

Municipality/Organization: Town of Chatham

EPA NPDES Permit Number: MAR041101

MADEP Transmittal Number: W- 035745

**Annual Report Number
& Reporting Period:**

No. 4: March 06-March 07

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: Robert Duncanson, Ph.D.

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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: This final document copy is being provided to you electronically by the Town of Chatham. A signed copy of this document is being sent via Certified Mail.

Printed Name: William Hinchey

Title: Town Manager

Date: April 26, 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 fourth annual report demonstrates and documents our efforts toward full compliance.

The Town of Chatham has been working aggressively to address stormwater problems identified through past shoreline sanitary surveys and other water quality programs. The recently completed Oyster Pond (a significant swimming, boating and shellfishing resource) stormwater mitigation project included several \$100,000's in mitigation. This project eliminated several identified direct stormwater discharges from town roads, as well as providing end-of-pipe treatment (StormCeptor) for a significant volume of stormwater runoff from other town roads and State Route 28.

The Barn Hill Road/Landing stormwater mitigation project has been designed and construction is expected later in 2007. This will eliminated additional direct stormwater discharge into an important shellfish and recreational use area.

The Town has completed design of improvements to a municipal parking that will incorporate a constructed wetland for stormwater mitigation. This project is being done in cooperation with an abutting property owner. Funds for construction are being sought at the May 2007 Annual Town Meeting.

The Town believes that these actions, as well as others completed prior to the Phase II Permit, show Chatham's ongoing commitment to addressing stormwater issues.

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 4 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 5 |
|-----------------|------------------------|--|---------------------------|--|--|
| 1.1 | Educational Flyer | Department of Health & Environment (DHE) | Distributed Annually | Goal met. Continued distribution of educational materials at municipal office locations, during public events and during public information presentations. Continued cooperation in the development and distribution of materials with the Pleasant Bay Alliance and Project STORM, a regional Cape Cod effort. | New materials to be developed and distributed. |
| Revised | | | | | |
| 1.2 | Web Page | DHE | Develop & Maintain | Goal met. 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 | Goal met. Progress/update meeting held annually as part of yearly budget process. | Same as year 4. |
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|---------|-------------------|---------------------|-----------------------------------|---|-----------------|
| Revised | | | | | |
| 1.4 | Pet Waste Control | DHE, Animal Control | Expand/document Mutt Mitt program | Goal met. Mutt Mitt program continues to be funded and maintained by the Town. The total number of Mutt Mitt dispenser locations in Chatham is 21. Mutt Mitt program to be expanded along recently completed Chatham Rail Trail bicycle path. | Same as Year 4. |
| Revised | | | | | |
| Revised | | | | | |

1a. Additions

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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 4 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 5 |
|-----------------|---------------------------------------|--------------------------------------|---------------------------------------|--|--|
| 2.1 Revised | Citizen Water Quality Monitoring | DHE | Program goals met/annual meeting held | Goal met. Summer 2006 water quality monitoring completed as per program goals. Meeting held in fall 2006 to present preliminary results and “thank” volunteers in cooperation with Friends of Chatham Waterways. | Same as Year 4. |
| 2.2 Revised | Storm Drain Marking | DHE | Document number marked/year | Effort postponed to Year 5 due to staff time limitations. | Begin storm drain marking in cooperation with volunteers from Friends of Chatham Waterways and other local groups. |
| 2.3 Revised | Annual Program Review | DHE, DPW, Board of Selectmen | Meeting held per schedule | Goal met. Progress/update meeting held annually as part of yearly budget process. | Same as Year 4. |
| 2.4 Revised | Household Hazardous Waste Collections | DHE | Document participation | Goal met. Six household hazardous waste collections were held May through October 2006, jointly with 2 adjoining towns, in cooperation with Cape Cod Cooperative Extension. In 2006 321 households participated, compared to 323 in 2005. | Same as Year 4. |
| 2.5 Revised | Web Page | DHE | Documents hits | Goal met. 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 214 hits in 2006. | Maintain and update web page. |

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| Revised | | | | | |
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2a. Additions

