and installing necessary components of the proposed trail system. Many local gardening industries will also be solicited for donations that could include native planting or the labor necessary for removal of invasive species.

2.3.5 Comparative Cost Effectiveness

The Young's Field Park Riverwalk and Greenway project is designed to improve the natural, scenic and habitat values of the Housatonic River. The cost of no action would be the deterioration and further erosion of the Housatonic River embankment that would ultimately require a hard armor solution to protect Young's Field Road and the abutment of Veterans' Bridge. The project is the solution to revitalize and stabilize the river embankment.

2.4 Socioeconomic Merit

2.4.1 Community Involvement and Diversity

The residents of New Milford have a long history of embracing projects that enhance the town they live in. In a time of governmental belt tightening the people of New Milford have stepped up to the plate on numerous occasions to protect and create open space and recreational projects. We feel that the Young's Field Park Riverwalk and Greenway project will be no different. The area is a focal point of recreational activity and this aspect of the plan will only serve to promote a healthy, active lifestyle. The residents of downtown and surrounding areas belong to the low income population, according to the 2000 census, and will be encouraged to avail themselves of the park facilities. Various community groups, town agencies and local scouting agencies have expressed interest in being involved with the Young's Field Park Riverwalk and Greenway project. The close proximity to the newly restored downtown district will improve the economics in the Main Street area and is in compliance with our membership in the Connecticut Main Street program.

2.4.2 Adverse Socioeconomic Impacts

There are no adverse socioeconomic impacts either short or long term associated with this project.

2.4.3 Coordination and Integration

As the largest land area town in Connecticut with extensive natural features New Milford is acutely aware of the need to protect the natural beauty of the Housatonic River. Balancing the desire to preserve land with the need for recreational outlets is a high priority as demonstrated in the town's Plan of Conservation and Development (POCD). The current POCD indicates that New Milford is behind the conventional standard of 10 to 15 acres of park and recreation area per 1,000 in population. The Young's Field Park Riverwalk and Greenway project, in concert with the Sega Meadows Park proposal and the newly acquired Reservoir Park will bring New Milford closer to the recreational standards for a town of 30,000 people.

2.4.4 Public Outreach

The Town of New Milford is covered by one daily newspaper and three weekly newspapers. Periodic press releases will be issued to ensure extensive coverage on the benefits of this project. The press releases will include information pertaining to the promotion of careful responsible use, protection of natural resources associated with riverine system and the project schedule. We will be placing information about the project on the town's website, www.newmilford.org as information is available. A localized mailing updating the schedule and encouraging civic donations and volunteer efforts will be utilized. There will be a ribbon cutting ceremony to welcome residents to the park and trail system one the project in completed.

2.5 Applicant Implementation Capacity

2.5.1 Technical Capacity of Applicant and Project Team

As Mayor of the Town of New Milford, Patricia Murphy has experience and contacts within the various governmental agencies to seek advice and project support. New Milford's DPW has three Connecticut licensed professional engineers with over 30 years of project construction, implementation and management experience on state, municipal and privately owned projects. In addition to DPW the town also employs James Ferlow as our Inland Wetlands Enforcement Officer with over 20 years of design, review and implementation of environmental projects. See resumes and credentials for principals as Attachment C.

2.5.2 Administrative Capacity of Applicant and Project Team

The majority of the administration and project coordination will be maintained in the Offices of Public Works and that of the Mayor. Both offices employ staff that are very familiar with project management, implementation techniques and have excellent communication and organization skills. The DPW has a proven track record of management in completing many road and bridge projects funded by the residents and also by state and federal grant monies. The grant monies required substantial administrative work as well as follow up to receive all the monies allocated. The latest experience has been the complete restoration and rehabilitation of the Lover's Leap Bridge. Community involvement from resident experts in recreational projects and environmentalists will also be sought. Both the DPW and Mayor's office have support staff well acquainted with project management at the local, state and federal level. There is also a locally available stream channel restoration specialist and a contracting company with experience with completing similar projects. The use of these specialists will be anticipated in completion of this project.

