



Town of Chatham



Department of Health and Environment

Health Water Quality Laboratory Conservation

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DATE: 4/28/06

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FROM: Robert A. Duncanson, Ph.D.
Director of Health & Environment
(508) 945-5165

Number of pages (including cover sheet): 21

Subject: NPDES P/I Small MST Annual Report

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Municipality/Organization: Town of Chatham

EPA NPDES Permit Number: MAR041101

MADEP Transmittal Number: W-035745

Annual Report Number

& Reporting Period:

No. 3: March 05-March 06

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Robert Duncanson, Ph.D.

Title: Dir. of Health & Environment

Telephone #: (508) 945-5165

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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 gather and evaluate 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, the information submitted 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.

Signature:

Printed Name: William Hinchey

Title: Town Manager

Date: April 28, 2006

Part II. Self-Assessment

The Town of Chatham has completed the required self-assessment and has determined that our municipality is working toward full compliance within the five year schedule as submitted to EPA and approved as Chatham's NOI to the General Permit issued to Massachusetts under Phase II of the Regulations. This third annual report demonstrates and documents our efforts toward full compliance.

Part III. Summary of Minimum Control Measures

1. Public Education and Outreach

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 4 |
|-----------------|------------------------|--|---------------------------|--|--|
| 1.1 | Educational Flyer | Department of Health & Environment (DHE) | Distributed Annually | "A Dog Owner's Guide to a Cleaner Pleasant Bay" was developed and distributed in cooperation with the Pleasant Bay Alliance. | New materials to be developed and distributed. |
| Revised | | | | | |
| 1.2 | Web Page | DHE | Develop & Maintain | Storm water information/education web page maintained on Town's web site. Has information from and links to EPA, MADEP and regional storm water web sites. | Maintain and update web page. |
| Revised | | | | | |
| 1.3 | Annual Program Review | DHE, DPW, Board of Selectmen | Meeting held per schedule | Progress/update meeting held annually as part of yearly budget process. | Same as year 3. |
| Revised | | | | | |

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|---------|-------------------|---------------------|-----------------------------------|---|-----------------|
| 1.4 | Pet Waste Control | DHE, Animal Control | Expand/document Mutt Mitt program | Existing Mutt Mitt program has been continued. Two additional Mutt Mitt dispensers were funded and installed by the Town. Three additional Mutt Mitt dispensers were installed in partnership with the Pleasant Bay Alliance. This brings the total number of dispenser locations in Chatham to 21. <i>"A Dog Owner's Guide to a Cleaner Pleasant Bay"</i> was developed and distributed in cooperation with the Pleasant Bay Alliance. | Same as Year 3. |
| Revised | | | | | |
| Revised | | | | | |

1a. Additions

| | | | | | |
|-----|----------------------|-----|--------------------|--|--|
| 1.5 | Cable Access Channel | DHE | Number of Showings | The EPA/Weather Channel Video <i>"After the Storm"</i> was shown on the local cable access channel approximately 12 times over several months. | |
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2. Public Involvement and Participation

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 4 |
|----------------|---------------------------------------|-------------------------------|---------------------------------------|---|---|
| 2.1 Revised | Citizen Water Quality Monitoring | DHE | Program goals met/annual meeting held | Summer 2005 water quality monitoring completed as per program goals. Meeting held in fall 2005 to present preliminary results and “thank” volunteers in cooperation with Friends of Chatham Waterways. | Same as Year 3. |
| 2.2 Revised | Storm Drain Marking | DHE | Document number marked/year | Effort postponed to Year 4 due to staff time limitations. | Begin storm drain marking in cooperation with volunteers from Friends of Chatham Waterways. |
| 2.3 Revised | Annual Program Review | DHE, DPW, Board of Selectmen | Meeting held per schedule | Progress/update meeting held annually as part of yearly budget process. | Same as Year 3. |
| 2.4 Revised | Household Hazardous Waste Collections | DHE | Document participation | Six household hazardous waste collections were held May through October 2005, jointly with 2 adjoining towns, in cooperation with Cape Cod Cooperative Extension. In 2005 274 households participated, compared to 323 in 2004. | Same as Year 3. |
| 2.5 Revised | Web Page | DHE | Documents hits | Storm water information/education web page maintained on Town’s web site. Has information from and links to EPA, MADEP and regional storm water web sites. Information Systems Department indicates 19 hits in 2005. | Maintain and update web page. |
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| Revised | | | | | | | | | |
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2a. Additions

