General Services Administration
Federal Supply Service
Authorized Federal Supply Schedule Price List

On line access to contract ordering information, terms and conditions, up to date pricing, and the option to create an electronic delivery order are available through GSA Advantage!, a menu driven database system. The INTERNET address GSA Advantage! is: *http://www.GSAAdvantage.gov*

Environmental Services
FSC Group 899

899-1 / 899-1RC
899-3 / 899-3RC
899-7 / 899-7RC

Contract Number: GS-10F-0373X

For more information on ordering from Federal Supply Schedules, click on the FSS Schedules button at *http:// www.fss.gsa.gov*

Contract Period: July 13, 2011 – July 12, 2016

Milone & MacBroom, Inc
99 Realty Drive
Cheshire, Connecticut 06410
Telephone: (203) 271-1773
Fax: (203) 272-9733
www.miloneandmacbroom.com

Business Size/Status: Large

GSA Contract Holder

Table of Contents

Customer Information

1a. Awarded Special Item Numbers (SINs)
SIN 899-1 (RC) – Environmental Consulting Services
SIN 899-3 (RC) – Environmental Training Services
SIN 899-7 (RC) – Geographic Information Systems (GIS) Services

1b. Lowest Priced Model Number
Not applicable

1c. Proposed Hourly Rates
See table of hourly rates and job title descriptions

2. Maximum Order
$1,000,000.

3. Minimum Order
$100

4. Geographic Coverage
Eastern USA. Other areas within continental USA to be negotiated with ordering agency on each task/delivery order.

5. Point of Production
Cheshire, Connecticut

6. Discount from list prices or statement of net price
All prices herein are net

7. Quantity Discounts
Contractor will offer volume discounts on large dollar orders.
2% discount orders $20,000 - $100,000
5% discount orders $100,000 - $1 Million

8. Prompt Payment Terms
1% net 10 days

9a. Notification whether Government purchase cards are accepted or not accepted at or below the micro-purchase threshold
Accepted

9b. Notification whether Government purchase cards are accepted or not accepted above the micro-purchase threshold
Accepted

10. Foreign Items
None

11a. Time of Delivery
To be negotiated with ordering agency on each task/delivery order.

Customer Information (Continued)

11b. Expedited Delivery
Contact Contract Administrator

11c. Overnight and 2-day delivery
Contact Contract Administrator

11d. Urgent Requirements
Contact Contract Administrator

12. FOB point(s)
To be negotiated with ordering agency on each task/delivery order.

13a. Ordering Address
Milone & MacBroom, Inc.
Attn: Scott G. Bristol
99 Realty Drive
Cheshire, Connecticut 06410
Phone – (203) 271-1773
Fax – (203) 272-9733
EMAIL: ScottGB@MiloneandMacbroom.com

13b. Ordering Procedures
Ordering procedures for supplies and services under Blanket Purchase Agreements (BPA's) are found in FAR 8.405-3.

14. Payment Address
Milone & MacBroom, Inc.
Attn: Accounts Receivable
99 Realty Drive
Cheshire, Connecticut 06410
Phone – (203) 271-1773
Fax – (203) 272-9733

15. Warranty Provision
Not Applicable

16. Export packing charges, if applicable
Not applicable

17. Terms and Conditions of Government purchase card acceptance
Contact Contractor's representative identified in Item #13a above.

18. Terms and Conditions of rental, maintenance, and repair (if applicable)
Not Applicable

19. Terms and Conditions of Installation (if applicable)
Not Applicable

Customer Information (Continued)

20. Terms and conditions of repair parts indicating date of parts price lists and any discounts from list prices (if applicable)
Not Applicable

20a. Terms and conditions for any other services (if applicable)
Not Applicable

21. List of service and distribution points (if applicable)
Not Applicable

22. List of participating dealers (if applicable)
Not Applicable

23. Preventive maintenance (if applicable)
Not Applicable

24a. Special attributes such as environmental attributes (e.g. recycled content, energy efficiency, and/or reduced pollutants)
Not Applicable

25. Data Universal Numbering System (DUNS) number
174825307

26. Notification regarding registration in Central Contractor Registration (CCR) database.
Milone & MacBroom, Inc. is registered in the Central Contractor Registration (CCR) database and SAM (System for Award Management)

Milone & MacBroom, Inc. Summary

Milone & MacBroom, Inc. is a full service environmental and engineering firm that prides itself on producing cost effective solutions for a variety of environmental issues. Founded in 1984, the firm enjoys an excellent reputation for its technical innovation and award-winning designs. The depth and capabilities of our highly experienced staff allow the firm to undertake a full range of projects and to meet complex requirements and challenging project schedules. Over the last 26 years, the firm has grown to more than 130 employees in offices located along the east coast from South Carolina to Maine. The headquarters is located in Connecticut.

The team of professionals at Milone & MacBroom, Inc. is committed to building strong partnerships with our clients to deliver creative solutions that are technically sound, cost effective, and environmentally sensitive. We strive to integrate the disciplines of environmental science and engineering in an exceptional work environment that is founded upon respect among ourselves, our clients, and our professional colleagues. Milone & MacBroom, Inc. is proud of the diversity of our client bases in both the public and private economic sectors. Our professional relationships are built and maintained by involving senior personnel in all aspects of a project from program development to design and implementation.

Milone & MacBroom, Inc. is recognized throughout the country for our leadership and innovation in the fields of environmental science and water resource engineering. Through the leadership of James MacBroom, the firm has offered expertise in all things water and environmental since our founding in 1984. Most of these projects are administered by the Water Resources and Environmental Science functional group. As consultants to federal, state, and local government, our environmental scientists and engineers combine the principles of engineering, biology, hydrology, and earth sciences to develop award-winning plans, studies, and project designs. This expertise is likewise shared through the teachings of Mr. MacBroom and others and is provided in a number of offered training courses.

As we move forward in the 21st century, Milone & MacBroom, Inc. is prepared to assist our clients in meeting the challenges of the future. We will continue to employ advanced technologies and our interdisciplinary approach to project management to achieve project excellence while maintaining environmental quality.