2.5.3 Project Commitments

Although the majority of work on project implementation will come from municipal departments in the Town of New Milford, other commitments have been sought from the New Milford Garden Club and the local Boy and Girl Scout groups.

3 LAND ACQUISITION PROJECTS

This section has not been completed as there is no acquisition of land involved.

Part D – Project Budget Narrative and Forms

The project team has carefully created a project budget based upon current costs for the Young's Field Park Riverwalk and Greenway. The costs assumptions associated with the forms were derived from actual project costs recently completed by the New Milford Department of Public Works (DPW) and internet research. As this is an implementation oriented project overruns associated with design and permitting are not anticipated. With respect to the materials and supplies an inflationary factor has been applied through 2009. Overruns associated with physical construction activities will be supplemented by additional funds or the work completed by the DPW.

Below is the budget justification broken down by year listing first the NRD funds followed by other contributions.

Year 1

Design (\$10,000) – The project requires design drawing to town of New Milford Inland Wetlands Regulations, DEP requirements and ACOE requirements. The use of an outside consultant familiar with stream channel stabilization restoration is required for this portion of the project. It is anticipated that the initial design drawings will cost \$8,000 with an additional \$2,000 if modifications to the plan are necessary.

Permitting (\$12,000) – This funding would be used for filing fees to the DEP and ACOE as well as for consultant representing the stabilization restoration in front of these adjudicating agencies. The DEP fees are estimated at \$5,000 and the ACOE fees are estimated at \$7,000 inclusive of consultant representation.

Other contributions (\$70,000) – These contributions include surveying of the project area, creation of existing condition plans, engineering associated with the parking lot reorganization, planting plan for the habitat restoration area and municipal representation throughout the permitting process. The total cost for engineering and permitting is approximately \$20,000. These will be performed as in-kind services. We have included in our proposal matching contribution funding to cover any and all costs associated with obtaining a right to pass and re-pass over two commercial properties. Both entities have indicated in the past that they would donate this easement to the town as the land is not otherwise usable provided that the town provides a hold harmless agreement and provides adequate security updates. In the event an easement must be purchased \$50,000 of other contributions would more than cover the legal, survey and purchase costs associated with the easements.

Year 2

Contracted Services (\$35,000) - River restoration including all elements associated with the shoreline stabilization as outlined in the project narrative.

Supplies, Materials and Equipment (\$88,000) – These items are required for two separate phases.

Parking area reorganization and habitat enhancement – This phase will require the following materials and supplies:

- Guiderails \$8,000
- Topsoil \$6,000
- Gravel \$5,000
- Plantings \$4,000

River embankment restoration and access – This phase will require the following materials and supplies:

- Fascines and wattles \$8,000
- Plantings \$3,000
- Plant medium \$2,000
- Docks, catwalks and hardware \$30,000
- Guiderails \$2,000
- Dock headers (2@\$10,000) \$20,000

Other contributions (\$15,000) – The Town of New Milford will be providing the labor and machine time involved in the reorganization of the parking area and the habitat restoration area. They will also be responsible for watering the newly installed plant. These are considered as in-kind services.

Year 3

Contracted Services (\$10,000) – The proposed boardwalk will be required to be properly anchored because of its presence in the 100 year floodplain. Our town engineers have indicated that the contractual services will be approximately \$10,000.

Supplies, Materials and Equipment (\$25,000) – The materials necessary are associated with the boardwalk. More specifically, pylons, support beams, decking and if required railings are included in this estimate. This figure is based upon internet search of pedestrian walkways compliant with best management practices for installation within wetland systems.

Other contributions (\$16,000) – The Town of New Milford in conjunction with scout troops and other volunteer organizations will provide the labor to implement the riverside trail. Monitoring as specified in the narrative will be conducted by the Town of New Milford. These are considered as in-kind services.