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| 2.6 | Comprehensive Wastewater Management Plan Citizens Advisory Committee | DHE | Document Public Involvement | The issue of stormwater management is a regular topic in the discussions of the CWMP CAC as the Wastewater Management Plan is developed. Stormwater management is one of the issues to be addressed in the CWMP. CAC meetings are held on a regular basis (usually monthly) and are televised on local cable access. CAC minutes and other documents are posted on tonw website. | Continue program. |
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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 4 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 5 |
|----------|---|-------------------------------|---------------------------------------|--|--|
| 3.1 | Stormwater System Mapping | DHE, DPW, GIS | Complete mapping by year 4 of program | Data collection commenced in March 2006. Approximately 50% of the town's infrastructure has been cataloged. Field work is estimated to be completed during the summer of 2007. QA/QC is estimated to be completed during fall/winter 2007. | Continue collection of field GPS data, integrate into GIS system. |
| Revised | | | | | |
| 3.2 | Identify and Document Illicit Connections | DPW, DHE | Document illicit connections | Progress limited to due staff time limitations. Past monitoring of | Staff training in the detection of illicit discharges. Continued monitoring of |

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|---------|---------------------------------------|----------|--|--|--|
| Revised | | | | | |
| 3.3 | 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. |
| Revised | | | | | |
| 3.4 | Review Existing Regulatory Mechanisms | DHE | Complete review by December 2004 | No progress, due to staff time limitations. | Complete review and recommend necessary additions/changes. |
| Revised | | | | | |
| 3.5 | Educational Flyer | DHE, DPW | Distributed annually | No progress, due to staff time limitations. | Develop and distribute flyer. |
| Revised | | | | | |
| Revised | | | | | |

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 4 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 5 |
|-----------------|--------------------------------------|---|--|--|---|
| 4.1 | Conservation Bylaw/Regulation Review | Conservation Commission/DHE | Necessary regulatory changes implemented | Goal met. | 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 | Goal met. | 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 TBD. Goal is dependent on community consensus on proposed zoning changes, this has been illusive so far. | Re-program to year 5. Review as propose bylaw changes are promulgated for comment. |
| Revised | | | | | |
| Revised | | | | | |
| 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 4 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 5 |
|-----------------|--------------------------------------|--------------------------------------|--|--|---|
| 5.1 | Conservation Bylaw/Regulation Review | Conservation Commission/DHE | Necessary regulatory changes implemented | Goal met. | Continue review and recommend additions/changes as new information becomes available. |
| Revised | | | | | |
| 5.2 | Subdivision Control Review | Planning Board, CDD, DHE | Necessary regulatory changes implemented | Goal met. | Continue review and recommend additions/changes as new information becomes available. |
| Revised | | | | | |
| 5.3 | 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 TBD. Goal is dependent on community consensus on proposed zoning changes, this has been illusive so far. | Re-program to year 5. Review as propose bylaw changes are promulgated for comment. |
| Revised | | | | | |
| Revised | | | | | |
| Revised | | | | | |

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| Revised | | | | | |
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5a. Additions

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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 4 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 5 |
|-----------------|------------------------|--------------------------------------|--|--|---|
| 6.1 | Catch Basin Cleaning | DPW | Clean/document 1/3 of town basins per year | Goal met. | Same as Year 3. |
| Revised | | | | | |
| 6.2 | Street Sweeping | DPW | Sweep/document roads once per year | Goal met. | Same as Year 3. |
| Revised | | | | | |

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|---------|--|---------------------------|-----------------------------------|---|--|
| 6.3 | Utilize Appropriate BMP's for All Municipal Projects | DPW, Building Maintenance | Document implementation | <p>Goal met, ongoing.</p> <p>New DPW building construction completed utilizing appropriate BMP's, including stat-of-the-art vehicle wash bay with 100% re-cycling.</p> <p>Construction completed of stormwater improvements to Stage Harbor Rd., Pond St., and Queen Anne Rd. at Oyster Pond resulting in elimination of stormwater discharge sites CHA-11 and CHA-13 utilizing multiple BMP's. CHA-12 being treated prior to discharge by StormCeptor unit..</p> <p>Design of improvements to Barn Hill Road and Landing utilizing multiple BMPs (CHA-5) complete; construction anticipated fall 2007.</p> <p>Re-design of town parking lot and adjacent private parking lot initiated, to include constructed wetland BMP for stormwater management. Preliminary design of new Police/Town Office Annex facility incorporates "rain gardens" for parking areas.</p> | Continue implementation of BMP's and initiate design for new projects. |
| Revised | | | | | |
| 6.4 | Pet Waste Control | DHE, Animal Control | Expand/document Mutt Mitt program | <p>Goal met.</p> <p>Mutt Mitt program continues to be funded and maintained by the Town. The total number of Mutt Mitt dispenser locations in Chatham is 21. Mutt Mitt program to be expanded along recently completed Chatham Rail Trail bicycle path.</p> | Same as Year 4. |