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3. Illicit Discharge Detection and Elimination

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 4 |
|----------------|---|-------------------------------|--|--|--|
| 3.1 Revised | Stormwater System Mapping | DHE, DPW, GIS | Complete mapping by year 4 of program | GPS system purchased and field mapping project initiated. Field mapping based on Highway Division sketches of stormwater infrastructure and information collected during sanitary surveys. Stormwater data collection being coordinated with GIS department as part of larger town effort to map other utility infrastructure. | Continue collection of field GPS data, integrate into GIS system. |
| 3.2 Revised | Identify and Document Illicit Connections | DPW, DHE | Document illicit connections | Progress limited to due staff time limitations. Past monitoring of discharges during DMF Sanitary Surveys have not documented the presence of illicit discharges. | Staff training in the detection of illicit discharges. Continued monitoring of discharges during DMF Sanitary Surveys. |
| 3.3 Revised | Eliminate Illicit Connections | DPW, DHE | Quantify illicit connections corrected | Progress limited due to staff time limitations. Discharges are being corrected as part of overall efforts to mitigate stormwater discharges. | Continue monitoring. |
| 3.4 Revised | Review Existing Regulatory Mechanisms | DHE | Complete review by December 2004 | No progress, due to staff time limitations. | Complete review and recommend necessary additions/changes. |
| 3.5 Revised | Educational Flyer | DHE, DPW | Distributed annually | No progress, due to staff time limitations. | Develop and distribute flyer. |
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| Revised | | | | | | | | | |
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3a. Additions

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4. Construction Site Stormwater Runoff Control

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 4 |
|-----------------|--------------------------------------|--|--|---|---|
| 4.1 | Conservation Bylaw/Regulation Review | Conservation Commission/DHE | Necessary regulatory changes implemented | | Continue review and recommend additions/changes as new information becomes available. |
| Revised | | | | | |
| 4.2 | Subdivision Control review | Planning Board, Community Development Dept. (CDD), DHE | Necessary regulatory changes implemented | Planning Board adopted changes to subdivision regulations. Prohibits discharge of paved surface runoff to open stream channels or wetlands. Mandates that stormwater be disposed of by subsurface leaching. Requires use of Rational Method and use of 25 year storm for design purposes. | Continue review and recommend additions/changes as new information becomes available. |
| Revised | | | | | |
| 4.3 | Site Plan Review | Planning Board, CDD, DHE | Necessary regulatory changes implemented | Planning Board and CDD undertaking a complete re-write of the town's zoning bylaw. Proposed changes include revisions to site plan review; expected completion date fall 2006. | Re-program to year 4. Review as propose bylaw changes are promulgated for comment. |
| Revised | | | | | |

4a. Additions

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5. Post-Construction Stormwater Management in New Development and Redevelopment

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 4 |
|----------------|--------------------------------------|-------------------------------|--|---|---|
| 5.1 Revised | Conservation Bylaw/Regulation Review | Conservation Commission/DHE | Necessary regulatory changes implemented | | Continue review and recommend additions/changes as new information becomes available. |
| 5.2 Revised | Subdivision Control Review | Planning Board, CDD, DHE | Necessary regulatory changes implemented | Planning Board adopted changes to subdivision regulations. Prohibits discharge of paved surface runoff to open stream channels or wetlands. Mandates that stormwater be disposed of by subsurface leaching. Requires use of Rational Method and use of 25 year storm for design purposes. | Continue review and recommend additions/changes as new information becomes available. |
| 5.3 Revised | Site Plan Review | Planning Board, CDD, DHE | Necessary regulatory changes implemented | Planning Board and CDD undertaking a complete re-write of the town's zoning bylaw. Proposed changes include revisions to site plan review; expected completion date fall 2006. | Re-program to year 4. Review as propose bylaw changes are promulgated for comment. |
| Revised | | | | | |
| Revised | | | | | |
| Revised | | | | | |

