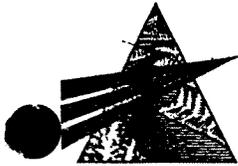




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APPENDIX H  
GOOD HOUSEKEEPING DOCUMENTATION  
Interview Questionnaire  
Drainage Inspection Report



**WOODARD & CURRAN**  
Engineering • Science • Operations

CORPORATE OFFICES: Maine, Massachusetts,  
New Hampshire, Connecticut, Illinois, Florida  
Operational offices throughout the U.S.

May 31, 2002

Mr. Brian Duval  
DEP  
627 Main Street, 2<sup>nd</sup> Floor  
Worcester, MA 01608

RE: Town of Acton Nonpoint Source Control Program  
Project 00-07/319  
Federal Grant ID Number BG991878-97

Dear Mr. Duval:

On behalf of the Town of Acton, Woodard & Curran Inc. is submitting meeting minutes and questionnaires from meetings held with representatives from five (5) Acton departments, including the Highway Department, the Natural Resources Department, the Engineering Department, the Building Department and the Board of Health.

Each department was presented with a questionnaire prior to the meeting that inquired as to activities or functions within that department related to nonstructural BMPs and stormwater management. The meetings were a follow-up to those questionnaires. This submittal fulfills requirements of Item A under Task A5 of the Town of Acton Nonpoint Source Control Program (Project 00-07/319).

If you have any questions and/or comments concerning this submittal, please contact me at (978) 557-8150 (Ext. 3615).

Very truly yours,

**WOODARD & CURRAN INC.**

Robert J. Rafferty, P.E.  
Project Manager

Enclosure

cc: Jane Peirce, 319 Program Coordinator  
Doug Halley, Town of Acton  
David Senus, W&C  
Helen Priola, W&C



**MEMORANDUM**

**TO:** Doug Halley  
**FROM:** Bob Rafferty  
**DATE:** April 8, 2002  
**RE:** Draft Summary of Town Department Meetings  
**CC:** David Senus  
Helen Priola  
File 203719.01

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This memorandum presents our notes from meetings held with various Town departments regarding non-structural stormwater BMPs (practices and procedures for stormwater pollution control). On January 25, 2002, Bob Rafferty and David Senus joined you to meet with the following department representatives:

- Dave Brown, Highway Superintendent
- Tom Tidman, Natural Resources Director
- David Abbt, Engineering Administrator
- Garry Rhodes, Building Commissioner

The meetings were conducted to satisfy the requirements of the *Nonpoint Source Control Program* being implemented within the Town of Acton. The following tasks are listed under Task A5 of the DEP's Scope of Services for the *Town of Acton Nonpoint Source Control Program*:

- A. Conduct review of current practices by meeting with Town Departments that have a role in watershed protection, including Planning, Engineering, Health, Conservation and Highway
- B. Develop recommendations for policy or practice improvements...
- C. Provide a Comprehensive Stormwater BMP Manual for use by the Town...

To comply with the subtasks listed above, Woodard & Curran Inc. prepared questionnaires that were designed to determine the extent of current non-structural stormwater management techniques currently implemented by Town departments.

The questionnaires are attached. These questionnaires were distributed on December 17, 2001 to the following departments:

- Highway
- Natural Resources
- Engineering
- Building
- Board of Health
- Planning

RE: Summary of Town Department Meetings  
Date April 8, 2002  
Page 2 of 7

Meeting with the Town departments provided feedback on the questionnaires. Additionally, interacting with the department representatives on a personal basis allowed for a greater level of explanation and understanding of both the 319 project and the current or anticipated stormwater management practices used by each department.

Our findings can be generalized into three points:

1. Despite the coordinated process for review of new construction, there is no single entity responsible for stormwater issues. Each town department has its own set of distinct responsibilities.
2. Current regulations/bylaws/ordinances do not provide enough power of enforcement for stormwater regulations and basic maintenance of private systems. The Town should implement stormwater bylaws establishing the requirements for operation and maintenance of storm drains regardless of the discharge location (public or private property). The existing bylaws do not provide an avenue of legal enforcement for discharges to private property.
3. The Town should develop a firm schedule and map of catch basin cleaning and storm drain outfall clearing.

