Shevenell~Gallen
and Associates, Inc. Environmental Consultants

A Wholly Owned Subsidiary of
Ransom Environmental Consultants, Inc.

195 Commerce Way, Suite D
Portsmouth, NH 03801
Tel (603) 436-1490
Fax (603) 436-6037

Received
3-6-03

UNIVERSITY OF NEW HAMPSHIRE

NPDES PHASE II MS4
STORM WATER MANAGEMENT PLAN
AND
GENERAL PERMIT APPLICATION
NOTICE OF INTENT

CERTIFICATION:

Signature:
Engineer: Edward J. Schmidt, P.E. PhD
License No. 4698 N.H.
Date: 2003

PREPARED FOR:

Mr. Bradford Manning
Director, Environmental Health and Safety
University of New Hampshire
Durham, New Hampshire 03824

PREPARED BY:

SHEVENELL~GALLEN and Associates, Inc.
195 Commerce Way
Suite D
Portsmouth, NH 03801

TABLE OF CONTENTS

TABLES

FIGURES

1.0 INTRODUCTION

1.1 Purpose

This document is intended to fulfill the Notice of Intent (NOI) requirements of the US EPA Phase II Municipal Separate Storm Sewer System (Small MS4) General Permit Application, as specified in 40 CFR 122, Final Rule promulgated December 8, 1999.

1.2 Objectives

The objectives of this NOI for coverage under the Phase II National Pollutant Discharge Elimination System (NPDES) permitting process are to:

- Reduce the discharge of storm water-carried pollutants from the contiguous UNH-Durham Campus to the Maximum Extent Practicable (MEP) through the implementation of Best Management Practices (BMPs) and the achievement of measurable goals to satisfy six Minimum Control Measures (MCMs);
- Protect water quality; and
- Satisfy the appropriate water quality requirements of the Clean Water Act.

1.3 NOI Information Summary

1.3.1 Person Responsible

Mr. Bradford Manning
Director, Environmental Health and Safety
University of New Hampshire
Perpetuity Hall, 11 Leavitt Lane
Durham, New Hampshire 03824
(603) 862-2571

1.3.2 Municipality and State

Town of Durham, Strafford County, New Hampshire

1.3.3 Legal Status of the Operator

Public Entity (University)

1.3.4 Receiving Waters

College Brook
Reservoir Brook (*aka* Pettee Brook)
Oyster River

1.3.5 Listed Species and Critical Habitat

Addendum A to the federal storm water Multi-Sector General Permit (MSGP, Section 1.2.3.6) requires that one or more of five criteria related to endangered or threatened species be met for eligibility under the permit.

Based on the most recent Endangered and Threatened Species County-Species List provided by the US EPA, the only listed species for Strafford County is the Small Whorled Begonia (*isotria medeoloides*). The presence or absence of this species on the UNH facility has not been documented, and no critical habitats were listed for Strafford County. The permittee meets the following Addendum A Criteria for eligibility:

- Criteria A: No listed endangered or threatened species or critical habitat are in proximity to the MS4 outfalls.
- Criteria D: Best judgment indicates that there is no reason to believe that the storm water discharges, allowable non-storm water discharges, or discharge related activities would jeopardize the continued existence of any species or result in the adverse modification or destruction of critical habitat.
- Criteria E: Because the storm system outfalls are located within the Town of Durham, the storm water discharges, allowable non-storm water discharges, and discharge related activities of the UNH system are being addressed in that operator's certification of MS4 eligibility.

Based on information provided by NOAA National Marine Fisheries Service, the storm water discharges, allowable non-storm water discharges, and discharge related activities of the UNH system will not adversely affect designated Essential Fish Habitats.

1.3.6 Protection of Historic Properties

Addendum B to the federal storm water Multi-Sector General Permit (MSGP, Section 1.2.3.7) requires that one of two criteria related to historic properties be met for eligibility under the permit.

Based on information provided by National Register of Historic Places, the storm water discharges, allowable non-storm water discharges, and discharge related activities of the UNH system would not adversely affect properties listed or eligible to be listed on the Register.

2.0 SITE DESCRIPTION

2.1 General

The Site consists of the University of New Hampshire (UNH), located in Durham, New Hampshire (*Figure 1*, Site Location). The primary campus is comprised of 300+ buildings located on 1,100+ acres of predominantly developed land, including impermeable ground surface represented by paved parking lots, roads, and sidewalks (*Figure 2*, Site Plan). Satellite areas of the campus not serviced by the storm water system are not included in the SWMP.

The Site is accessed from the east via Main Street through downtown Durham, and from the west via Old Route 4 (Main Street extension), and shares the use and responsibility of six public roads (Main Street, Mill Road, Madbury Road, Garrison Avenue, Strafford Avenue, and Edgewood Road) with the municipality. Sanitary waste-water is collected and treated by the Town of Durham WWTF; there are reportedly no combined storm water and municipal sanitary sewer system outfalls (CSOs) at the Site.

2.2 Climate

The Site is located in the northern temperate zone in northeastern North America, and experiences full seasonal variations in precipitation and temperature. Based on long-term National Weather Service (NWS) data collected for Durham, New Hampshire, regional annual averages are as follows:

- precipitation 43+ inches;
- snowfall 63+ inches; and
- temperature 47 degrees F (range of 0F to 100F).