6. Pollution Prevention and Good Housekeeping in Municipal Operations

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 4 |
|-----------------|--|--------------------------------------|--|---|--|
| 6.1 Revised | Catch Basin Cleaning | DPW | Clean/document 1/3 of town basins per year | Goal met. | Same as Year 3. |
| 6.2 Revised | Street Sweeping | DPW | Sweep/document roads once per year | Goal met. | Same as Year 3. |
| 6.3 Revised | Utilize Appropriate BMP's for All Municipal Projects | DPW, Building Maintenance | Document implementation | <p>New DPW building under construction utilizing appropriate BMP's to retain all stormwater on-site and to mitigate pollutant loads from activities.</p> <p>Town completed design of improvements to Stage Harbor Rd., Pond St., and Queen Anne Rd. (Site CHA-11-13) utilizing multiple BMP's to mitigate runoff to Oyster Pond. Project out to bid summer 2006, construction to begin in fall 2006.</p> <p>Design of improvements to Barn Hill Road and Landing utilizing multiple BMPs (CHA-5) 90% complete; project may go out to bid in fall 2006.</p> <p>Re-design of town parking lot and adjacent private parking lot initiated, to include constructed wetland BMP for stormwater management.</p> | Continue implementation of BMP's and initiate design for new projects. |

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|---------|-------------------|---------------------|---|--|--|
| 6.4 | Pet Waste Control | DHE, Animal Control | Expand/document Mutt Mitt program | Existing Mutt Mitt program has been continued. Two additional Mutt Mitt dispensers were funded and installed by the Town. Three additional Mutt Mitt dispensers were installed in partnership with the Pleasant Bay Alliance. This brings the total number of dispenser locations in Chatham to 21. "A Dog Owner's Guide to a Cleaner Pleasant Bay" was developed and distributed in cooperation with the Pleasant Bay Alliance. | Same as Year 3. |
| Revised | | | | | |
| 6.5 | Annual Training | DPW, DHE | Held annually/participation documented. | No progress, due to staff time limitations. | Program to be developed and implemented in Year 4. |
| Revised | | | | | |
| Revised | | | | | |

6a. Additions

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7. BMPs for Meeting Total Maximum Daily Load (TMDL) Waste Load Allocations (WLA) << if applicable >>

| BMP ID # | BMP Description | Responsible Dept./Person Name | Measurable Goal(s) | Progress on Goal(s) – Permit Year 3 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 4 |
|----------|-----------------|-------------------------------|--------------------|---|------------------------------------|
| Revised | | | | | |

7a. Additions

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7b. WLA Assessment

Part IV. Summary of Information Collected and Analyzed

The Town of Chatham was the first Massachusetts community to have nitrogen-loading thresholds completed as part of the MADEP's Massachusetts Estuaries Project. The thresholds developed are in the process of being incorporated into the town-wide Comprehensive Wastewater and Nutrient Management Planning Program.

Part V. Program Outputs & Accomplishments (OPTIONAL)

Programmatic

| | | |
|--|-------|-------------------|
| Stormwater management position created/staffed | (y/n) | 2 collateral duty |
| Annual program budget/expenditures | (\$) | \$20,000* |
| | | |
| | | |

*** In addition to DPW funding for routine drainage improvements.**

Education, Involvement, and Training

| | | |
|---|---------------|----------------|
| Estimated number of residents reached by education program(s) | (# or %) | |
| Stormwater management committee established | (y/n) | |
| Stream teams established or supported | (# or y/n) | |
| Shoreline clean-up participation or quantity of shoreline miles cleaned | (y/n or mi.) | Yes |
| Household Hazardous Waste Collection Days | | Yes |
| ▪ days sponsored | (#) | 6 |
| ▪ community participation | (%) | 274 households |
| ▪ material collected | (tons or gal) | |
| School curricula implemented | (y/n) | |
| | | |
| | | |