TABLE 1. HOUSATONIC RIVER NRD FUNDING ALLOCATION BY FISCAL YEARS¹

PROJECT TITLE:		Young's Field Park Riverwalk and Greenway			
SPONSOR NAME:		Town of New Milford			
EXPENSE CATEGORY (See App. A)	FISCAL YEAR 1	FISCAL YEAR 2	FISCAL YEAR 3	FISCAL YEAR 4	
	Housatonic River NRD Funds	Housatonic River NRD Funds	Housatonic River NRD Funds	Housatonic River NRD Funds	
A. SALARIES					
B. OVERHEAD AND BENEFITS					
C. CONTRACTED SERVICES	\$10,000	\$35,000	\$10,000		
D. SUPPLIES, MATERIALS AND EQUIPMENT		\$88,000	\$25,000		
E. TRAVEL					
F. OTHER (LIST) Permit fees & representation	\$12,000				
G. OTHER (LIST)					
TOTAL BY FISCAL YEAR	1	2	3	4	
	\$22,000	\$123,000	\$35,000		
GRAND TOTAL (sum of boxes 1+2+3+4)					
[This sum is the total NRD fund request and should match Part A, Budget Summary, Box 1]					
				\$180,000	

¹ The fiscal year is July 1 – June 30. If the proposed project will be completed in one year, fill in only the column titled "Fiscal Year 1."
 .1

TABLE 2. PROJECT BUDGET SUMMARY BY TASK AND FUNDING SOURCE

PROJECT TITLE:		Young's Field Park Riverwalk and Greenway					
SPONSOR NAME:		Town of New Milford					
TASK ²	HOUSATONIC RIVER NRD FUNDS	OTHER CONTRIBUTIONS			TOTAL COST BY TASK		
		COMMITTED	NOT COMMITTED	5	6	7	8
A. Design & planning	\$10,000	\$20,000					\$30,000
B. Easements		\$30,000	\$20,000				\$50,000
C. Parking area restoration	\$25,000	\$15,000					\$40,000
D. Park amenities, river side Rehabilitation & docks	\$98,000						\$98,000
E. Trail, Boardwalk, stairs And fencing	\$35,000		\$10,000				\$45,000
F. Monitoring		\$4,000	\$2,000				\$6,000
G. Permitting	\$12,000						\$12,000
TOTAL BY FUNDING SOURCE	5	6	7	8	GRAND TOTAL		
	\$180,000	\$69,000	\$32,000		\$281,000		