2.3 Topography and Drainage

The topography of the Site is generally level and at or near to road grade, with rolling terrain evident in the undeveloped portions, and approximately 20+ feet of topographic relief and a maximum elevation of 80+ feet MSL. The Site lies within the Oyster River Basin, which discharges to the east into Great Bay and thence the Atlantic Ocean (*Figure 1*).

The Site is serviced by a comprehensive storm drain system comprised of 500+ catchbasins and associated piping, discharging to two surface water bodies (College Brook and Reservoir/Pettee Brook), which in turn discharge to the Oyster River. NOTE: the discharge points of the Site system are all reportedly located in the Town of Durham, and are being managed under that municipality's SWMP in cooperation with UNH. These outfalls are being mapped as part of the UNH SWMP, and will be included in the comprehensive Site Plan being generated under BMP 07 of this NOI (*Section 4.3*).

2.4 Receiving Water Quality

Based on the New Hampshire Department of Environmental Services (NHDES) draft 2002 list of threatened or impaired waters that require a total maximum daily load (TMDL) analysis (*aka* the Section 303[d] List), the tidal reaches of the Oyster River are a low priority for preparation of a TMDL plan. Neither the non-tidal reaches of the Oyster River nor the two streams receiving outfall discharges (College Brook and Reservoir/Pettee Brook) are listed.

Based on the Section 303(d) list, several sections of the receiving waters are not fully supporting their designated uses. Specifically, the Oyster River Reservoir and the Old Reservoir (headwaters of Reservoir/Pettee Brook) are not fully supporting primary contact recreation due to the presence of high levels of E. Coli, and the Old Reservoir is not fully supporting aquatic life due to pH levels. Additionally, the main stem of the Oyster River, College Brook, and Reservoir/Pettee Brook are also not fully supporting primary contact recreation due to the presence of high levels of E. Coli.

In a 1983 report of the Durham Urban Runoff Program, intensive monitoring in Pettee Brook and the Oyster River indicated that detected levels of turbidity, coliform bacteria, and metals were associated with storm water runoff. Although these parameters were found to affect potential beneficial uses of these fresh water streams, the report concluded that "...existing uses of Durham's fresh water resources are not obviously impaired as a result of storm water runoff in the area" (*Section 1.3.5*).

3.0 POTENTIAL NON-POINT CONTAMINANT SOURCES

A summary of potential non-point source (NPS) contaminants identified for the Site is attached (*Table 1*). Most are related to maintenance and use of roads, paved areas, and/or landscaping.

3.1 Site Activities

On-Site activities with the potential to impact the storm water system include:

- General maintenance of buildings, grounds, and roads.
- Seasonal application of sand, salt and de-icer to roads, parking lots and sidewalks.
- Seasonal application of pesticides, herbicides, and fertilizers to landscaped areas.
- Small construction projects.

Other activities occurring at the Site include drainage of chlorinated swimming pool water and neutralized laboratory acid wastes; these discharges directly enter the sanitary sewer system under permit, and are not associated with the storm water system.

Current activities associated with the management of the storm water system include:

- Cleaning and repair of catchbasins on a regular schedule (*Section 4.6.1*).
- Ongoing installation of oil-water separators in selected basins on an as-needed basis.
- Mapping of all storm system catchbasins and outfalls, as part of the comprehensive UNH Site Plan being generated under BMP 07.
- Sweeping and plowing of sidewalks, parking lots, and selected streets.

3.2 Historic Spills/Leaks

The following spills/leaks that had the potential to impact the storm system have been recorded for the Site:

- December 2000: 30+ gallons of No.6 fuel oil was released from a supply valve associated with an above-ground storage tank (AST) inside the Heating Plant building, in proximity to a floor drain. Approximately 5 gallons of product entered the floor drain; a connection to the storm sewer system was identified, and subsequently eliminated with the knowledge and approval of the NH DES.

- May 2002: 17+ gallons of diesel fuel was released to the ground surface from a fuel dispenser at an adjacent NH DOT Transportation Services Garage. No fuel reportedly entered the UNH storm water system.

These releases were reported to the NH DES, and no further remedial actions were required at the time. The locations of these releases will be located on the comprehensive Site Plan being generated under BMP 07 of the NOI (*Table 2*).

3.3 Roads and Parking Areas

Roads and parking areas are considered the primary NPS on-Site, specifically as potential sources of sand, salt, and oil/grease runoff to the storm water catchbasin system. These areas are maintained (swept and plowed) regularly. Snow plow leavings are not transported off-Site, but are left at the boundaries of the plowed areas and allowed to melt. UNH staff are responsible for maintaining the local campus access roads, sidewalks, and parking lots. Maintenance of the six municipal roads intersecting the Site (Main Street, Mill Road, Madbury Road, Garrison Avenue, Strafford Avenue, and Edgewood Road) is the responsibility of the Town of Durham.

3.4 Outdoor Material Storage Areas

Road sand and salt are stored seasonally in bulk at the Facilities Building yard; these piles are kept covered to minimize runoff when not loading or unloading materials. One 1,000-gallon aboveground storage tank (AST) containing "Ice-B-Gone" (a non-hazardous de-icing compound composed of sugar-cane and magnesium chloride, MgCl) is also located in the Facility Building yard. These features will be located on the comprehensive Site Plan being generated under BMP 07 of the NOI (*Table 2*).