Legal/Regulatory

| | In Place Prior to Phase II | Under Review | Drafted | Adopted |
|---|----------------------------------|-----------------|---------|---------|
| Regulatory Mechanism Status (indicate with "X") | | | | |
| ▪ Illicit Discharge Detection & Elimination | | X | | |
| ▪ Erosion & Sediment Control | | X | | |
| ▪ Post-Development Stormwater Management | | X | | |
| Accompanying Regulation Status (indicate with "X") | | | | |
| ▪ Illicit Discharge Detection & Elimination | | X | | |
| ▪ Erosion & Sediment Control | | X | | |
| ▪ Post-Development Stormwater Management | | X | | |

Mapping and Illicit Discharges

| | | |
|--|-------------------|-------------|
| Outfall mapping complete | (%) | 90 |
| Estimated or actual number of outfalls | (#) | 30 |
| System-Wide mapping complete | (%) | |
| Mapping method(s) | | |
| ▪ Paper/Mylar | (%) | |
| ▪ CADD | (%) | |
| ▪ GIS | (%) | In progress |
| Outfalls inspected/screened | (# or %) | |
| Illicit discharges identified | (#) | |
| Illicit connections removed | (#) (est. gpd) | |
| % of population on sewer | (%) | 5 |
| % of population on septic systems | (%) | 95 |

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Construction

| | | |
|---|------------|--|
| Number of construction starts (>1-acre) | (#) | |
| Estimated percentage of construction starts adequately regulated for erosion and sediment control | (%) | |
| Site inspections completed | (# or %) | |
| Tickets/Stop work orders issued | (# or %) | |
| Fines collected | (# and \$) | |
| Complaints/concerns received from public | (#) | |
| | | |
| | | |

Post-Development Stormwater Management

| | | |
|--|----------|--|
| Estimated percentage of development/redevelopment projects adequately regulated for post-construction stormwater control | (%) | |
| Site inspections completed | (# or %) | |
| Estimated volume of stormwater recharged | (gpy) | |
| | | |
| | | |

Operations and Maintenance

| | | |
|---|-------------|----------------------|
| Average frequency of catch basin cleaning (non-commercial/non-arterial streets) | (times/yr) | 1/3 OF TOWN PER YEAR |
| Average frequency of catch basin cleaning (commercial/arterial or other critical streets) | (times/yr) | 1/3 OF TOWN PER YEAR |
| Total number of structures cleaned | (#) | 400± |
| Storm drain cleaned | (LF or mi.) | |

| | | |
|--|----------------|----------------------------------|
| Qty. of screenings/debris removed from storm sewer infrastructure | (lbs. or tons) | |
| Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.) | | Beneficial re-use being explored |
| Cost of screenings disposal | (\$) | |
| | | |

| | | |
|--|----------------|---------|
| Average frequency of street sweeping (non-commercial/non-arterial streets) | (times/yr) | 1 |
| Average frequency of street sweeping (commercial/arterial or other critical streets) | (times/yr) | 1 |
| Qty. of sand/debris collected by sweeping | (lbs. or tons) | |
| Disposal of sweepings (landfill, POTW, compost, beneficial use, etc.) | (location) | COMPOST |
| Cost of sweepings disposal | (\$) | |
| Vacuum street sweepers purchased/leased | (#) | 1 |
| Vacuum street sweepers specified in contracts | (y/n) | |
| | | |

| | | |
|--|-------------|--|
| Reduction in application on public land of: ("N/A" = never used; "100%" = elimination) | | |
| ▪ Fertilizers | (lbs. or %) | |
| ▪ Herbicides | (lbs. or %) | |
| ▪ Pesticides | (lbs. or %) | |
| | | |

| | | |
|--|---|--|
| Anti-/De-Icing products and ratios | % NaCl % CaCl ₂ % MgCl ₂ % CMA % Kac % KCl % Sand | 50 50 |
| Pre-wetting techniques utilized | (y/n) | No, available but not used last winter |
| Manual control spreaders used | (y/n) | |
| Automatic or Zero-velocity spreaders used | (y/n) | Yes |
| Estimated net reduction in typical year salt application | (lbs. or %) | |
| Salt pile(s) covered in storage shed(s) | (y/n) | Yes |
| Storage shed(s) in design or under construction | (y/n) | |