The Town's upcoming submittal of a Notice of Intent (Stormwater Management Plan) for the EPA Phase II Stormwater regulations will address these issues. Pending your review, we will follow up this memorandum with specific recommendations for policy or practice improvements and provide a Comprehensive Stormwater BMP Manual for use by the Town.

RE: Summary of Town Department Meetings  
Date April 8, 2002  
Page 3 of 7

**Department:** Highway

**Representative:** Dave Brown, Highway Superintendent

- Schedule of maintenance on storm drain system? – Maintenance is performed at known problem areas and on areas where problems are arising. The Highway staff scouts outfalls in late winter / early spring and prioritizes maintenance outfall clearing based on visual observations and complaints. Flushing is not typically performed. The Town has a 2-inch fire hose with a nozzle for emergencies and borrows Concord's sewer jetter if needed.
- Mapped locations of the maintained drainage structures? – No set schedule for maintenance and no maps. Structures are maintained based on problem areas.
- Specific information on access problems (easements)? – There are no significant problems accessing the drainage structures or outfalls.
- Catch basins are cleaned using highway crews and a clamshell. All catch basins are cleaned yearly. They start with reported and observed problems first and then proceed with a normal rotation.
- Catch basin waste is stored in North Acton and combined with leaves and soil from roadside construction. Trimmings, clippings and general yard waste are added to make compost. Christmas trees are burned. The Town does not want tree ornaments and tinsel in compost. The Town does not actively advertise recycling of yard waste. Compost is used on baseball fields, etc. They have a screener.
- Town owns 1 street sweeper (mechanical brush style sweeper). The Town also rents from A+ Sweepers and pays by the hour for the sweeping services. The contract is bid yearly and can be extended up to three years.
- Highway has a composting program where citizens can bring their leaves, clippings, hedge trimmings, etc. Town does not send yard waste drop offs through its chipper due to concerns over potential damage caused by foreign objects.
- Highway does not deal with fertilization of playing fields or other public lands. The Natural Resources Department performs any fertilization work.
- Sand & Salt are mixed in a 5 sand to 1 salt mixture
  - A 60' X 80' covered building (shed) exists for unmixed salt
  - 5:1 sand to salt is stored within another structure
  - Drains at DPW yard drain to a wetland outlet near Conant School
  - Drain overflow goes to 10,000-gal storage tank, drained by septic hauler (Wind River Environmental) whenever necessary. Tank has a high level alarm.
- Transfer station will have a tight tank. Town is working with DEP on this issue.
- Maintenance garage tanks drain to oil/water separator
  - UST have leak detection and key systems
  - UST tank auto-test on 1<sup>st</sup> Sunday of every month
  - All above ground tanks and barrels are contained within spill control pallet
- Drainage problem areas noted:
  - Corner of Quarry Road and Route 27 (hillside drainage across road)
  - Spencer Road/Prospect Street Area
  - Arlington Street/West Acton Center
  - Stowe Road
- Generally concerned about staffing for any future drainage programs

RE: Summary of Town Department Meetings  
Date April 8, 2002  
Page 4 of 7

**Department:** Natural Resources  
**Representative:** Tom Tidman, Natural Resources Director

- By-Law: No pesticide use within 40' of a wetland or other water body
- Largest "problem areas" with standing water are those areas near beaver impoundments. Fast growing beaver populations are responsible for 20+ impoundments across town (currently) with the promise of more in the near future.
- Natural Resources is not currently involved in any sort of stream maintenance.
- Sources of potential contamination to Nashoba Brook are the construction companies near or on Wetherbee Street. Contamination potential exists due to junk material, automobiles, and other machinery left uncovered close to the brook.
- Fertilization and Irrigation Control
  - No control over fertilization habits of citizens (residential subdivisions)
  - Fields tend to be fertilized more than in the past due to demands by athletic entities.
  - Fertilization records for last year are very good. Kept by the recreation department. These will be supplied to W & C soon.
  - Swimming pond (NARA) fields are under-fertilized due to concerns over nutrient loading to swimming pond.
  - All irrigation water comes from deep bedrock wells on-site. No controls exist for shutoff due to rain. Rain-detection devices are being considered.
  - NARA site has 6.5 acres of auto irrigation. Other areas of automatic irrigation are: 3 acres at 2A-27, and 2 acres on Concord Road, with auto irrigation of the schools planned.
- Currently considering having additional "Turf-Maintenance" training for staff members. Has 4 fulltime employees and one crew leader. All are licensed as pesticide applicators, which is a job requirement. Chris Noble, graduate of U-Mass turf management course, coordinates the fertilizer program.
- Drainage problem areas noted:
  - Cowdrey Lane
  - Elementary School
  - Roche Brothers
  - Ice House Road
  - 2A - Acorn Park
- General drainage concerns:
  - Approximately 20 beaver activity areas
  - Stream management (clearing etc.) is partially conducted along shorelines by stream teams but there is no program of clearing of stream channels.
  - No residential stormwater controls.