Every employee at Milone & MacBroom, Inc. is committed to the core principles and values that define our company. We value the strong personal relationships and exceptional work environment that we have created and recognize that the sum of our collective parts will always be greater than our individual strengths and contributions. We are a team of talented, committed, energetic people who are motivated by challenge, diversity, and team success.

Milone & MacBroom, Inc. has defined nine service areas within the firm. Environmental Science stands apart as one of our nine service areas, aligned mainly with the Water Resources and Environmental Science functional group described above. However, elements of environmental science are incorporated into our other engineering service areas and these services, in turn, support our environmental consulting services. Milone & MacBroom, Inc. is currently registered on CCR and SAM for NAICS 541620, Environmental Consulting Services, applicable to SINs 899-1/899-1RC, 899-3/899-3RC, and 899-7/899-7RC.

Milone & MacBroom, Inc. Office Locations

Milone & MacBroom, Inc. maintains 8 offices located in 6 states as follows:

Headquarters
99 Realty Drive
Cheshire, Connecticut 06410
T (203) 271-1773 / F (203) 272-9733

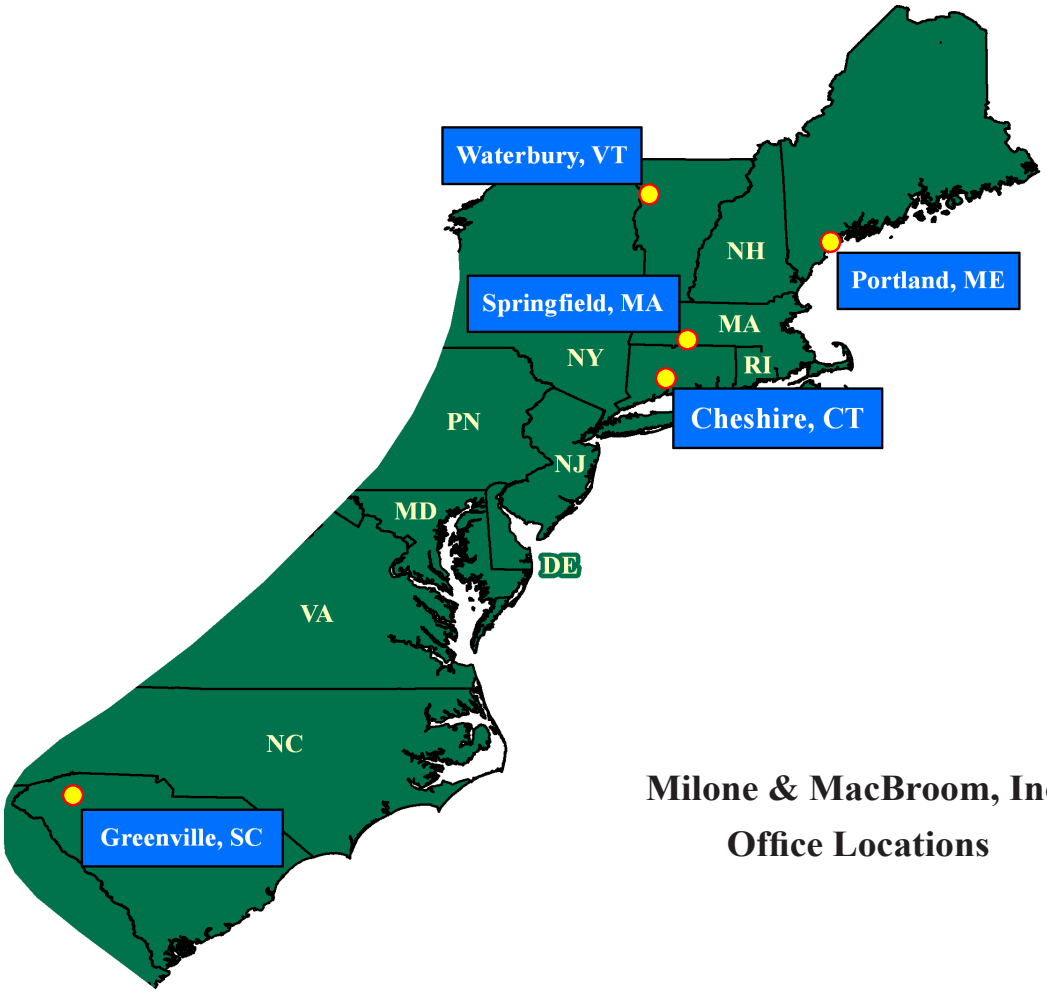
Regional Offices

100 Commercial Street, Suite 417
Portland, Maine 04101

One Financial Plaza
1350 Main Street, Suite 1012
Springfield, Massachusetts 01103

307-B Falls Street
Greenville, South Carolina 29601

One South Main Street, 2nd Floor
Waterbury, Vermont 05676



Milone & MacBroom, Inc.
Office Locations

SERVICES OFFERED

Milone & MacBroom, Inc. offers general Environmental Consulting Services under SIN 899-1 / 899-1RC. These include but are not limited to:

- NEPA Environmental Assessments and Environmental Impact Statements
- Wetland Evaluations
- Watershed Management Plans and Watershed Needs Assessments
- Drinking Water Source Protection Plans
- Natural Resource Inventories and Management Plans
- Flood Mitigation Plans
- Coastal Area Management Plans
- Pre-Disaster Natural Hazard Mitigation Plans
- Water System Vulnerability Assessments and Emergency Response Plans
- Water Supply Plans and Water Conservation Plans
- Environmental and Land Use Regulation Development
- Environmental Compliance Audits
- Environmental Permitting
- Environmental Monitoring, including Wetlands
- Wetland Restoration
- Streambank Stabilization and Natural Stream Channel Design
- Fluvial Geomorphic Assessments
- Fish Passage and Dam Removal Feasibility and Design
- Bridge Scour Analysis
- Dredging and Sediment Removal Feasibility Studies and Design
- Stormwater Management Plans
- Spill Prevention/Control and Countermeasure Plans
- Pollution Prevention Surveys
- Data Collection, Feasibility, and Risk Analysis
- RCRA/CERCLA and other Site Investigations
- Hazard Exposure Assessments
- Preparation, Characterization, Field Investigation, Conservation, and Closure of Sites
- Long-Term Monitoring/Long-Term Operation (LTM/LTO)
- Containment, Monitoring, and/or Reduction of Hazardous Waste Sites
- UST/AST Removal and Soil Vapor Extraction