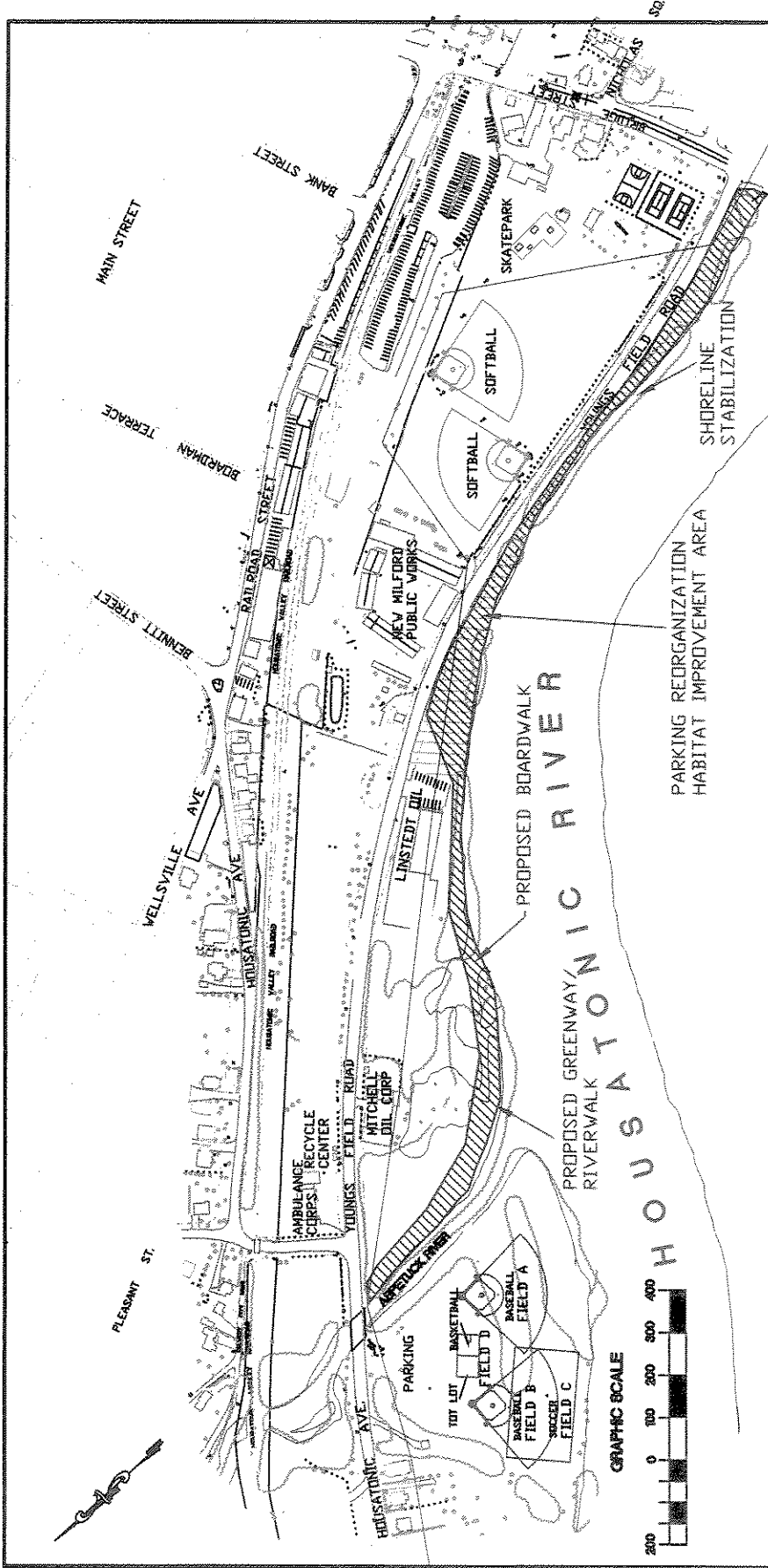
NOTES: Box 5 should be the same as the Grand Total indicated in Part D Table 1. Box 6 above should match Part A, Budget Summary, Box 2. Box 7 above should match Part A, Budget Summary, Box 3. Box 8 should match Part A, Budget Summary, Box 4

² The listed tasks should correspond with information provided in the Project Implementation Plan. .1

ATTACHMENT A

Project site map

GREENWAY RIVERWALK



Young's Field Riverwalk Greenway
 Young's Field Road
 Scale 1" = 400', Date January 11, 2007

Town of New Milford
 Public Works Department
 6 Young's Field Road
 New Milford, Connecticut
 (860) 355-6040, fax (860) 355-6055
Project: Final Version of Young's Field Riverwalk Greenway Riverwalk.dwg

ATTACHMENT B

GRANT OF EASEMENT

For valuable consideration, receipt and sufficiency of which is hereby acknowledged, _____, hereinafter referred to as "Grantor", hereby grants to _____, its successors and assigns, hereinafter referred to a "Grantee", for itself and members of the public the perpetual right to pass and re-pass, by foot, over the property described in the attached schedule A, including the right to create and maintain walking trails and paths over and through such premises for the purpose of recreational day hiking and walking.

The Grantee agrees and covenants that, except with the written prior permission of the Grantor, no building or other structure will be constructed and there shall be no excavation, filling or mechanical grading except as may be reasonably required to create and maintain such trails and paths. Grantee further agrees and covenants to maintain all trails and paths in a reasonably safe condition and keep the easement area clean and free of debris, trash and garbage.

Grantor covenants and agrees that _____ shall refrain from erecting any structure or otherwise interfering with the right herein granted.

In witness hereof, the Grantor has hereunto caused ___ hand and seal to be affixed this _____.

WITNESSED BY:

Grantor

ATTACHMENT C

Project Team Resumes

Michael F. Zarba, P.E.

49 Meadowwood Drive
New Milford, CT 06776

Cell Number: (203) 223-7042
Home Number: (860) 354-8487
Email: miloand2@yahoo.com

Professional Engineer with sixteen years of municipal and consultant engineering experience seeking a responsible management and administrative position in a large, professional, and diverse municipal Public Works Organization.

