

# **Dover New Hampshire Stormwater Utility Feasibility Study Final Report**

A Final Report to

The New Hampshire Department of Environmental Services

Submitted by

**Dean Peschel, Community Services Department,  
City of Dover, New Hampshire  
288 Central Ave  
Dover, NH 03820**

For New Hampshire Department of Environmental Services'  
2009 Stormwater Utility Feasibility Study Grant

November, 2011

Funding for this project was provided in part by a Watershed Assistance Grant from the NH Department of Environmental Services with Clean Water Act Section 319 funds from the U.S. Environmental Protection Agency.



# Dover Stormwater Utility Feasibility Study Final Report

## Contents Outline:

1. General Project Information.
  - a) Identification of key players and participants.
  - b) Final study budget breakdown and match sources.  
Explanation of costs that were either over- or under-estimated.
  - c) Final project outcome.
  
2. Lessons Learned.
  - a) Analysis of the scope of work.  
How you implemented and the usefulness of the tasks in the scope of work.  
Description of the most important elements leading to the final outcome.  
Description of the least important or effective elements or exercises.
  - b) What worked well.
  - c) What you would do differently?
  
3. Next Steps.
  - a) Likelihood that the recommendations of the implementation plan will be applied.
  
4. Attachments of material required in grant agreement deliverables.

## 1. General Project Information

**1-a) Identification of key players and participants:** The City of Dover Stormwater Utility Feasibility study involved a number of people. City Staff prepared, RFQ and interviewed several respondents to select a consultant, GHD, to work in partnership and lead an Ad-hoc committee of Dover stakeholders appointed by the City Council. Key City staff included Douglas Steele, Director of Community Services, Bill Boulanger, Superintendent of Public Works & Utilities, Dean Peschel, Environmental Projects Manager, Dan Lynch, Finance Director and Kathleen Meyers, GIS Technician. The Ad-hoc Committee was chaired by Jan Nedelka, City Councilman. The rest of the committee included Vice Chair Dorothea Hooper, City Councilwoman, Gary Green, Planning Board member, Jay Stephens, Dover Utilities Commission member, Chad Kageleiry, commercial real estate developer, Dana Lynch, owner of a local engineering firm representing the Dover Chamber of Commerce, Raymond Bardwell, a former City engineer and businessman, Chris Nash and Dennis Ciotti, a local businessman and former City Councilor.

The GHD team included Alyson Watson, Bill Hall and Rick Shafer and Anastasia . Barbara McMillan of NHDES participated in the project representing the grantor. Others who participated in the process were Joe Boucher, Drain division foreman, Chris Parker, Planning Director, Stacey Hager, Community Services Business Manager and Marcia Gasses, Planning Board Chair.

**1-b) Final study budget breakdown and match sources:** The project was completed on budget with one amendment for addition impervious cover data. During the course of the study, the City authorized a contract amendment to perform impervious surface calculations on 100 percent of the commercial and industrial properties and a selected sample set of residential properties representing the various neighborhoods/types found in Dover. The total contract with GHD was \$84,149.00. The original grant project budget was \$45,843, \$27,500 grant and \$18,343 matched by the City. The original contract price with GHD was a fixed fee lump sum of \$49,737. The City elected to amend the contract to calculate impervious cover measurements which added \$34,412 to the initial contract cost.

**1-c) Final project outcome:** The committee met five times over a six month period and concluded in a find report to the City Council that a budget increase was necessary to adequately fund storm water operations and that establishing a utility would provide the most equitable and reliable funding method for the City of Dover. Many good things came out of the feasibility process. A citizen committee representing various stakeholder groups that would be affected by the outcome of the committee's recommendation were able to work cooperatively and despite concerns and misgivings unanimously voted to support the formation of a storm water utility.

On the other side of the coin, once the committee report was presented to the City Council and public meetings were held to educate and inform the citizens. The meetings were attended and dominated by a small group of citizens strongly opposed to establishing the utility. The well organized opposition spoke at a public hearing held at the City Council. More than twenty of them spoke in opposition speaking with the following common themes:

1. Not wanting to be the first utility in NH.
2. Fed up with unfunded federal mandates.
3. New MS4 permit not yet issued.
4. No new taxes.
5. Lack of trust in government.

Considering the overwhelming negative response at the public hearing voted down the formation of a storm water utility in Dover. The City Council felt that much was learned by the feasibility process but that establishing a utility at this time in Dover was premature.