SERVICES OFFERED (Continued)

Milone & MacBroom, Inc. offers general Environmental Training Services under SIN 899-3 / 899-3RC. Available courses include:

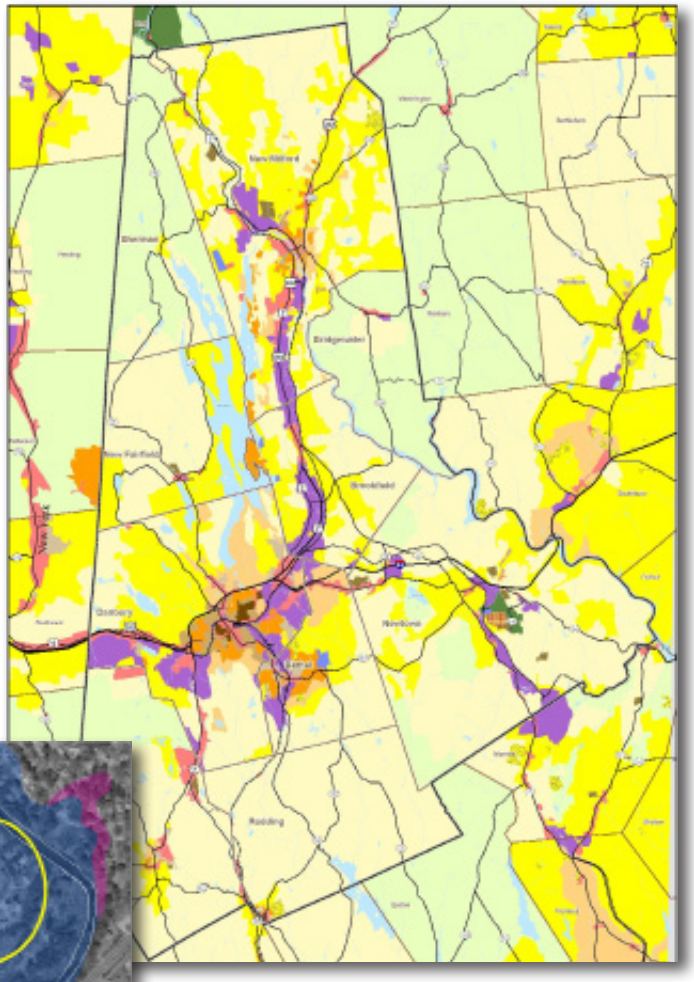
- Stormwater Management
- Streambank Stabilization and Natural Stream Channel Design
- Fish Passage and Dam Removal
- Identifying Scour at Bridges
- Scour Countermeasure Design
- Water Supply Safe Yield Analysis
- Water System Emergency Response and Water Conservation
- Pre-Disaster Natural Hazard Mitigation

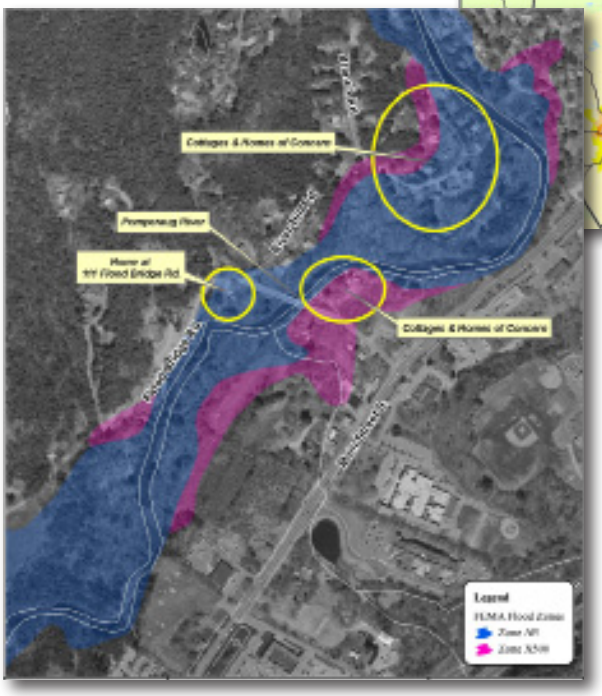
Full descriptions of the available courses are included on Pages 11 - 21.

SERVICES OFFERED (Continued)

Milone & MacBroom, Inc. offers Geographic Information Systems (GIS) Services under SIN 899-7 / 899-7RC. These services include but are not limited to:

- Mapping and Cartography
- Scanning and Data Conversion
- Natural Resource Planning
- Growth Forecast Modeling
- Site Selection
- Natural Hazard Planning
- Data Interpretation
- Utility Mapping
- GPS Field Services





TRAINING COURSE DESCRIPTIONS (SIN 899-3 / 899-3RC)

IDENTIFYING SCOUR AT BRIDGES

Course Description: Attendees will receive comprehensive training in the recognition and prevention of scour-related failure of bridges. Key topics will include morphology, sediment transport, scour mechanisms, and evaluation. Materials for the course will be based on the FHWA's documents "Evaluating Scour at Bridges" (HEC-18) and "Stream Stability at Highway Structures" (HEC-20) and will be supplemented by outside reference materials from current research and literature on the topic.

The course provides background on geomorphologic processes and the effect of fixed structures on these processes. Channel classification methods and their applicability to scour design will be discussed (i.e., identifying entrenchment, aggradation, degradation, etc.). Various types of scour will be defined and discussed as will the importance of selecting appropriate hydrologic data as a design basis.

One, two or three-day courses can be provided with the depth of study varying with the duration of the program.

Objectives: Upon completion of the course, participants will be able to:

- Classify channels using a variety of geomorphologic tools;
- Understand the influence of sediment transport and bed load on scour;
- Develop appropriate criteria for successful scour evaluation; and
- Identify appropriate design criteria for scour critical structures

Target Audience: Federal, State, and local highway hydraulic, structural, and geotechnical engineers and bridge inspectors responsible for maintaining the integrity of highway bridges against possible hydraulic related problems. Consultants that engage in bridge engineering work are encouraged to attend.