TOWN OF NEW MILFORD Director of Public Works

2006 – Present

- Responsible for the total operation and management (planning, coordination and supervision) of the Public Works Department which includes the Highway and Vehicle Maintenance Department, Engineering Department, Facilities Maintenance Department and the Transfer/Recycling Center.
- Prepare annual operating and capital budget requests, including the update of the five year capital plan. Operating budget for all departments is approximately \$5 million and Capital budget is approximately \$2 million.
- Oversee and direct all bid contracts for outside consulting/engineering services, roadway construction activities, facility maintenance services and all departmental materials and supplies. This includes management and oversight of all contracts including those with state and federal agencies.
- Administers all collective bargaining agreements for employees covered by union contracts, including collective bargaining negotiations and dispute resolution procedures.

CITY OF STAMFORD Supervisor of Highways

1996 – Present

- Responsible for maintaining 315 miles of roads- LARGEST road network in the state of CT
- Prepare and manage department with \$8 million dollar annual operating and capital budget. \$5.2 million operational budget includes road maintenance, snow removal, signs, and parking meters and over 85 full time and seasonal employees. Capital budget of \$3 million consists of twenty projects including large equipment purchases and environmental compliance activities.
- Responsible for storm water management, including permitting and implementation of NPDES for the only Phase I municipal system in the State of CT
- Prepares bid specifications and recommends awards, administrates eight annual contracts and multiple one-time contracts, including paving, sidewalks, road reconstruction, equipment rental, vehicle and highway equipment, and environmental compliance.
- Initiated citywide pavement management system to track status of given roads, plan future work, and evaluate results for maintenance and repair methods, including micro-surfacing, overlay, hot or cold in-place recycling, and reclamation.
- Improved job safety and reduced worker's compensation claims by 33% through training.
- Managed employee relations issues, including contract negotiation and grievance arbitration
- Highway Department awarded **"Distinguished Service Award" from Connecticut Association of Street and Highway Officials, 2002 and "Environmental Excellence in Salt Management" by the Salt Institute, 2004**
- Routinely sits on consultant selection committees, interviewing and selecting professional consultant and engineering firms to work for the City on bridge, building and roadway design projects

PURCELL ASSOCIATES Design Engineer

1995 – 1996

- Prepared detailed design specifications for road reconstruction projects
- Daily supervision of design process, including hydrology/hydraulic analysis, surveying analysis, Autocad mapping and plan/sheet setup, and determination of roadway design criteria
- Responsible for presenting to both clients and the general public at informational meetings and Public Hearings.
- Lead Design Engineer for the Route 82/85 Intersection and Roadway Improvements in Montville, CT. Project consisted of over three miles of roadway improvements including the upgrade of the Route 82/85 intersection to include turn lanes, accident reduction and increased intersection efficiency.
- Served as liaison Town Engineer to various town Planning and Zoning Commissions for site plan review, traffic impact analysis, drainage calculation review, and effects on public infrastructure

TOWN OF NEW MILFORD

Town Engineer

1990 - 1995

- Responsible for coordination, design, and supervision of all public works projects in largest area town in the state, including roads, bridges, storm sewers, sidewalks, parking areas, and municipal buildings. Supervised and managed a staff of three administrative, 25 Highway department, 4 Vehicle maintenance, 5 Building maintenance, and 3 Recycling center employees
- Project Manager for state funded Cross Road and Wells Road Bridge Reconstruction projects. Performed contract preparation, field inspection; coordinated with consulting engineers, contractor, and state representatives,
- Professional consultant of all the Land Use boards for site plan review and engineering consultation and non voting member of the New Milford Planning Commission
- Assisted Public Works Director in budgetary planning for capital planning
- Acting Public Works Director of highway, building maintenance, recycling/ waste transfer station, and vehicle maintenance in Director's absence

CHANCE & CAUSSEAU

Staff Engineer

1989 – 1990

- Designed site grading plans, water and sewer systems, storm water management systems & parking areas for multi-unit living complexes.
- Performed hydrologic and hydraulic studies and prepared drainage calculations for land use commission review and approval.
- Designed and prepared roadway plans, profiles and cross sections with storm water systems, water and sewer systems included
- Performed and prepared all necessary drainage, water and sewer calculations for permit approvals.