Except for interior and exterior fuel oil ASTs (all having secondary containment in compliance with the UNH Spill Prevention Control and Countermeasure [SPCC] Plan), no petroleum or industrial chemicals are stored in bulk on-Site. Vehicles are neither fueled on-Site, nor maintained outside of the Facility Services buildings. However, UNH and state vehicles are regularly fueled at exterior dispensers on the adjacent NH DOT Facility; this facility operates under a separate NPDES Phase I plan, and is responsible for the maintenance of catchbasins discharging to the UNH storm water system.

4.0 MINIMUM CONTROL MEASURES

A summary of the proposed Best Management Practices, measurable goals, schedules for implementation, and associated information is attached for reference (*Table 2*).

4.1 Public Education and Outreach

UNH is in a unique situation in that it operates its storm water system for an essentially "closed" population of known size and distribution, specifically its faculty, staff and students on the Durham Campus. Therefore, permit issues associated with business and industrial operations are absent.

4.1.1 Best Management Practices

- BMP 01: Production and Distribution of Informational Publications. Printed informational packets will be obtained from regulatory and other sources and/or produced by UNH, and distributed campus-wide by mailings to the campus community, and via visual displays in public areas.

- BMP 02: Production and Distribution of Informational Video. In association with the NH DES and the Seacoast Stormwater Coalition (a non-profit organization), UNH has produced a 30-minute informational video entitled "Storm Water Runoff – There is No 'Away'". This video is currently in post-production, and will be distributed: to requesting municipalities and organizations for public outreach purposes; throughout UNH for classrooms and workshops; and for public viewing.

- BMP 03: Development of a Storm Water Program Link on the UNH Website. UNH will develop an informational web page concerning the impact to surface water bodies of non-point pollutant sources to stormwater discharges, with appropriate regulatory and technical links, for addition to its existing website.

4.1.2 Measurable Goals, Implementation Schedule and Milestones

The printed materials, video, and web page will be obtained, completed, and/or distributed within the first year of the permit term. The public response to the materials will be documented by comment forms, provided both in print and via email.

4.1.3 Responsible Person

Bradford Manning
Director, Environmental Health and Safety

4.2 Public Participation/Involvement

UNH's faculty, staff and students regularly participate in a variety of volunteer activities, simplifying the mechanism of public participation in the implementation of the SWMP.

4.2.1 Best Management Practices

- BMP 04: Public Notification Meeting. UNH will conduct an open presentation to introduce the campus community to the requirements and implementation of their Phase II MS4 SWMP, and provide a forum for questions. Representatives of UNH, the municipal and state governments, and other concerned parties will be invited to provide information. UNH will provide a summary the FAQs and answers from this campus community forum, to be posted on the UNH website.

- BMP 05: Establishment of a Volunteer Committee. UNH will convene a Volunteer Storm Water Committee, comprised of UNH faculty, staff and students for the purpose of developing and promoting coordinated participation events. Events will include speakers, educational field trips, community waste collections, volunteer water quality monitoring, web site maintenance, and community awareness exercises. The committee will coordinate with existing regional watershed and environmental organizations to maximize notification and response volumes.

- BMP 06: Stenciling of Catchbasins. Secondary school students have already been involved in local stenciling activities through the UNH Sea Grant Program. UNH will expand this program to include participation by the collegiate student body or other interested parties in stenciling the on-Site storm water catchbasins, as identified and mapped for the Site Plan developed under BMP 07 (*Table 2*).

4.2.2 Measurable Goals, Implementation Schedule and Milestones

The public meeting will be conducted within 180 days of the permit filing. The volunteer committee will be convened subsequent to the public meeting, meet at least quarterly, and promote at least one event per UNH semester. Stenciling events will begin during the Fall Semester 2003, will be conducted at least twice annually (dependent on weather conditions) until completed prior to the end of the first permit term (five years), and will be repeated as necessary to maintain visibility as part of Good Housekeeping BMPs (*Section 4.6*).

4.2.3 Responsible Person(s)

Bradford Manning
Director, UNH Environmental Health and Safety

4.3 Illicit Discharge Detection and Elimination

Based on information provided by UNH Facilities Services, the existing documented utility and floor drains within the university buildings, particularly those associated with maintenance areas and laboratories, discharge to the sanitary sewer system. Therefore, while the potential discharge of small volumes of chemicals associated with maintenance and laboratory uses have been excluded from the proposed SWMP, they are incorporated in the illicit discharge detection and elimination (IDDE) plan for future assessment and/or elimination. In addition, because responsibility for the storm water outfalls are shared with the Town of Durham, UNH will be coordinating its IDDE efforts with the municipality under their SWMP.

4.3.1 Best Management Practices

- BMP 07: Development of a Storm Sewer System Map. This BMP is already in preparation. UNH is developing a comprehensive GIS-based Site Plan, including the GPS-derived coordinates and specifications of the catchbasins, control structures, and outfalls associated with the storm system. NOTE: Outfall information is being collected in cooperation with the Town of Durham SWMP, as outlined above. The ArcGIS base map will include a data layer compatible with facility maintenance planning, as outlined in the Good Housekeeping BMPs.

