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## 2001 Storm Drain Monitoring and Municipal Training Project

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# **2001 STORM DRAIN MONITORING AND MUNICIPAL TRAINING PROJECT**

## **A Final Report to The New Hampshire Estuaries Project**

Submitted by

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## **EXECUTIVE SUMMARY**

The New Hampshire Department of Environmental Services (DES) received funds in 2001 from the New Hampshire Estuaries Project (NHEP) to train municipal staff in coastal communities to identify illicit discharges. This final report describes the resulting training workshops that were held in January, 2003.

NHEP chose to fund this activity for a number of reasons. Primarily, it helped to fulfill one of the water quality action plans identified in the NHEP Management Plan. In addition, many coastal municipalities are now regulated under Phase II of the federal stormwater regulations. Regulated municipalities must develop best management practices to detect and eliminate illicit discharges into the municipal storm sewer system. DES has been investigating illicit discharges in the coastal watershed since 1996, and we thought it would be helpful to pass along the expertise we have developed in the last six years.

## **INTRODUCTION**

This final report describes the training sessions held for municipal officials in the Seacoast on the topic of investigating and locating illicit discharges into the storm drainage system. A Memorandum of Agreement (MOA) between NHEP and DES established funding for this project. DES held two, half-day training sessions in January 2003, one in Dover and one in Epping. Each training session offered four presentations from DES staff. NHEP funding paid for the printing costs of an illicit discharge detection and elimination manual, handout materials, compact discs containing all of DES's illicit discharge monitoring data in the coastal watershed, and food for the training sessions.

## **PROJECT GOALS AND OBJECTIVES**

The goal of the project was to hold training sessions for municipal officials to identify illicit connections. The project's objective is derived from one of the Action Plans identified in the NHEP Management Plan relating to water quality (see [www.state.nh.us/nhep/Mgtplan/mgtplan.htm](http://www.state.nh.us/nhep/Mgtplan/mgtplan.htm)). Action WQ-4A aims to establish on-going training and support for municipal personnel in monitoring storm drainage systems for illicit connections.

## **METHODS**

On March 14, 2001, the Governor and Executive Council approved an MOA between the New Hampshire Office of State Planning and DES to implement several NHEP actions to improve the environmental quality of the state's estuaries, including funding for the municipal training project.

The first step in preparing for the workshops was to develop a manual for illicit discharge detection and elimination. The MOA originally stated that DES would create a handbook to include equipment needs, laboratory fees, monitoring parameters and protocol, and a suggested

monitoring schedule. However, early in 2002, DES found out that the New England Interstate Water Pollution Control Commission (NEIWPCC) was planning to write a manual on illicit discharge detection and elimination. DES decided to offer assistance with the preparation of this manual instead of duplicating their efforts. The assistance included bringing NEIWPCC staff along for a day in the field to demonstrate common activities involved in illicit discharge investigations, including pulling manhole covers, dye testing, follow-up sampling, and conducting an outfall survey. DES also assisted NEIWPCC by providing editorial comments on several drafts of the report and supplying many of the photographs in the document. The final version of the manual was finished in early January, 2003 and was made available online at [www.neiwpcc.org/iddmanual.pdf](http://www.neiwpcc.org/iddmanual.pdf). NEIWPCC did not publish a paper version of the manual, but NHEP funding paid for copying and binding so that DES could distribute copies at the workshops.

Workshops were scheduled for the mornings of January 23, 2003 at the Dover Public Library and January 28, 2003 at the Epping Town Hall. "Save the date" postcards announcing the workshops were sent in late November to coastal officials and other interested parties. Invitations containing the agenda, directions, and a registration form were mailed on December 20, 2002 and posted on the DES website. Participants were able to register online or by mailing or faxing the registration form. Online registration made up 52 percent of the 50 responses.

DES prepared a packet that included the following materials:

- A compact disc containing the following files:
  - DES's coastal illicit discharge investigation sampling data, 1996-2002.
  - sample field survey forms.
  - a copy of Rob Livingston's presentation.
- Illicit Discharge Detection and Elimination Manual: A Handbook for Municipalities, NEIWPCC, January, 2003.
- Handouts of the Powerpoint presentations.
- Reference information, including sample fact sheets, outreach, funding information, and field survey publications.