EDUCATION & TRAINING

Education

- University of Rhode Island, B S Civil Engineering
- State of Connecticut Licensed Professional Engineer (Lic. # 18408)

Training (2000-04)

- New England chapter APWA: Environmental Compliance workshop
- National Seminars Group: Attitude problems in the workplace
- University of Wisconsin
 - Managing Snow and Ice Control Operations
 - Construction Contract Interpretation
 - Implementing a Sidewalk Management System
- Lorman Education Services: ADA, FMLA and Worker's Compensation in Connecticut
- UCONN
 - Expecting inspections
 - Principles of Road Management System
 - All About Asphalt pavements
 - On the Job Safety
 - Snow & Ice Control
 - Managing, Motivating & Communicating your way to successful supervision
 - Basics of a Good Road
 - Principles of drainage for Local Roads
 - Asset management & GASB 34
- ASCE Continuing Education: Roadside Design
- Rockhurst University: the Essentials of OSHA Compliance
- Texas Engineering Extension Service: Public Works: Preparing and Responding to WMD/Terrorism Incidents

PROFESSIONAL ASSOCIATIONS

- American Society of Civil Engineers
- American Public Works Association
- Connecticut Association of Street and Highway Officials

MANAGERIAL AND ADMINISTRATION SKILLS

- Experienced manager of union, seasonal and professional employees
- Extensive employee relations and union management experience
- Strong financial planner able to execute and show operational and capital expenditures
- Skilled in standard office software and familiar with wide range of public works software options
- Excellent project and operational management skills
- Significant experience in bid preparation, selection, and implementation process
- Knowledgeable in State and Federal grant processes
- Skilled in working on multi-departmental programs and projects

Thomas J. Sprong
98 Transylvania Road
Roxbury, CT 06783
860-210-1480
tsprong@charter.net

EXPERIENCE SUMMARY:

Fifteen years of civil and environmental engineering experience, with an emphasis on the design, construction and management of municipal facilities. Extensive experience in the design and construction of water, wastewater and remedial facilities for State and municipal authorities. Preparation of numerous contract documents for public bidding and experience in all facets of procurement, ensuring that technical, financial and political risks are appropriately shared between public and private sector partners. Experience in project finance includes strategic project planning, budget forecasting and financial modeling. Routine interaction with regulatory agencies.

PROJECT MANAGEMENT AND CONSULTING EXPERIENCE:

2006 – Present, Town Engineer, Town of New Milford, Connecticut

Responsible for the operation and management of the Engineering Department within the Department of Public Works, which also includes interfacing with the Highway Department and Facilities Maintenance Department.

- Preparation of annual Engineering Department capital and operating budgets for inclusion in the five-year capital plan for the Town.
- Direct and oversee all municipal engineering and construction projects, including roadway construction and repair, stormwater drainage installation and repair, bridge inspection and replacement / restoration, and all other public infrastructure improvements
- Technical Liaison to Planning, Zoning, and Inland Wetlands and Watercourses Commissions for site plan review, hydraulic and hydrology review, drainage calculations review and overall impact analysis on public infrastructure
- Coordination and oversight of engineering staff performing design of public improvement projects, including preparation of bid documents for public bidding purposes
- Oversight and coordination of engineering staff conducting construction oversight and inspection for permitted public improvements
- Coordinate and interface with state agencies for permitting of Town facilities, including the transfer/recycling center and municipal stormwater management program

1995 – 2006, Senior Project Engineer, Malcolm Pirnie, Inc., White Plains, NY

Represented Malcolm Pirnie as part of a joint venture team of engineers responsible for design services during construction for a New York City DEP wastewater upgrade project in excess of 600 million dollars in constructed value.

- Managed personnel and coordinated contractor inquiries and requests for information in regard to the interpretation of project contract documents. Responsibilities included tracking of all information and coordination of all responses electronically through the use of project management software for integration with the project web site.
- Coordinated and managed all necessary changes to the contract documents, including interfacing with design specialty groups. This included preparation of documents to

forward to the contractor and the client for resolution and integration into the project. Generated and managed change orders resulting from necessary project design modifications and coordinated the proper documents to be presented to the client for review and approval.