**Department:** Engineering  
**Representative:** David Abbt, Engineering Administrator

- The stormwater related rules and regulations followed by Engineering are contained within the Zoning By-Laws and the Subdivision Rules and Regulations, both of which have been obtained by W & C.
- Building/Development review is coordinated between several departments
  - Planning board reviews all plans for subdivisions
  - Building department reviews all commercial plans
  - Conservation/Natural Resources department reviews if there are potential impacts to wetlands or river ways
- Around 1980, rule was passed that any new commercial or residential development required detention basins to treat 1" stormwater falling on any impervious surface (street/sidewalks for residential)
  - Detention basins sized to 1" run-off volume, have a clay liner, no outlet
  - Basins generally contain cattails and large amounts of pollywogs
  - Typically there is a splitter box that directs "initial flow" to detention pond and excess flow to outlet
  - There is no need for maintenance since the intent is to "naturalize" the basin.
- Construction activities – erosion control plans typically taken from Stormwater Management Handbook
  - Steep slope construction typically causes the biggest erosion control concern
  - Erosion and sediment control plans required from new developments
- Engineering department does final inspection of all street/community development plans prior to acceptance.
  - Engineering department provides field verification of all storm drain systems.
  - No O&M regulations for private subdivisions or commercial property.
  - Subdivision as-builts are kept on file in Engineering
- Detention basins are shown on site plans, but are not mapped on a town-wide map.
- One concern of Engineering is the amount of letter writing and legwork involved in getting commercial (private) developments to maintain their stormwater collection, treatment, or conveyance systems. Difficulty exists with regulating the maintenance of these private systems
  - Commercial establishments have special permits that must be renewed if the owner ever wants to modify the site.
  - Town asks owners to fix any drainage problems. Failure to comply could jeopardize the special permit.
- Currently, no major storm drain improvement programs are in place
  - Problems exist with old "small" pipes clogging or being undersized
  - Some outfalls merely drain 2 catch basins
  - Aluminum pipes seem to be "dissolving", steel pipes are rusting
  - System has many old bends and non-desirable flow directions
  - Many drains were constructed during the WPA projects of the 1930's

RE: Summary of Town Department Meetings  
Date April 8, 2002  
Page 6 of 7

**Department:** Building

**Representative:** Garry Rhodes, Building Commissioner

- Refer to Zoning By-Laws and Subdivision Rules and Regulations for standard setbacks
- Zoning does not have standard set-backs from water; Natural Resources Department regulates this. Zoning setbacks are from property lines only.
- Zoning Regulations tend to consider groundwater before they consider surface water or wetlands.
- Zone 4 is least restrictive, Zones 1-3 must treat first 1" impervious through detention.
- Ground water regulations:
  - Foundation must be waterproof
  - Foundation drains are routed to wetlands, drainage line, etc. Need a positive removal of water (Gravity to light or pump out.)
  - There is no regulation of the discharge if it is on private property. Public drain connection requires a street opening permit.
  - Permit from Engineering and Natural Resources for street opening and water discharge respectively.
- Complexity of regulations decreases ability to enforce stormwater components. Common sense and "real-world" language would help general understanding of regulations.
- Department would like a way to appeal to a higher board with stormwater related issues
  - Each Town department is charged with looking at a specific issues that may at times conflict with other departments' concerns. All departments are independent authorities, which can be at cross-purposes.
  - When a private entity is not maintaining their stormwater management system, it would be good to have a specific board that the Town can turn to for assistance and enforcement.
- Staffing to regulate and enforce any future stormwater regulations is a concern.