SCOUR COUNTERMEASURE DESIGN

Course Description: Attendees will receive comprehensive training in the design of scour countermeasures. Basic topics such as geomorphology, sediment transport and scour types will be reviewed, but the one day course will focus heavily on calculating scour and design of countermeasures in accordance with the FHWA's "Bridge Scour and Stream Instability Countermeasures" (HEC-23).

The course will provide the technical background necessary to develop the necessary input data to the scour analysis and countermeasure design. Lectures will be supplemented with sample problems to be worked through in a hands-on learning environment to estimate maximum scour depths and design countermeasures. Course work will cover both classical calculation methods as well as HEC-RAS applications for scour analysis. Floodplain management and wetland impact issues related to placement of countermeasures will also be discussed.

Objectives: Upon completion of the course, participants will be able to:

- Identify appropriate design criteria for development of a competent scour analysis;
- Perform scour analysis and interpret results in a meaningful way; and
- Design scour countermeasures while giving consideration to floodplain management and environmental impacts.

Target Audience: Federal, State, and local highway hydraulic, structural, and geotechnical engineers responsible for designing or reviewing scour countermeasures. Consultants who engage in bridge engineering work are encouraged to attend. Students should complete the Identifying Scour at Bridges course prior to this course.

FISH PASSAGE AND DAM REMOVAL

Course Description: This two-day course will provide attendees with an understanding of the engineering principles associated with dam removal and design of fish passage. Topics covered will include geomorphologic processes of natural river systems, the influence of dams on those processes, sediment transport mechanisms, and management of contaminated sediment. Course material is based on a variety of sources including the firm's extensive experience.

The course will address the issues generally required to be evaluated in restoring fish passage and considering dam removal. Alternative fish passage mechanisms such as fish ladders, roughened ramps, and bypass channels will be discussed. The impact of dam removal on river processes and prediction of post removal river alignments and bed grades will be discussed.

Objectives: Upon completion of the course, participants will be able to:

- Understand the basic principles of geomorphic classification;
- Evaluate sediment volumes, transport rates and management options;
- Understand the advantages and limitations of fish passage options; and
- Understand the principles of predicting post dam removal channel behavior.

Target Audience: Engineers, planners, and biologists responsible for design and review of fish passage are encouraged to attend.

Existing Conditions

Upstream Photo-simulation

STREAMBANK STABILIZATION AND NATURAL CHANNEL DESIGN

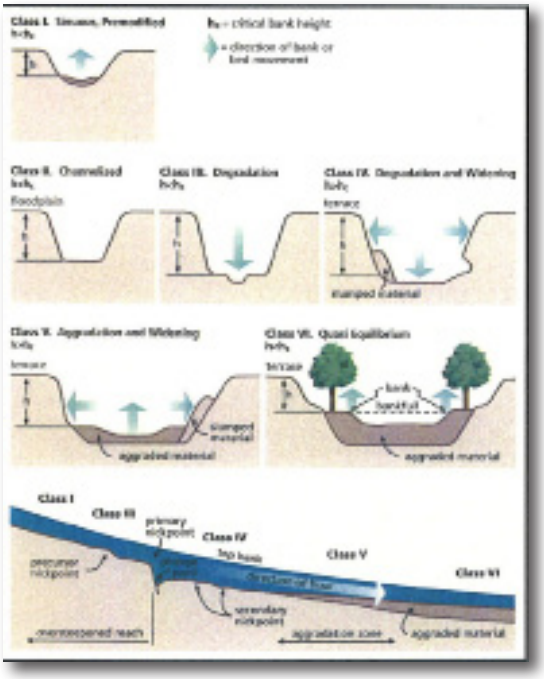
Course Description: This one-day course covers a variety of streambank stabilization and channel design techniques. Students learn the basics of river classification and identification of natural stream features. The course material is proprietary based on work completed by Milone & MacBroom, Inc. over the firm's 26 year history.

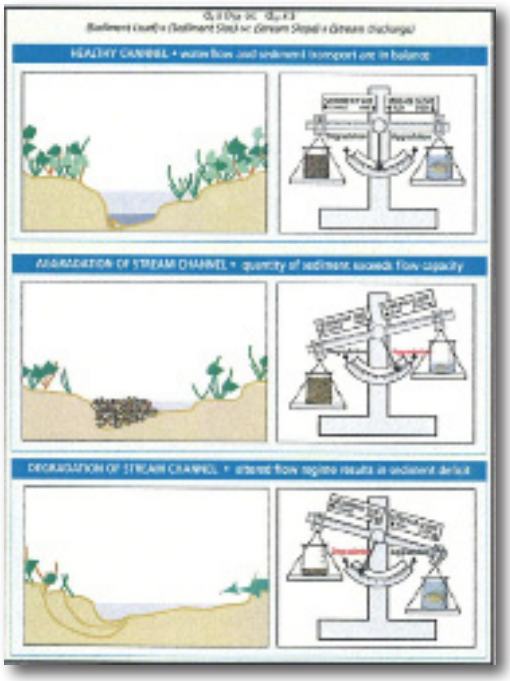
Topics include design of effective bank stabilization that can withstand flooding; this requires an understanding of river dynamics and processes which will be introduced. The requirements for design of healthy channels capable of supporting low flows while remaining stable at high flows will be presented. Other topics include selection of appropriate design flow rates and balancing quantitative analysis and design with qualitative design methods. Design of channel features and stabilization methods will be discussed.

Objectives: Upon completion of the course, participants will be able to:

- Characterize channels using geomorphic principles;
- Evaluate design requirements for a stable channel; and
- Select appropriate stabilization methods based on channel and flow characteristics.

Target Audience: Engineers, planners, and biologists responsible for designing, ensuring or monitoring channel stabilization and maintenance.





FLOODPLAIN MANAGEMENT THROUGH RESTORATION

Course Description: This one-day course reviews floodplain management approaches and provides current thinking and examples of using natural stream and floodplain restoration to reduce flood risks. An emphasis will be placed on re-connecting channels and floodplains and restoring natural processes that limit flood and erosions risks and provide areas for sediment deposition and nutrient uptake.

The course will cover floodplain restoration projects where collaborations allowed for parties with different interests to join together to perform a mutually beneficial project.