- Interfaced with the Resident Engineering staff to facilitate identification and resolution of project construction problems and coordinated issues with the design specialty groups responsible for initial project design to minimize financial impact to the client and project schedule.

Represented state and municipal clients in Connecticut, New York and New Jersey on water and wastewater improvement projects in excess of 12 million dollars in total constructed value.

- Managed contract operations and personnel coordination for water and wastewater facility design, construction and procurement. Responsibilities included strategic planning, proposal preparation and evaluation, client presentation, development of contract documents, procurement, and contract negotiations.
- Designed facilities including water distribution systems, sewer systems, roads, retaining walls, embankments, landscaping and restoration of wetland habitat.
- Managed contract operations and personnel coordination for remedial investigation and mitigation strategies for contaminated groundwater and soil sites. Responsibilities included contaminant identification, evaluation of remedial alternatives, strategic planning, proposal preparation, design of remedial systems, preparation of contract documents, procurement, contract negotiations, and construction management.
- Prepared storm water pollution protection plans and facility best management practices plans for private clients.

1992 – 1995, Engineer, Leggette, Brashears and Graham, Inc., Trumbull, CT

Conducted phased site assessments and evaluations of industrial, commercial, residential, and vacant properties for State and municipal agencies and private clients. Designed and implemented soil and groundwater remedial systems, including: pump and treat; soil vapor extraction; waste excavation, characterization, and disposal; and waste encapsulation. Responsibilities included proposal preparation, coordination, planning, supervision of field investigations, and report preparation.

EDUCATION: **Bachelor of Science, Civil/Environmental Engineering, 1992.**
Northeastern University, Boston, Massachusetts.

CERTIFICATION: **Licensed Professional Engineer, State of Connecticut (Lic. #20033)**

COMPUTER SKILLS: Extensive experience using Microsoft Word, Excel, Outlook, Project, PowerPoint, and Access; Primavera Expedition, and AutoCAD 2000-2005.

PROFESSIONAL ASSOCIATIONS: American Society of Civil Engineers, Connecticut Association of Street and Highway Officials

JAMES FERLOW
69 HILLTOP VIEW ROAD
NEW MILFORD, CONNECTICUT

EDUCATION

- 1986 Allegheny College, Meadville, PA - Bachelor of Science, Biology
Comprehensive Thesis: "The Diversity of Secondary Defense Chemicals: Alkaloid Diversity in Aquatic Plants" May 2, 1986
- 1987 Rutgers University, Cook College - Continuing Professional Education
"Understanding Wetland Soils"
"Stratigraphy, Structure, Geophysics, and Geohydrology of New Jersey Plain"
- 1989 "Environmental Law and Regulation"
"Understanding Soil Conditions of Wetlands"
- 1993, 94, 95,96 State of Connecticut, Department of Environmental Protection, Commissioner's Courses
98,99,2000,01
- 1997 State of Connecticut, Department of Environmental Protection, Municipal Inland Wetlands Commissioners Comprehensive Training Program pursuant to Connecticut General Statute Section 22a-39(n). Certificate Granted.

PROFESSIONAL EXPERIENCE

1996 to present

Town of New Milford, New Milford, CT

Wetlands Enforcement Officer/ Department Head of Wetlands Agency

- Provide pre-development site assessment, site investigation for compliance with permit conditions, building plans, erosion control and best management practice.
- Research proposals, violations and complaints utilizing databases, air photos, maps, soils books and on-site datum.
- Provide interpretation of local and state regulations and policies.
- Prepare cease and correct orders, violation summaries and legal notices.
- Attend and present facts and findings for applications for permits, cease and correct hearings, public hearings, and meetings as required.
- Provide public education through lectures, conferences, and local media.
- Provide recommendations to applicants regarding alternative analysis and mitigation techniques.
- Provide recommendations for permit conditions and permit denial decisions.
- Create and defend budget recommendations and implementation of the budget.
- Hire and oversee personnel and conduct personnel performance evaluations
- Prepare documentation and provide expert court testimony for wetland litigation proceedings and presentations before the Connecticut Siting Council.
- Provide recommendations on local regulation revisions, wetlands and watercourse map amendments and comments on Connecticut legislation amendments on behalf of the Town.
- Responsible for meeting all DEP and statutory reporting requirements.