- BMP 08: Development of Policy Prohibiting Illicit Discharges. UNH will develop an in-house policy specifically prohibiting non-allowable, non-stormwater discharges to the storm system, including provisions for the reporting, investigation, and enforcement of same. An email link will be established on the UNH web site to allow direct reporting of an illicit discharge to UNH authorities.

- BMP 09: Development and Implementation of IDDE Plan. This plan will include provisions for:

    - Identification of areas of likely illicit outfalls based on available documentation and field truthing, and prioritization of same.
    - Location of illicit discharge outfalls by dry-weather visual screening, video inspection, smoke/dye testing, and other means.
    - Determination of the illicit discharge source(s), and whether the discharge is a significant contributor of pollutants.
    - Documentation of the assessment, elimination, and impact of the illicit discharge on the storm system.

- BMP 10: Provide Informational Materials to Employees and the Public. In association with the Public Education and Outreach BMPs outlined above, information regarding the hazards of illegal discharges and improper waste disposal will be provided to the UNH campus community.

- BMP 11: Assessment of Non-Stormwater Discharges (NSWDs). The presence of allowable (as listed by US EPA) NSWDs to the on-Site storm system will be identified,

assessed for potential contaminant contribution, and if necessary addressed under the IDDE plan.

4.3.2 Measurable Goals, Implementation Schedule and Milestones

The comprehensive Site Plan will be completed within one year of the permit filing. The IDDE Plan will be completed within one year of the permit filing; the implementation of the IDDE Plan will commence within two years, and be completed in stages by the term of the permit (five years). The informational BMP will be completed in accordance with the Public Outreach schedule outlined in BMP 01 above. The NSWD assessment will be implemented in coordination with the IDDE Plan schedule; IDDE field work will be conducted as practical based on seasonal conditions. Numbers of completed IDDE inspections and eliminations will be included in the annual reports.

4.3.3 Responsible Person(s)

Duncan Pollock
Deputy Director, UNH Facilities Services

4.4 Construction Site Runoff Control

Site control issues associated with new construction are currently the responsibility of the subcontractor managing the individual project. These measures are reviewed by UNH Facility Services staff for compliance with appropriate state and federal regulations, including storm water discharges due to surface erosion and sediment runoff.

4.4.1 Best Management Practices

- BMP 12: Development of a Construction Site Erosion and Sediment Runoff Control (ESC) Policy. This policy is already in preparation, and will include the following:
  - Pre-construction plan reviews, including an assessment of potential water quality impacts.
  - Requirements for construction contractors to implement control measures and BMPs appropriate to the site conditions, and in compliance with state and federal permitting requirements.
  - Procedures to ensure that construction contractors have received and acknowledged the requirements of the UNH policy, and enforcement options to ensure compliance with that policy.
  - Requirements for proper handling of solid wastes, construction debris, washings, industrial chemicals, and sanitary wastes at the construction site.
- BMP 13: Public Notification and Comment. Public notification and comment periods will be conducted via the UNH stormwater website link, depending on the construction schedule for individual projects as determined by UNH, allowing at least 30 days for notification and comment prior to approval of a contractor's site runoff control plan. In

addition, public comments and inquiries made during the construction process will be documented by email, and referred to the appropriate Facility Design and Construction staff for follow-up, if necessary.

- BMP 14: On-Site Inspection and Enforcement. UNH Facility Design and Construction staff will conduct regular inspections of individual construction projects to ensure compliance with the runoff control policy. Failure to comply will result in enforcement actions as specified in the policy, and the rate of compliance will be documented for annual SWMP reporting. Priorities will be established for the ongoing inspection schedule based on the type of construction activity, topography and soil characteristics, and potential for water quality impact.

4.4.2 Measurable Goals, Implementation Schedule and Milestones

The construction site runoff control policy will be completed and implemented within one year of the permit filing. Site inspections will be performed at least weekly for the duration of the construction period.

4.4.3 Responsible Person(s)

Paul Chamberlin
Director, UNH Facilities Design and Construction

4.5 Post-Construction Runoff Control

UNH will develop, implement and enforce a program to address storm water runoff from new development and re-development projects that disturb greater than one acre (or less than one acre if part of a larger common plan of development) and discharge into the storm water system.

4.5.1 Best Management Practices

- BMP 15: Development of a Post-Construction Runoff Control Policy. This policy is already in preparation, and will include the following:
    - Pre-construction assessment of potential water quality impacts from the planned site, and compliance with appropriate local and state development guidelines, comprehensive development plans, and standard site control requirements (non-structural BMPs).
    - Pre-construction assessment of the effectiveness of the runoff control measures proposed as part of the development project, including storage, infiltration, and vegetative practices (structural BMPs).
    - Inspections and enforcement during construction to ensure compliance with the approved BMP designs.
    - Provisions for the regular maintenance and review of the runoff control measures, and potential upgrade and/or replacement of same as measures are improved or new technologies become available.

4.5.2 Measurable Goals, Implementation Schedule and Milestones

The post-construction runoff control policy will be completed and implemented within one year of the permit filing. A schedule of at least annual maintenance and review will be implemented within two years.