## **RESULTS AND DISCUSSION**

The agenda for the workshops follows.

**Illicit Discharge Detection and Elimination (IDDE) Workshops**  
**AGENDA**

January 23, 2003 at Dover Public Library  
January 28, 2003 at Epping Town Hall  
9:00 AM to 1:00 PM

- |             |  |                        |
|-------------|--|------------------------|
| 8:45-9:00   | Registration (coffee and snacks provided)  |                        |
| 9:00-9:05   | Welcome  | Andrea Donlon, NHDES   |
| 9:05-9:20   | Quick summary of Phase II regulation   | Jeff Andrews, NHDES    |
| 9:20-9:50   | The basic requirements of IDDE <ul style="list-style-type: none"><li>▪ Storm drainage map</li><li>▪ Ordinance</li><li>▪ Plan</li><li>▪ Outreach and Education</li><li>▪ How to fill out the NPDES permit for this control measure</li></ul>  | Andrea Donlon, NHDES   |
| 9:50-10:35  | Detecting and eliminating illicit discharges – “how to” <ul style="list-style-type: none"><li>▪ Outfall surveys and observations</li><li>▪ Sampling</li><li>▪ Dye testing</li><li>▪ Smoke testing</li><li>▪ Fixing</li><li>▪ Summary of what DES has done in coastal watershed 1996-present (pertinent sampling data will be given out to individual towns and cities)</li></ul> | Rob Livingston, NHDES  |
| 10:35-10:45 | BREAK  |                        |
| 10:45-11:00 | Enforcement issues   | Sharon Ducharme, NHDES |
| 11:00-11:15 | Funding opportunities  | Andrea Donlon, NHDES   |
| 11:15-12:15 | Round table discussion of participants/case studies/lingering questions  |                        |
| 12:15-12:45 | LUNCH (provided, free)   |                        |
| 12:45-1:00  | <b>Live demonstration</b> outside (optional) <ul style="list-style-type: none"><li>▪ Smoke testing and sampling of known illicit discharge within walking distance</li></ul>   | Rob Livingston, NHDES  |

A total of 33 people were present at the Dover workshop, and 27 attended the Epping workshop. Representatives from Brentwood, Dover, Durham, Epping, Exeter, Greenland, Milton, North Hampton, Portsmouth, Raymond, Rochester, and Somersworth attended, along with staff from the U.S. Environmental Protection Agency (USEPA); New Hampshire Department of Transportation (DOT); New Hampshire Office of State Planning; NHEP; DES; the University of New Hampshire Water Utilities; University of New Hampshire Technology

Transfer Center (UNH-T<sup>2</sup>); Maine Department of Environmental Protection; the city of Winooski, Vermont; and several consulting firms.

In general, the presentations were well received, and questions and comments provided lively discussions throughout the day. It was particularly useful to have representatives from the municipalities in the same room at the same time to compare experiences.

Unfortunately, complications prevented the live demonstrations from happening. In Dover, the weather was too cold and windy and the illicit discharge had been fixed just two weeks before. In Epping, the smoke blower could not get started because the temperatures were too cold.

The workshops were deemed helpful enough that UNH-T<sup>2</sup> hosted an additional workshop in the Merrimack watershed. This event was held at Fratello's Restaurant in Manchester on February 19, 2003. The content and speakers were the same as the coastal workshops, except a session presenting DOT's Phase II stormwater program was added in the afternoon.

## **CONCLUSIONS AND RECOMMENDATIONS**

The workshops were an excellent opportunity for DES to pass along expertise to municipalities, and they provided a timely forum for the municipalities to air concerns and ask questions of EPA and DES about the Phase II stormwater regulations. Responses from workshop evaluation forms were positive. In evaluation forms, workshop attendees mentioned wanting assistance on the other five minimum control measures of Phase II, the construction general permit of Phase II (DES and EPA already held workshops on this during the summer of 2002), and more information about funding opportunities.

As communities begin to implement the best management practices listed in stormwater permits, there may be future training needs. DES has been meeting with representatives from EPA, DOT, and UNH-T<sup>2</sup> several times a year to discuss coordination of Phase II regulations. Future training opportunities will be identified at these meetings. At this time, DES does not have a recommendation for future workshops to be funded by NHEP.