1991 to present

Environmental Consulting, Private

- Expert trial testimony and reports
- Environmental monitoring
- Wetland delineation
- Erosion control design

1992 to 1996

Town of Greenwich, Greenwich, CT
Wetlands Compliance Officer

- Provide pre-development site assessment, site investigation for compliance with permit conditions, building plans, erosion control and best management practice.
- Research proposals, violations and complaints utilizing databases, air photos, maps, soils books and on-site datum.
- Prepare cease and correct orders, violation summaries and legal notices.
- Attend and present facts and findings for cease and correct hearings, public hearings, and meetings as required.
- Provide public education through lectures, conferences, and local media.
- Provide recommendations to applicants regarding alternative analysis and mitigation techniques.

1989 to 1991

I.E.P. Inc., Danbury, CT

- Provide interpretation of local, state and federal regulations and policies.
- Complete regulatory forms required by local, state, and federal agencies
- Public presentation for Environmental Commissions and Public Hearings.
- Wetland delineation based upon the "Federal Manual for Identifying and Delineating Jurisdictional Wetlands".
- Preparation of Environmental Assessments, Environmental Impact Statements, Wetland Delineation Reports, Coastal Area Management Reports, and Biological Evaluations.
- Preparation of preliminary drawings and illustrative graphics.
- Provide alternatives analysis and recommendations of mitigation techniques.

1986 to 1989

Environmental Design Associates, PC (EDA), Wilton, CT

- Preparation of Environmental Assessments, Environmental Impact Statements, Wetland Delineation Reports, Coastal Area Management Reports, and Biological Evaluations.
- Field identification of wetland limits according to local, state, and federal laws.
- Preparation of local, state, and federal wetland permit applications.
- Preparation of preliminary drawings and illustrative graphics.
- Provide alternatives analysis and recommendations of mitigation techniques.

1985 & 1986
summers

Bartlett Arboretum, University of Connecticut, Stamford, CT

- Plant taxonomy
- Vegetation planting, care, and habitat work and techniques.

**RESEARCH and
PUBLICATIONS**

“Development Related Storm Runoff Renovation”

co-authored by Donald L. Ferlow, Proceeding of the International Wetland Symposium, Wetlands and River Corridor Management - July 5-9, 1989 Charleston, South Carolina; The Association of Wetland Managers, Inc.

“Functional Values and Ecosystem Integrity Within Five Man-made Wetland Ecosystems”

co-authored by Judith A. Slayback, Christine M. Suarez-Murias, and Donald I. Ferlow, presented at the 10th Annual Society of Wetlands Scientists National Convention, June, 1989

“Watershed Approach to Environmental Site Assessment”

co-authored by George Benson and Christine M. Suarez-Murias - New York Real Estate Journal, October 15, 1990, pg. 13.

“If You Plant It, Will It Grow”

co-authored by Donald L. Ferlow; Proceeding of “Quebec 2000 International Wetland Symposium” – August 6 – 12, 2000, Quebec Canada. Presented by Donald L Ferlow.

“The Role of Wetlands Science Within the Regulatory Venue: The Value of Wetland Science Education for Applicants, Professionals and Commissions”.

co-authored by Donald L. Ferlow; Proceeding of “Quebec 2000 International Wetland Symposium” – August 6 – 12, 2000, Quebec Canada. Presented by James B. Ferlow.

PROFESSIONAL AFFILIATIONS

- | | |
|-----------------|---|
| 1988 to present | Society of Wetland Scientists - presenter at the 10th Annual National Conference, Orlando, Florida, June 1, 2, and 3, 1989 and presenter at “Quebec 2000 International Wetland Symposium; August 6 –12, 2000 Quebec Canada. |
| 1989 to present | Soil and Water Conservation Society |
| 1996 to present | Connecticut Association of Inland Wetland and Conservation Commissions – Executive board member since 1996, Officer since 2001. |