Objectives: Upon completion of the course, participants will be able to:

- Understand the important functions floodplains play in maintaining a healthy ecosystem and reducing flood and erosion risks;
- Evaluate the channel-floodplain connection; and
- Provide design ideas to re-connect floodplains.

Target Audience: This course is planned for engineers, regulators, floodplain managers, members of non-profit organizations, and planners responsible for managing streams and floodplains.

STORMWATER MANAGEMENT

Course Description: Attendees will receive detailed knowledge of stormwater management processes including design of wet bottom basins, created wetlands, and infiltration basins. Course materials are compiled from various references on stormwater management.

The course is intended to provide the technical background necessary to design treatment systems for the renovation of stormwater in urbanized areas. This includes understanding appropriate hydrology and computational methods and calculations of pollutant removal efficiencies for various treatment systems.

Objectives: Upon completion of the course, participants will be able to:

- Understand the influence of development patterns on stormwater; and
- Design stormwater treatment systems and processes.

Target Audience: Federal, State, and local engineers responsible for the design and review of stormwater systems.

DRINKING WATER SOURCE PROTECTION

Course Description: This course will provide attendees with an understanding of the various methods of watershed management that are available for drinking water source protection. Topics will include:

- Federal regulations and guidelines;
- Existing planning processes such as the EPA's watershed management guidelines and the European Union's Drinking Water Safety Plans;
- Utilization and modification of local land use regulations;
- Working with stakeholders;
- Development of conceptual watershed models;
- Review of existing Source Water Assessment Program reports;
- Stormwater management practices;
- Low impact development;
- Stormwater utilities;
- Memorandums of understanding;
- Watershed recreation programs;
- Watershed security;
- Land acquisition and open space management;
- Water quality monitoring programs; and
- Spill response and waste management.

Course material is based on a variety of Federal, State, European Union, and American Water Works Association sources as well as the firm's extensive experience.

The course will address the most common elements to be included in source protection plans and review how to develop and implement a plan.

Objectives: Upon completion of the course, participants will be able to:

- Understand the relationships between existing guidelines, programs, and resources that are available;
- Identify appropriate means of protecting drinking water supplies; and
- Work with a community to develop a source protection plan.

Target Audience: Regulators, scientists, engineers, planners, and others interested in or responsible for drinking water source protection.

RESERVOIR SAFE YIELD ANALYSIS

Course Description: This course will provide attendees with an understanding of the process for determining the safe yield of a surface water supply. The course emphasizes drinking water supplies, but other uses of impoundments are discussed. Topics include:

- A review of reservoirs, dams, intakes, and usable vs. unusable storage;
- Dam leakage;
- Evaporation and precipitation;
- Development of appropriate streamflow records;
- Assigning reasonable demand factors;
- Determining the critical drought period;
- Accounting for diversions and instream flow releases;
- Methods of analysis, including simple mass balance analysis and HEC-5 modeling; and
- Analysis of impoundments for other uses.

Course material is based on a variety of guidelines and the firm's experience relative to evaluating safe yield.

Objectives: Upon completion of the course, participants will be able to determine the safe yield of a reservoir or impoundment.

Target Audience: Regulators, scientists, engineers, and planners that must determine safe yield or review analyses performed by others.

STREAM BIOLOGY

Course Description: This two-day course will provide attendees with an introduction to the biology of flowing waters. Topics covered will include aquatic food webs, descriptions of aquatic plants and animal groups common in rivers, biomonitoring, and habitat assessment. Course material is based on past lectures, research projects, protocol development, and project work.

The course will present an overview of the living component of the stream aquatic ecosystem and how to use living organisms as a source of information to understand environmental quality and support project design. One day will be spent in the classroom and one day will be spent in the field.

Objectives: Upon completion of the course, participants will be able to:

- Understand the basic principles of stream biology;
- Assist with biomonitoring data collection;
- Make interpretations of biomonitoring data; and
- Perform a habitat assessment.

Target Audience: Typical attendees include non-profit organizations, watershed groups, planners, engineers, government regulators, students, and future stream-team volunteers.

Sample #:	1		Date:	9/2/2009
Stream:	Dibbles Brook			
Location:	SG-5 to P-4			
Sampled by:	RKS			

# of organisms identified: 365

MAYFLIES (*Ephemeroptera*)

Number found	Families	Feeding group	Tolerance value	HBI value
4	Baetidae	C.gatherer	4	16
	Caeniidae	C.gatherer	7	0
	Ephemerellidae	C.gatherer	1	0
	Ephemeridae	C.gatherer	4	0
	Heptageniidae	Scraper	4	0
	Leptophlebiidae	C.gatherer	2	0
	Oligoneuriidae	C.filterer	2	0
	Potomanthidae	C.gatherer	4	0
	Siphlonuridae	C.gatherer	7	0
	Tricorythidae	C.gatherer	4	0
4		TOTALS		16

CHANNEL AND FLOODPLAIN MORPHOLOGY

Course Description: This two-day course covers the fundamentals of the physical form and process of rivers and floodplains. Students learn the basics of river classification and identification of natural stream features. The course material is a combination of past scientific research, discipline publications, and proprietary information based on work completed by Milone & MacBroom, Inc. over the firm's 26 year history. The genesis of the course material is literature reviews, white papers, research papers, peer-reviewed papers, book chapters, books, courses, and professional presentations.

This course is an overview of geomorphic variables and classification systems used to understand channels and floodplains. Topics include stressor analysis and departures from expected reference conditions to assess problems. An emphasis will be placed on mimicking the natural form and processes of river systems to facilitate design.

Objectives: Upon completion of the course, participants will be able to:

- Characterize channels and floodplains using geomorphic principles;
- Evaluate stressors and stable design requirements for the active river area including channels and floodplains; and
- Create designs that rehabilitate natural channel/floodplains form and function.

Target Audience: This course is planned for engineers, regulators, members of non-profit organizations, planners, and biologists responsible for problem identification, project design, evaluation monitoring, and funding.