RE: Summary of Town Department Meetings  
Date April 8, 2002  
Page 7 of 7

**Department:** Board of Health

**Representative:** Doug Halley, Board of Health Director

- Water District controls water use regulations and therefore controls sprinkler regulations
- Woodard & Curran Inc. produced septic system management plan for the Town
- No pooper-scooper law in place
- Composting is through DPW (Highway)
- Yard burning regulations are in place
- Town needs a strategic plan regarding water resources, including stormwater
- Use stormwater to recharge groundwater and return to natural flow.
- Tracing coliform data at several stream locations. Intent is to correlate rainfall versus coliform to determine impact of point sources versus nonpoint sources.

**MEMORANDUM**

**TO:** Department of Public Works/Highway  
**FROM:** David Senus, Woodard & Curran Inc.  
**DATE:** December 13, 2001  
**RE:** Acton Town Department Questionnaire

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Woodard & Curran Inc. along with the Massachusetts Department of Environmental Protection (DEP) is working with the Town of Acton to develop a non-point source phosphorus reduction program that will address stormwater issues within the Town. One of the tasks set forth for this program by the DEP is to communicate with Town departments about current procedures related to stormwater runoff. The purpose of this survey/questionnaire is to determine the current state of awareness within the Town departments related to stormwater management issues along with determining what stormwater quality control measures are currently in-place. Information gathered in this survey will help to develop Best Management Practices (BMPs) for each department, which in turn will lead to better stormwater quality within the Town.

Please fill in (to the best of your ability) the following department-specific questions and please provide copies of any regulations or documents requested below. If there are additional stormwater quality control measures in-place that are not requested, please feel free to include those measures. For questions or comments, please contact Bob Rafferty {(978) 657-0555} or David Senus {(781) 251-0200} at Woodard & Curran.

**Drainage Maintenance**

Is there a drainage structure maintenance plan in place? If so, could you provide the following:

- A schedule of maintenance?
  
- Mapped locations of the maintained drainage structures?
  
- Any specific information on access problems (are there easements in place)?

- Information on how these structures are cleaned (what equipment: bucket or vacuum truck)?
  
- How and where is waste disposed?

### **Street-sweeping**

Is there a street sweeping schedule? If so, could you provide a copy of this schedule?

What type of street-sweeper(s)?

- Mechanical
- Regenerative Air
- Vacuum
- Or Tandem Sweeping (mechanical followed by a vacuum).

### **Other Measures**

Does the Town recycle any yard waste?

Does the Town add fertilizer to ball fields, parks or other public lands? If so, how often and how?

Are there automatic sprinklers on public land?

- If so, is there a specific watering program?

What are the storage practices for sand and deicing material, fertilizer/pesticides, etc.?

Is there a preventive maintenance program in place – oil changes, storage, garage maintenance etc.? Are the maintenance areas under roofs? How and where are town trucks and equipment washed?

Could you list several major stormwater problem areas?

What specific concerns related to drainage or stormwater you would like to see addressed?

Are there regulations or guidance materials on:

- Dust control?
- Spill control?
- Record keeping?
- Employee Training (Stormwater related issues)?

**MEMORANDUM**

**TO:** Natural Resources/Conservation Department  
**FROM:** David Senus, Woodard & Curran Inc.  
**DATE:** December 13, 2001  
**RE:** Acton Town Department Questionnaire

---

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**Conservation Control Measures**

Are the Town by-laws more stringent than the state Wetlands Protection Act & Rivers Protection Act? If so, could you please provide a copy?

Could you list several major stormwater problem areas?

What specific concerns related to drainage or stormwater you would like to see addressed?



Are there regulations or guidance materials on:

- Dust control?
- Spill control?
- Record keeping?
- Employee Training (Stormwater related issues)?

**MEMORANDUM**

**TO:** Engineering Department  
**FROM:** David Senus, Woodard & Curran Inc.  
**DATE:** December 13, 2001  
**RE:** Acton Town Department Questionnaire

---

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**Strom-Drain Design**

Could you provide a copy of the design standards for:

- Storm drains?
- Streets (crown, street drainage structures, etc...)?

When does engineering see and review the plans for developments? What are the procedures for review and permitting?

Are there ordinances or bylaws for stormwater control during and after construction? If so, can you provide a copy?

Are there good examples of drainage and stormwater control that can be examples for future projects?

Are there ongoing drainage plans?

Could you list several major stormwater problem areas?

What specific concerns related to drainage or stormwater you would like to see addressed?