4.5.3 Responsible Person(s)

Paul Chamberlin
Director, UNH Facilities Design and Construction

Duncan Pollock
Deputy Director, UNH Facilities Services

4.6 Pollution Prevention/Good Housekeeping

UNH currently performs regular maintenance of its storm water catchbasin system, and coordinates the clearing and maintenance of roadways and parking areas with the Town of Durham, as described in *Section 2.0* above.

4.6.1 Best Management Practices

- BMP 16: Development of a Comprehensive Operations and Maintenance Plan. This plan to prevent and reduce pollutant runoff during regular Site operations is already in preparation, and will include the following:
    - Maintenance tasks and schedule for catchbasins and paved surfaces, including regular cleaning and sweeping and additional weather-specific actions, to reduce floatables and other contaminants entering the storm water system.
    - Incorporation of maintenance and planning schedules into a data layer of the comprehensive Site Plan (BMP 07), and an assessment of available management software tools for potential incorporation.
    - Installation specifications and schedule for oil-water separators in selected catchbasins, to reduce oil/grease runoff entering the system from roadways and parking areas.
    - Regular inspection schedule for all structural storm water controls, and upgrading of applied BMPs such as re-stenciling of catchbasins as needed for visibility.
    - Reduction of sand/salt storage and spreading through the use of newer, more efficient equipment, and coordinating seasonal plowing/sanding schedules with the municipality, dependent on seasonal variations and extremes.
    - To the extent possible, the assessment and reduction of pesticide/herbicide/fertilizer use for landscaping purposes.

- BMP 17: Development of a Comprehensive Materials Management Policy. An integrated policy regarding the storage, use, and disposal of potential pollutants will be developed, and will include the following separate UNH policies already in place:

  - Hazardous materials storage, use and disposal.
  - Reduction, reuse and recycling of solid wastes.
  - Handling and disposal of catchbasin spoils and road sweepings.
  - Integrated contingency/SPCC plan.
  - Ongoing assessment and implementation of alternative methods and products.
  - Maintenance of the comprehensive chemical inventory record keeping system.

- BMP 18: Employee Training Program. UNH Facilities staff will be trained in accepted pollution prevention practices (PPP), and the best management practices (BMPs) being implemented on-Site as part of the SWMP.

- BMP 19: Campus Community Outreach Program. In conjunction with the Public Education and Outreach BMPs, members of the UNH community will be encouraged to reduce and/or eliminate disposal of solid wastes that may contribute to non-point source pollution.

- BMP 20: Campus Community Participation Program. UNH faculty, staff and students already participate in many surface water monitoring activities in and around the campus. In conjunction with implementation of the Volunteer Storm Water Committee (*Section 4.2*) formed under the Public Participation / Involvement BMP, these activities will be reviewed and available data collected on storm water related water quality, and an annual report will be prepared for distribution to interested parties in the campus community.

4.6.2 Measurable Goals, Implementation Schedule and Milestones

The operations and maintenance plan, materials management and recycling policy, employee training, and community outreach and participation programs will be completed and implemented within two years of the permit filing. Documentation of schedule compliance, reduction in materials use, and estimated reduction in the pollutant discharge will be collected for annual reporting.

4.6.3 Responsible Person(s)

Duncan Pollock
Deputy Director, UNH Facilities Services

5.0 REPORTING AND RECORDKEEPING

Reports will be submitted annually during the term of the Permit (typically 5 years), and contain the following information:

- Compliance status with permit conditions, including an assessment of the appropriateness of the BMPs selected, and progress toward achieving the specified measurable goals.
- Results of any monitoring data or other information collected as part of the BMP process.
- Summary of the activities planned for the next reporting cycle.
- Changes made to or proposed for the specified BMPs and/or associated measurable goals.
- Notice of reliance on another governmental entity to satisfy a portion of the Permit obligations (if any).

Requests for modification of the permit will be submitted in writing, signed, and will include the following information:

- Analysis of why any unsuccessful BMP is ineffective or unfeasible, including cost-prohibitive.
- Expectations of the effectiveness of the recommended BMP.
- Analysis of why the replacement BMP is expected to achieve the measurable goals.

Records will be maintained for at least 3 years, and made available to the public at reasonable times during regular business hours.

Reports will be submitted annually by the permit date to the following regulatory agencies:

United States Environmental Protection Agency
Municipal Assistance Unit (CMU)
One Congress Street, Suite 1100
Boston Massachusetts 02114-2023

New Hampshire Department of Environmental Services
Water Division
Waste Water Engineering Bureau
PO Box 95
Concord, New Hampshire 03302-0095

6.0 REFERENCES

NH DES, 2002. New Hampshire Small MS4 Storm Water Management Program Guidance.

NEIWPCC, 2003. Illicit Discharge Detection and Elimination Manual – A Handbook for Municipalities.

NHDES, 2003. Draft 2002 List of Threatened or Impaired Waters that Require a TMDL (Section 303[d] List).

NHDES, 2003. Draft 2002 List of Threatened or Impaired Waters that Do Not Require a TMDL (Section 303[d] List).

NHWSPCC, 1983. Summary Report of the Durham Urban Runoff program.

NOAA, NMFS, 2003. Essential Fish Habitats, Northeast Region.