HYDROLOGIC MODELING

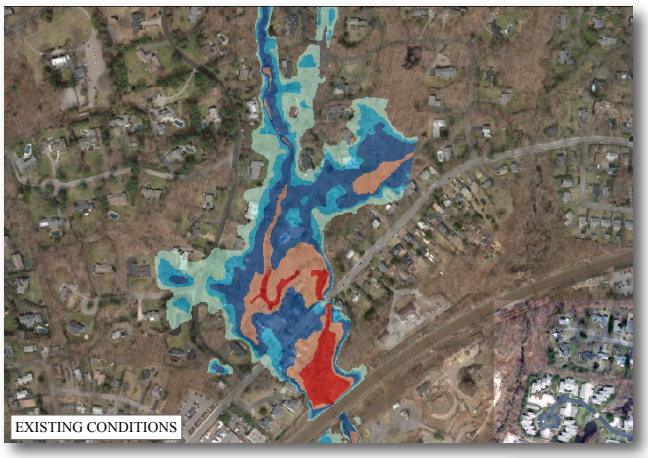
Course Description: Attendees will be given an introduction to popular public-domain hydrology and hydraulic models used today for project design. Models include TR-20, HEC-HMS, HEC-RAS, and FishXing. Skills such as watershed delineation and land use analysis will be taught that are required for modeling.

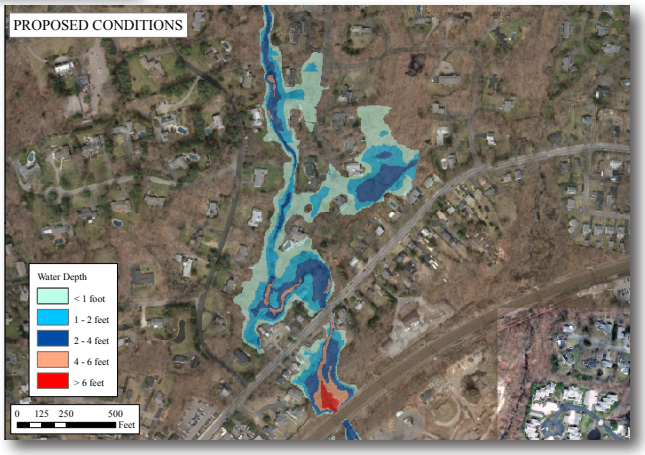
Project case studies will be used to provide modeling examples. Small modeling tasks will be performed by course attendees throughout the lectures. The introductory course is planned to be two days long, while a more advanced modeling course can be offered that covers more design examples and topics for experienced modelers such as sediment transport analysis, stable channel design, and dam break analysis using HEC-RAS.

Objectives: Upon completion of the course, participants will be able to:

- Understand the fundamentals of basic models used for project design;
- Initially interpret modeling data; and
- Perform basic or advanced modeling tasks.

Target Audience: Federal, State, and local regulators, engineers, non-profit organizations, students, and watershed groups.





PRICE LISTS

Hourly Labor Rates for SINs 899-1, 899-3, 899-7

Labor Category	Hourly Pricing Structure July 2013 - 2014
Principal	$201.50
Department Manager	$166.24
Senior Licensed Professional	$166.24
Licensed Professional	$141.05
Senior Engineer	$125.94
Senior Environmental Scientist	$125.94
Senior Environmental Planner	$125.94
Engineer	$110.83
Environmental Scientist	$110.83
Environmental Planner	$110.83
Senior Draftsperson	$ 90.68
Draftsperson	$ 85.64
Clerical	$ 55.41

PRICE LISTS

Environmental Training Courses 899-3

Course Title	Course Length	Minimum Participants	Maximum Participants	Materials Provided	Pricing Structure
Identifying Scour at Bridges	1 Day	5	30	Printed	$ 4,230.00
Scour Countermeasure Design	1 Day	5	30	Printed	$ 4,230.00
Fish Passage and Dam Removal	2 Days	5	30	Printed	$ 8,463.00
Streambank Stabilization and Natural Stream Channel Design	3 Days	5	30	Printed	$12,695.00
Floodplain Management Through Stream Restoration	1 Day	5	30	Printed	$ 4,230.00
Stormwater Management	1 Day	5	30	Printed	$ 3,173.00
Drinking Water Source Protection	1 Day	5	30	Printed	$ 4,230.00
Reservoir Safe Yield Analysis	1 Day	5	30	Printed	$ 3,173.00
Stream Biology	1 Day	5	30	Printed & Electronic	$ 3,173.00
Channel and Floodplain Geomorphology	2 Days	5	30	Printed & Electronic	$ 7,405.00
Hydrologic Modeling	3 Days	5	30	Printed & Electronic	$12,695.00

LABOR CATEGORIES AND DESCRIPTION

Administrative Assistant

Education/Experience: High School Diploma. Two to three years of experience.

Description of Qualifications: Proficiency in Microsoft Word, Excel, PowerPoint, and graphic applications. Telephone techniques and etiquette. Ability to type 50 to 60 wpm accurately. Educated in proper English usage, grammar, spelling, and punctuation. Prepare, proofread, and format memorandums, letters, complex reports, contract documents, and other official records. Coordinate conference calls, meetings, and events. Maintain and organize file systems. Greet visitors.

Draftsman

Education/Experience: Associate's degree or completion of technical trade school in CAD, drafting, or related field. Zero to two years of related experience with background in drafting and design. Equivalent to level P1.

Description of Qualifications: Basic knowledge of engineering standards, technology, and trends. Knowledge of accepted design techniques and principles for planning, preparation, and execution of design work. Knowledge of CAD and manual drafting principles, practices, methods, and techniques. Ability to operate a computer using standard drafting software packages that include AutoCAD, Softdesk, Land Development Desktop, Microstation, Photoshop, 3-D Vis, Microsoft Word, Microsoft Excel, and PowerPoint. Prepare design work, drafting, printing, and checking of construction drawings and maps with input from senior personnel and other project team members. Modify drawings in accordance with engineer markups and specifications. Check final drawings. Maintain complete, readily accessible files and records of reports.

Senior Draftsman

Education/Experience: Associate's degree or completion of technical trade school in CAD, drafting, or related field. Three years of related experience in design with a background in drafting and design. Equivalent to level P2.