Are there regulations or guidance materials on:

- Dust control?
- Spill control?
- Record keeping?
- Employee Training (Stormwater related issues)?

**MEMORANDUM**

**TO:** Zoning Department  
**FROM:** David Senus, Woodard & Curran Inc.  
**DATE:** December 13, 2001  
**RE:** Acton Town Department Questionnaire

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Woodard & Curran Inc. along with the Massachusetts Department of Environmental Protection (DEP) is working with the Town of Acton to develop a non-point source phosphorus reduction program that will address stormwater issues within the Town. One of the tasks set forth for this program by the DEP is to communicate with Town departments about current procedures related to stormwater runoff. The purpose of this survey/questionnaire is to determine the current state of awareness within the Town departments related to stormwater management issues along with determining what stormwater quality control measures are currently in-place. Information gathered in this survey will help to develop Best Management Practices (BMPs) for each department, which in turn will lead to better stormwater quality within the Town.

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**Zoning Issues**

What are standard setbacks?

Are there any special setbacks for water resources? (Cluster vs. large lots)

Are there regulations or guidance materials on:

- Dust control?
- Spill control?
- Record keeping?
- Employee Training (Stormwater related issues)?

Could you list several major stormwater problem areas?

What specific concerns related to drainage or stormwater you would like to see addressed?

**MEMORANDUM**

**TO:** Planning Department  
**FROM:** David Senus, Woodard & Curran Inc.  
**DATE:** December 13, 2001  
**RE:** Acton Town Department Questionnaire

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Woodard & Curran Inc. along with the Massachusetts Department of Environmental Protection (DEP) is working with the Town of Acton to develop a non-point source phosphorus reduction program that will address stormwater issues within the Town. One of the tasks set forth for this program by the DEP is to communicate with Town departments about current procedures related to stormwater runoff. The purpose of this survey/questionnaire is to determine the current state of awareness within the Town departments related to stormwater management issues along with determining what stormwater quality control measures are currently in-place. Information gathered in this survey will help to develop Best Management Practices (BMPs) for each department, which in turn will lead to better stormwater quality within the Town.

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**Potential Planning Related Stormwater Issues**

We are interested in the Development Review Process. Specifically, how the Development Review Process addresses stormwater runoff control.



Please elaborate on and provide any guidelines, standards, regulations or by-laws related to construction runoff control, general erosion control, drainage, road design (min widths etc), cluster development vs. large lot zoning, etc...

Are there good examples of drainage or stormwater control that can be used as good examples for other projects?

Could you list several major stormwater problem areas?

What specific concerns related to drainage or stormwater you would like to see addressed?

Are there regulations or guidance materials on:

- Dust control?
- Spill control?
- Record keeping?
- Employee Training (Stormwater Related issues)?

**MEMORANDUM**

**TO:** Board of Health  
**FROM:** David Senus, Woodard & Curran Inc.  
**DATE:** December 13, 2001  
**RE:** Acton Town Department Questionnaire

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Woodard & Curran Inc. along with the Massachusetts Department of Environmental Protection (DEP) is working with the Town of Acton to develop a non-point source phosphorus reduction program that will address stormwater issues within the Town. One of the tasks set forth for this program by the DEP is to communicate with Town departments about current procedures related to stormwater runoff. The purpose of this survey/questionnaire is to determine the current state of awareness within the Town departments related to stormwater management issues along with determining what stormwater quality control measures are currently in-place. Information gathered in this survey will help to develop Best Management Practices (BMPs) for each department, which in turn will lead to better stormwater quality within the Town.

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**BOH Regulations**

In addition to addressing whether the following exist, could you provide a copy of any of the following regulations?

- Are there automatic sprinkler regulations?
  
  
  
  
  
  
  
  
  
  
- Is there a septic system / onsite sewage disposal management plan in place?

- Are there yard or pet waste controls?
  
- Is there a composting program?
  
- Is there a town-wide yard waste collection and composting program?
  
- Are there regulations or guidance materials on:
  - Dust control?
  - Spill control?
  - Record keeping?
  - Employee Training (Stormwater Related issues)?

Could you list several major stormwater problem areas?

What specific concerns related to drainage or stormwater you would like to see addressed?

**Public Education**

- Is there public education material on hand regarding fertilizer usage or other stormwater related issues?