US EPA, 1999. 40 CFR Parts 9, 122, 123, 124: National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Storm Water Discharges; Final Rule. Federal Register v.64, n.235; December 8, 1999.

US EPA, 2000. Storm Water Phase II Compliance Assistance Guide. EPA 833-R-00-002.

US EPA, 2000. Storm Water Phase II Final Rule, Fact Sheets 1.0 – 4.0.

US EPA, 2000. Endangered and Threatened Species County-Species List.

US NPS, 2003. National Register of Historic Places.

Personal Conversation, 2003. Mr. Robert Levesque, P.E., Town Engineer, Durham Department of Public Works.

Personal Conversation, 2003. Mr. Jeff Schloss, Coordinator, UNH Office of Sustainability.

Personal Conversation, 2003. Mr. David Fluharty, Director, UNH Technology Transfer Center.

7.0 CERTIFICATION

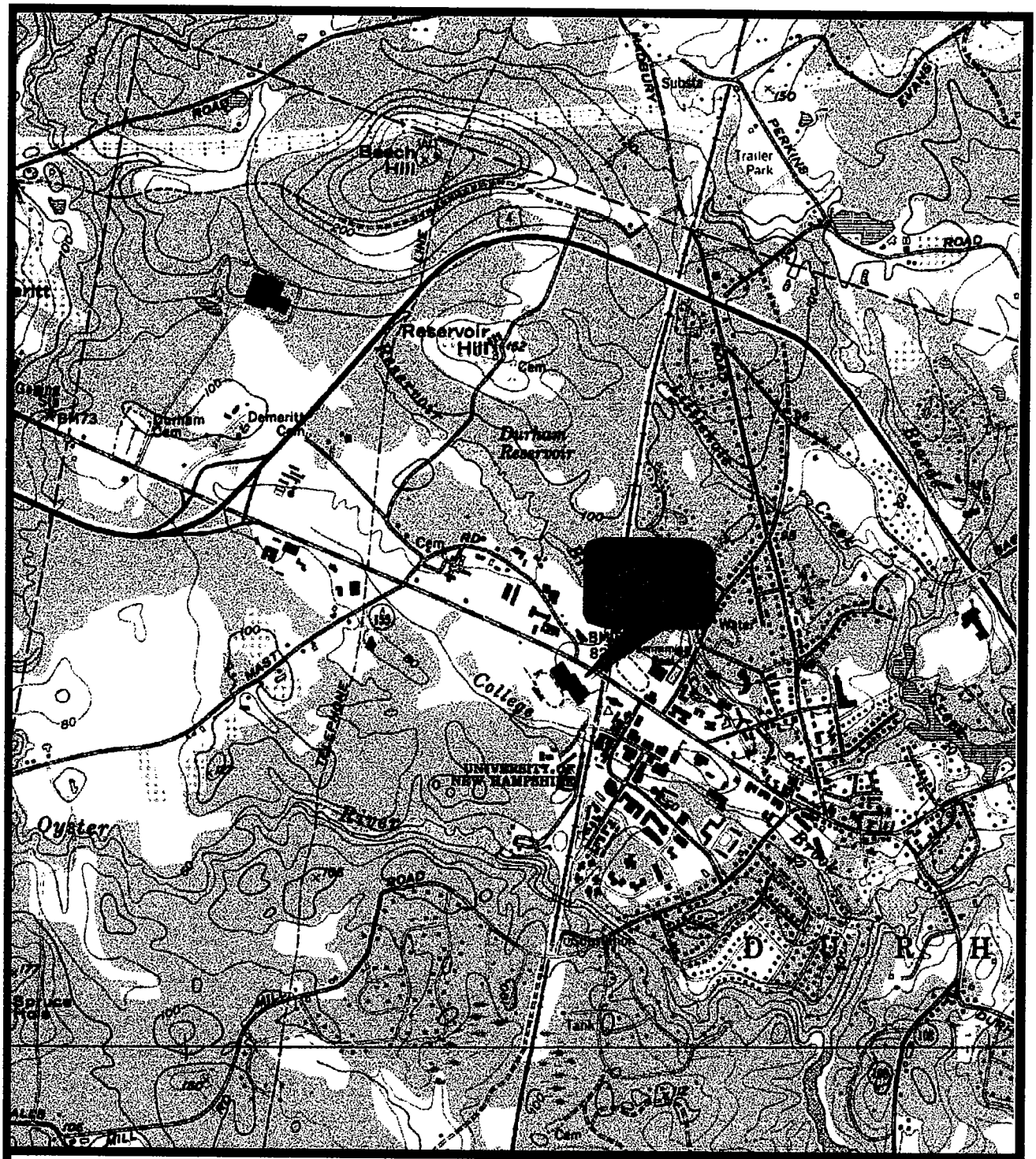
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Bradford Manning
Signature of Official