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|---------|-----------------|----------|---|---|---|
| Revised | | | | | |
| 6.5 | Annual Training | DPW, DHE | Held annually/participation documented. | No progress, due to staff time limitations. See 6a. below. | Program to be developed ad implemented in Year 5. |
| Revised | | | | | |
| Revised | | | | | |

6a. Additions

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|-----|-------------------------------------|----------|--|--|--|
| 6.6 | Stormwater staff Education/Training | DPW, DHE | Document participation. | Staff participated in “Project STORM”, the consortium of Cape Cod Phase II communities, that provides networking and training/education opportunities. DHE staff participated in a Project STORM sponsored field trip to the University of New Hampshire Stormwater BMP Training Facility. This provided an opportunity to view and discuss the research being conducted at the facility on the advantages/disadvantages/applicability of various stormwater BMPs. DHE staff participated in the Project STORM meeting on Financing Stormwater Programs on Cape Cod. | Continue to participate in Project STORM and take advantage of education /training opportunites. |
| 6.7 | DPW Permit Filing | DPW | File for applicable Conservation Permits | Goal Met. DPW routinely files for applicable permits. | Continue to file as applicable. |

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 4 (Reliance on non-municipal partners indicated, if any) | Planned Activities – Permit Year 5 |
|-----------------|---|--------------------------------------|--|---|--|
| 7.1 Revised | No Discharge Area (NDA) | DHE | NDA enacted | NDA previously established for Stage Harbor complex, with fixed pumpout facility at Harbormasters Office. | Work with Pleasant Bay Alliance on establishment of NDA for Pleasant Bay. |
| 7.2 Revised | Comprehensive Wastewater Management Plan (CWMP) | DHE, CAC, Water & Sewer | CWMP completed. Town Meeting action to begin implementation. | CWMP began in 1997; completion delayed due to initiation of MA Estuaries Project (MEP). All revised MEP reports received; MEP Cockle Cove Creek salt marsh study report received. | CWMP expected to be completed in summer 2007; to be filed with MEPA/DEP in fall 2007. Funding for 1 st phase of wastewater treatment facility upgrade/expansion to be sought at May 2008 Annual town Meeting. |
| 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. Draft CWMP/EIR expected to be completed in summer 2007.

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 | (%) | 321 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 | (%) | 100 |
| Estimated or actual number of outfalls | (#) | 30 |
| System-Wide mapping complete | (%) | 50 |
| Mapping method(s) | | |
| ▪ Paper/Mylar | (%) | |
| ▪ CADD | (%) | |
| ▪ GIS | (%) | 50 |
| Outfalls inspected/screened | (# or %) | |
| Illicit discharges identified | (#) | |

| | | |
|-----------------------------------|--------------------|----|
| Illicit connections removed | (#) (est. gpd) | |
| % of population on sewer | (%) | 5 |
| % of population on septic systems | (%) | 95 |
| | | |
| | | |

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.) | 600 L.F. |
| Qty. of screenings/debris removed from storm sewer infrastructure | (lbs. or tons) | 10 tons |
| Disposal or use of sweepings (landfill, POTW, compost, recycle for sand, beneficial use, etc.) | | Beneficial re-use being explored |
| Cost of screenings disposal | (\$) | |
| | | |
| | | |

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|--|----------------|---------|
| 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) | 3 |
| Qty. of sand/debris collected by sweeping | (lbs. or tons) | 40 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 %) | |
| | | |
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|--|---|--|
| 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) | |