Description of Qualifications: Knowledge of drafting standards, technology, and trends. Knows accepted design techniques and principles for planning, preparation, and execution of design work. Knowledge of CAD and manual drafting principles, practices, methods, and techniques. Ability to provide direction and oversight to lower level personnel. Ability to operate a computer using standard drafting software packages that include AutoCAD, Softdesk, Land Development Desktop, Microstation, Photoshop, 3-D Vis, Microsoft Word, Microsoft Excel, and PowerPoint. Ability to read and interpret construction drawings and maps. Prepare design work, drafting, printing, and checking of construction drawings and maps. Plot new maps. Modify drawings in accordance with engineer markups and specifications. Check final drawings. Conduct routine plotter and printer maintenance. Maintain complete, readily accessible files and records of reports. Review and check the work of other draftsmen to ensure accuracy and correctness. Set up and maintain CAD standards.

LABOR CATEGORIES AND DESCRIPTION

Environmental Scientist

Education/Experience: Bachelor's degree in environmental science, earth science, or related field. Zero to four years of related experience. Equivalent to level P1 or P2.

Description of Qualifications: Must have basic knowledge of trade standards, technology, and trends. Knowledge of environmental and/or earth sciences and a broad range of scientific principles. Research, analyze, and summarize scientific data both manually and with computer programs. Knowledge of principles and practices of geographic information systems (GIS) and other software applications. Assist in collecting data and conduct studies, analyses, and technical evaluations to support the planning and design of environmental and water resources-related projects. Conduct site investigations and field monitoring to ensure compliance with local, state, and federal environmental regulations. Assist in the preparation of reports, plans, specifications, supporting documents, and permit applications for project planning. Ensure quality control requirements and procedures are identified and followed. Compile and integrate data for the preparation of maps using GIS.

Environmental Planner

Education/Experience: Bachelor's degree in planning or related field. Zero to four years of related experience. Equivalent to level P1 or P2.

Description of Qualifications: Must have basic knowledge of trade standards, technology, and trends. Knowledge of environmental issues and planning principles. Research, analyze, and summarize planning data both manually and with computer programs. Knowledge of principles and practices of geographic information systems (GIS) and other software applications. Assist in collecting data and conduct studies, analyses, and technical evaluations to support the planning and design of environmental and water resources-related projects. Conduct site investigations and field monitoring to ensure compliance with local, state, and federal environmental regulations with direction and input from senior personnel and other team members. Assist in the preparation of reports, plans, specifications, supporting documents, and permit applications for project planning. Ensure quality control requirements and procedures are identified and followed. Compile and integrate data for the preparation of maps using GIS.

LABOR CATEGORIES AND DESCRIPTION

Engineer

Education/Experience: Bachelor of Science degree in civil/environmental engineering or related field. Registration as an Engineer in Training (EIT) with a State Examining Board of Professional Engineers. Zero to three years of related experience. Equivalent to level P1 or P2.

Description of Qualifications: Basic knowledge of engineering standards, technology, and trends. Knowledge of accepted design techniques and principles for planning, preparation, and execution of design work. Knowledge of materials, methods, and the tools to complete engineering/construction projects. Knowledge of AutoCAD and/or other software applications. Assist in the preparation of calculations for storm drainage, wastewater and water systems; earthwork quantities and cost estimates; and other supporting documentation for public and private projects. Test soils and materials to determine the adequacy and strength of foundations, concrete, asphalt, or steel. Compute load and grade requirements, water flow rates, and material stress factors. Utilize a variety of computer programs including AutoCAD software to undertake designs and computations. Assist in the preparation of improvement plans, specifications, supporting documents, and permit applications with direction and input form senior personnel and other team members. Inspect project sites to monitor progress and ensure conformance to design specifications and safety standards. Assist in performing construction administration services for assigned projects that include tracking and reviewing submittals, responding to Requests for Information from contractors and subcontractors, preparing field reports, and maintaining logs and files.

Senior Environmental Scientist

Education/Experience: Master's degree in environmental science, earth science, or related field. Five to seven years of related experience. Equivalent to level P3.

Description of Qualifications: Strong knowledge of trade standards, technology, and trends. Knowledge of environmental and/or earth sciences and a broad range of scientific principles. Research, analyze, and summarize scientific data both manually and with computer programs. Knowledge of principles and practices of geographic information systems (GIS) and other software applications. Ability to provide direction and oversight to lower level personnel. Manage and execute a wide range of planning and environmental projects from inception to completion. Prepare recommendations based on research and technical evaluations to support the planning and design of water supply, stormwater, flood control, erosion and sediment control, and environmental projects. Conduct site investigations and field monitoring to ensure compliance with local, state, and federal environmental regulations. Prepare reports, proposals, plans, specifications, supporting documents, and permit applications for project planning. Ensure quality control requirements and procedures are identified and followed. Meet with clients, regulators, and interest groups concerning projects and environmental matters.

LABOR CATEGORIES AND DESCRIPTION

Senior Environmental Planner

Education/Experience: Master's degree in planning or related field. Five to seven years of related experience. Equivalent to level P3.

Description of Qualifications: Strong knowledge of trade standards, technology, and trends. Knowledge of environmental issues and planning principles. Research, analyze, and summarize planning data both manually and with computer programs. Knowledge of principles and practices of geographic information systems (GIS) and other software applications. Ability to provide direction and oversight to lower level personnel. Manage and execute a wide range of planning and environmental projects from inception to completion. Prepare recommendations based on research and technical evaluations to support the planning and design of water supply, stormwater, flood control, erosion and sediment control, and environmental projects. Conduct site investigations and field monitoring to ensure compliance with local, state, and federal environmental regulations. Prepare reports, proposals, plans, specifications, supporting documents, and permit applications for project planning. Ensure quality control requirements and procedures are identified and followed. Meet with clients, regulators, and interest groups concerning projects and environmental matters.

Senior Engineer

Education/Experience: Bachelor of Science degree in civil/environmental engineering or related field. Registration as an Engineer in Training (EIT) with a State Examining Board of Professional Engineers. Five to seven years of related experience. Equivalent to level P3.