March 5, 2003
Date

BRADFORD Manning
Name and Title
DIRECTOR
Environmental Health & SAFETY

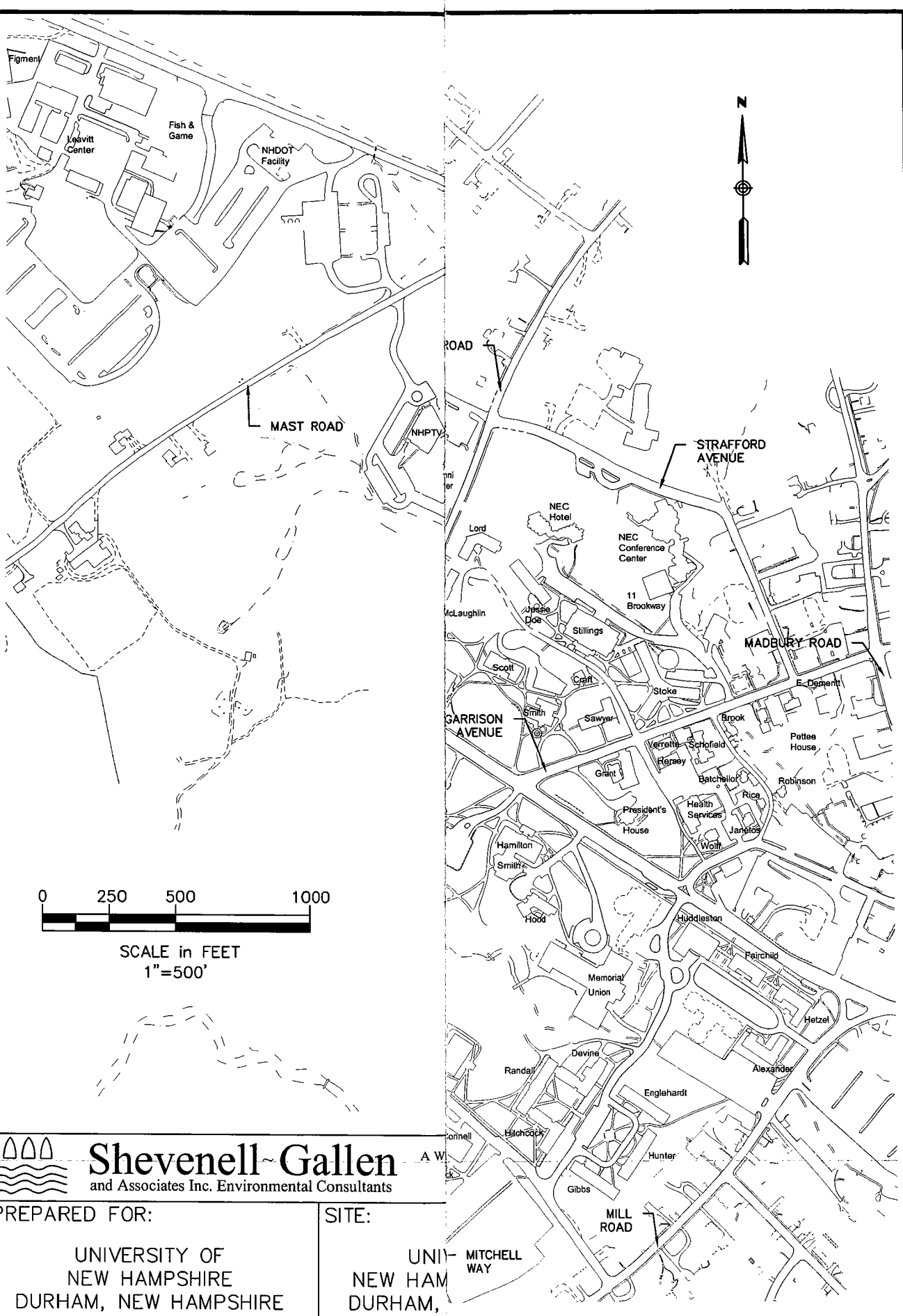
FIGURES



SOURCE: Dover West, NH 7.5' Quadrangle | SCALE: 1 inch = 2,000 feet

FIGURE 1. Index Map Showing the Location of the Subject Property.

UNIVERSITY OF NEW HAMPSHIRE Main Street Durham, New Hampshire	SHEVENELL~GALLEN and Associates, Inc. 195 Commerce Way Portsmouth, New Hampshire



Shevenell~Gallen
and Associates Inc. Environmental Consultants

PREPARED FOR:	SITE:
UNIVERSITY OF NEW HAMPSHIRE DURHAM, NEW HAMPSHIRE	UNI NEW HAM DURHAM,

\\Server\projects\SGA-DWGS\18\18146 UNH\18146-01.dwg Mar 04, 2003 - 11:55ar

TABLES

TABLE 1. SUMMARY OF POTENTIAL NON-POINT SOURCE (NPS) CONTAMINANTS
Phase II MS4 Storm Water Management Plan
University of New Hampshire
Durham, New Hampshire

NPS ID	NPS	Origin	Volume(s)	Notes
1	Road Sand	Storage and seasonal application	600-800 tons spread annually by UNH	Road maintenance shared with Town of Durham
2	Road Salt	Storage and seasonal application	300-400 tons spread annually by UNH	Road maintenance shared with Town of Durham
3	Road De-Icer	Storage and seasonal application	1,000-gallon AST	Non-hazardous, sugar-cane and MgCl based product
4	Oil/Grease	Surface runoff from roads and parking areas	Unknown	Non-recordable discharges from vehicles
5	Pesticides/Herbicides/Fertilizers	Seasonal application to landscaped areas	*Roundup Pro* - 418 ounces annually. *Merit .5G* - 810 pounds annually. *Proscape/Trimec* - 400 pounds annually.	Licensed for application by NH Department of Agriculture; stored indoors in small quantities, diluted prior to use.
6	Sediment	Construction areas	Unknown	Non-recordable discharges
7	Atmospheric Deposition	Unknown	Unknown	Non-recordable discharges