Description of Qualifications: Strong knowledge of engineering standards, technology, and trends. Knowledge of accepted design techniques and principles for planning, preparation, and execution of design work. Knowledge of materials, methods, and the tools to complete engineering/construction projects. Knowledge of project management standards and AutoCAD and/or other software applications. Ability to provide direction and oversight to lower level personnel. Perform calculations for storm drainage, wastewater, and water systems; earthwork quantities and cost estimates; and other supporting documentation for public and private projects. Test soils and materials to determine the adequacy and strength of foundations, concrete, asphalt, or steel. Compute load and grade requirements, water flow rates, and material stress factors. Prepare improvement plans, specifications, supporting documents, and permit applications. Inspect project sites to monitor progress and ensure conformance to design specifications and safety standards. Perform construction administration services for assigned projects that include tracking and reviewing submittals, responding to Requests for Information from contractors and subcontractors, preparing field reports, and maintaining logs and files.

LABOR CATEGORIES AND DESCRIPTION

Licensed Professional / Specialist

Education/Experience: Bachelor of Science degree in science, engineering, landscape architecture, planning, or related field. Licensure as Professional Engineer, Landscape Architect, AICP, CFM, Soil Scientist, or other professional certification in specific field of expertise. Three to six years of professional experience. Equivalent to level P3.

Description of Qualifications: Generally accepted as having expertise in trade standards, technology, and trends. Knowledge of accepted design techniques and principles for planning, preparation, and execution of complex projects. Knowledge of materials, methods, and the tools to complete engineering/construction projects. Knowledge of project management standards and advanced software applications. Prepare reports, improvement plans, specifications, supporting documents, and permit applications. Inspect project sites to monitor progress and ensure conformance to design specifications and safety standards. Perform construction administration services for assigned projects that include tracking and reviewing submittals, responding to Requests for Information from contractors and subcontractors, preparing field reports, and maintaining logs and files. Test soils and materials to determine the adequacy and strength of foundations, concrete, asphalt, or steel. Compute load and grade requirements, water flow rates, and material stress factors. Meet with general public and/or developers, landowners, and interest groups concerning zoning; subdivision projects; building projects; and engineering regulations, standards, or policies.

Senior Licensed Professional / Specialist

Education/Experience: Bachelor of Science degree in science, engineering, landscape architecture, planning, or related field. Licensure as Professional Engineer, Landscape Architect, AICP, CFM, Soil Scientist, or other professional certification in specific field of expertise. Seven or more years of related experience with a strong focus on project management. Equivalent to level P3 or P4.

Description of Qualifications: Knowledge of trade standards, technology, and trends. Knowledge of accepted design techniques and principles for planning, preparation, and execution of complex projects. Knowledge of materials, methods, and the tools to complete engineering/construction projects. Knowledge of project management standards and advanced software applications. Create and execute project work plans for all phases of the engineering work and revise as appropriate to meet changing needs and requirements. Responsible for ensuring all work is carried out in a safe manner and in accordance with company safety rules and applicable regulatory, industry, and other pertinent standards. This includes but is not limited to coordinating and participating in regular safety meetings and training, work site inspections, using required personal protective equipment, and responding to unsafe work hazards. Ensure that a Site Safety Plan is prepared and implemented for all work sites. Manage day-to-day operational aspects of multiple small- to midsize-scale projects. Distribute assignments to a team of engineers and technicians while monitoring progress and quality of service provided to clients. Review deliverables prepared by the team before passing on to client. Develop and maintain a schedule and budget for the assigned engineering project. Control expenditures within limitation of project budget. Attend and participate in client meetings. Meet with general public and/or developers, landowners, governmental agencies, and interest groups concerning zoning; subdivision projects; building projects; and engineering regulations, standards, or policies.

LABOR CATEGORIES AND DESCRIPTION

Department Manager

Education/Experience: Bachelor of Science degree in science, engineering, landscape architecture, planning, or related field. Licensure as Professional Engineer, Landscape Architect, AICP, CFM, Soil Scientist, or other professional certification in specific field of expertise. Ten to 15 years of project management experience that includes time management, budget control, client relations, and personnel management. Equivalent to level P4.

Description of Qualifications: Advanced competency levels in one or more disciplines including hydrology, hydraulics, stormwater management, stream restoration, and natural resources or environmental engineering. Computer proficiency using standard software packages that include Microsoft Word, Microsoft Excel, and PowerPoint. Advanced knowledge of mathematical concepts, hydraulics, hydrology, statistics, engineering principles, land surveying. Essential responsibilities include project management, contract administration, business development, and safety. Advanced knowledge of client/end user needs; engineering principles and techniques; government/agency/industry regulations, codes, and standards; industry standards, technology, and trends; internal procedures and external regulations that govern safety; layout and visual/graphic design techniques; company design standards; project standards; safety guidelines; reporting techniques; contract administration; pricing model and billing procedures; and familiarity with local and regional current events, politics, project funding sources, and regulatory programs or agencies. Carry out supervisory responsibilities that include participation in performance reviews; hiring, promotion, development, discipline, and termination decisions; and other appropriate human resources functions affecting assigned personnel.

Principal

Education/Experience: Bachelor of Science degree in science, engineering, landscape architecture, planning, or related field. Licensure as Professional Engineer, Landscape Architect, AICP, CFM, Soil Scientist, or other professional certification in specific field of expertise. At least 20 years of project management experience that includes time management, budget control, client relations, and personnel management. Equivalent to level P4.

Description of Qualifications: Advanced competency levels in one or more disciplines including hydrology, hydraulics, stormwater management, stream restoration, and natural resources or environmental engineering. Computer proficiency using standard software packages that include Microsoft Word, Microsoft Excel, and PowerPoint. Advanced knowledge of mathematical concepts, hydraulics, hydrology, statistics, engineering principles, land surveying. Essential responsibilities include project management, contract administration, business development, and safety. Advanced knowledge of client/end user needs; engineering principles and techniques; government/agency/industry regulations, codes, and standards; industry standards, technology, and trends; internal procedures and external regulations that govern safety; layout and visual/graphic design techniques; company design standards; project standards; safety guidelines; reporting techniques; contract administration; pricing model and billing procedures; and local and regional current events, politics, project funding sources, and regulatory programs or agencies. Carry out supervisory responsibilities that include participation in performance reviews; hiring, promotion, development, discipline, and termination decisions; and other appropriate human resources functions affecting assigned personnel.