TABLE 2. SUMMARY OF BEST MANAGEMENT PRACTICES (BMPs) FOR MINIMUM CONTROL MEASURES
Phase II MS4 Storm Water Management Plan
University of New Hampshire
Durham, New Hampshire

BMP ID	BMP	Responsible Person(s)	Measureable Goal(s)	Milestone(s)	Implementation Schedule
PUBLIC EDUCATION AND OUTREACH					
01	Production and Distribution of Informational Publications	B. Manning	Distribution to Faculty and Student Population; Evaluation of Public Comments	NA	March 10, 2004
02	Production and Distribution of Informational Video	B. Manning	Completion of Video Post-Production; Scheduling of Public Viewing; and Notice of Availability to Requesting Organizations	NA	March 10, 2004
03	Development of a Stormwater Program Link on the UNH Website	B. Manning	Completion of Website Link	NA	March 10, 2004
PUBLIC PARTICIPATION / INVOLVEMENT					
04	Public Notification Meeting	B. Manning	Holding of Public Meeting	NA	September 10, 2003
05	Establishment of a Volunteer Committee	B. Manning	Establishment of Committee; Semester Events	First and Quarterly Meetings	December 10, 2003 March 10, 2004 +
06	Stenciling of Catchbasins	B. Manning	All CBs Stenciled	First Event and Completion	December 10, 2003 March 10, 2008

TABLE 2. SUMMARY OF BEST MANAGEMENT PRACTICES (BMPs) FOR MINIMUM CONTROL MEASURES
Phase II MS4 Storm Water Management Plan
University of New Hampshire
Durham, New Hampshire

BMP ID	BMP	Responsible Person(s)	Measureable Goal(s)	Milestone(s)	Implementation Schedule
ILLICIT DISCHARGE DETECTION AND ELIMINATION					
07	Development of a Storm Sewer System Map	D. Pollock	Completion of Site Plan	NA	March 10, 2004
08	Development of Policy Prohibiting Illicit Discharges	D. Pollock	Completion and Implementation of Policy	NA	March 10, 2004
09	Development and Implementation of an IDDE Plan	D. Pollock	Completion and Implementation of Plan	Initial Identification; Assessment and Elimination	March 10, 2004 March 10, 2008
10	Provide Informational Materials to Employees and Public	D. Pollock	Inclusion in Informational Packet	NA	Per BMP 01
11	Assessment of Non-Stormwater Discharges	D. Pollock	Identification and Elimination of Contributing Allowable NSWDs	Initial Identification, Assessment, and Dismissal/Elimination	Per BMP 09

TABLE 2. SUMMARY OF BEST MANAGEMENT PRACTICES (BMPs) FOR MINIMUM CONTROL MEASURES
Phase II MS4 Storm Water Management Plan
University of New Hampshire
Durham, New Hampshire

BMP ID	BMP	Responsible Person(s)	Measureable Goal(s)	Milestone(s)	Implementation Schedule
CONSTRUCTION SITE RUNOFF CONTROL					
12	Development of a Construction Site Erosion and Sediment Runoff Control Policy	P. Chamberlin	Completion and Implementation of Policy	NA	March 10, 2004
13	Public Notification and Comment	P. Chamberlin	Documentation and Followup	NA	Per Project
14	On-Site Inspection and Enforcement	P. Chamberlin	100% Compliance	NA	March 10, 2008
POST-CONSTRUCTION RUNOFF CONTROL					
15	Development of a Post-Construction Runoff Control Policy	P. Chamberlin D. Pollock	Completion and Implementation of Policy; Annual Inspection and Review Schedule	NA	March 10, 2004 March 10, 2005

TABLE 2. SUMMARY OF BEST MANAGEMENT PRACTICES (BMPs) FOR MINIMUM CONTROL MEASURES
Phase II MS4 Storm Water Management Plan
University of New Hampshire
Durham, New Hampshire

BMP ID	BMP	Responsible Person(s)	Measureable Goal(s)	Milestone(s)	Implementation Schedule
POLLUTION PREVENTION / GOOD HOUSEKEEPING					
16	Development of a Comprehensive Operations and Maintenance Plan	D. Pollock	Completion and Implementation of Plan	Maintenance and Inspection Schedules; Reduction in Pollutant Discharges	March 10, 2005; Annual Reporting
17	Development of a Materials Management and Recycling Policy	D. Pollock	Completion and Implementation of Policy	Reduction in Materials Use	March 10, 2005; Annual Reporting
18	Facilities Employee Training Program	D. Pollock	Completion and Implementation of Program	NA	March 10, 2005
19	Community Outreach Program	D. Pollock	Completion and Implementation of Program	NA	March 10, 2005
20	Community Participation Program	D. Pollock	Completion and Implementation of Program	NA	March 10, 2005

NOTES: BMP = Best Management Practice
IDDE = Illicit Discharge Detection and Elimination
NA = not applicable