## 2. Lessons Learned

### 2-a) Analysis of the Scope of Work:

- **Task 1. Request for Qualifications** Five highly qualified firms responded to an RFQ issued by the City. Interviews with the five responding consultants were very helpful for actual comparisons of ability to conduct a stormwater feasibility study. Each consultant was able to provide a presentation that outlined their strong points for completing the tasks and highlighted some innovative approaches to consider. The interview process though time consuming was very fruitful as we modified our scope to incorporate specific ideas learned from their experience.
- **Task 2. Stormwater Utility Development Workshops:** Using a stakeholder driven process that included the Stormwater Study Committee (committee) including city councilors and area businesses providing a good reality check and an opportunity to empower some of the most likely to oppose the utility to be part of the process. Meetings and presentations appeared to be very effective in providing the appropriate timing and content to promote questions and buy-in on solutions. See appendixes for meeting agendas and notes or video. Stakeholders included: A local design engineer (chamber of commerce) large property owner/commercial developer, city council members, interested citizens, nonprofits, and a representative from the Dover Utility Commission, and Planning Board.
- **Task 3. Stormwater Program Analysis and Planning:** A totally necessary task, the timing of producing this information provided a nice framework for discussion and decision making among that committee. In addition, it provided the background for presentation to the city council and was outlined to answer any questions or concerns that came up. The resulting documentation now enables the stormwater program to be in the budget and creates better transparency and planning tools.
- **Task 4. Compelling Case:** Under the compelling case workshop it was a great stakeholder group for discussion. Some were really against a stormwater utility. Some were claiming that they already pay more taxes. Many diverse points of view were discussed and addressed.

- **Task 5. Education and Outreach Strategies:** GHD presented a comprehensive outreach strategy to the committee that included some branding and marketing of the program. This appeared to be a lot more effort than the committee felt was needed and they were decided not to pursue such an extensive effort. The committee members were confident in getting support for the utility and cut out most of the outreach plan. In hindsight, it may have been more productive to examine the outreach plan closer and to prioritize some of the suggestions rather than eliminating them considering the lack of support at the City Council Public Hearing. That said the current economic and political climate may have over shadowed any public education and outreach program in the end.
- **Task 6. Data Compilation for Rate Methodology:** This was a necessary task to include in the feasibility study. It gave the committee the basis of understanding of how a rate structure would be applied in Dover to insure it was equitable and defensible. It appeared to provide the Committee with a great deal of confidence in the process while addressing many of their concerns and questions that had come up earlier in the process.
- **Task 7. Rate Structure Analysis:** This was an important task that worked well with the committee participating in the process. The consultant provided the Committee with various options of how the rate could be structured. The consultant wisely let the Committee work their way through the process of deciding which option was right for Dover. Making the rate structure fair , understandable to everyone, and manageable is an awkward process as there are many considerations both practical and emotional that needed to be worked through. To keep it simple, the committee eventually decided that they would not recommend a tiered structure for the residential rate.
- **Task 8. Billing methodology:** Seemed like a fairly easy process. Three methods, tax bill, sewer bill, stormwater – separate bill. It might not need to be a part of the public process since it is more internal although having the committee participate did alleviate earlier concerns about increased workload etc.
- **Task 9. Recommendations:** Already have a structure in place and it would just change from one division to another (budgeting). Didn't see this as an issue – because superintendent handles all functions.
- **Task 10. Final Feasibility Study Report:** No comment.
- **Task 11. Presentation and Final Recommendations:** Most of the comments about this task are included in section 2-b) and 2-c).
- **Task 12. Final Grant Report:**

## **2-b) What worked well.**

The interview process was helpful to get a good idea of the consultants experience and their proposed process. The Ad-hoc Committee was very formal and took their responsibility seriously.

Many good things came out of the feasibility process. A citizen committee representing various stakeholder groups that would be affected by the outcome of the committee's recommendation were able to work cooperatively and despite concerns and misgivings unanimously voted to support the formation of a storm water utility.

Conducting question and answer sessions before the public hearing seemed to be productive. It allowed an opportunity for the public and opportunity to be heard and to show the committee what type of concerns they had. However, there were some problems with the public appearing to have their questions and concerns alleviated at the public meetings but indicating that they were still opposed to the formation of the utility to the city council during the public hearing.

The presentation to the City Council was given by the Councilor who served as the Chair of the Stormwater Ad Hoc Committee. Due to his extensive knowledge about the subject and his excellent presentation, this provided a good opportunity to present the information from what appeared to be a less biased point of view and to provide a history of the process that included his own skepticism in the beginning of the process.

## **2-c) What Would You Do Differently?**

Looking back it is always easy to identify what one would do differently. In general the public stakeholder process was a very successful approach gaining the buy-in of key people that would be most affected by a stormwater utility. However, the success with gaining this sector's support may have created a bit of a false sense of security that didn't take into consideration the opponents that were not part of the process and would strongly voice their concerns during the public process.

Although perspectives were different, depending on one's role in this study, there was a fair amount of agreement about what might be done differently if this process were to be repeated. Some of the recommendations below could also be used by other New Hampshire municipalities looking to identify a stormwater program funding mechanism

- Have the Committee members attend the city council meeting/public hearing and talk in support of the Committee's recommendation.
- Wait until the federal MS4 permit is out rather than using the draft as the reason for some increased costs.
- Notify and secure attendance from representatives in favor of the utility, i.e., local environmental organizations, local residents, etc.
- Consider specific barriers and adjust messages and timing, i.e., present difficult economic times, no trust in municipal, state, and federal government, strong opposition to taxes, no existing federal mandate to make changes.

Some recommendations were not as clear and seemed to be things that just needed to be considered rather than suggested changes.

- Consider including a tiered structure for the residential rate in order to be more equitable and to address the feeling of subsidizing one's neighbor with a large house and driveway.
- Providing more time between the presentation to the council and the public hearing might have helped if the time was used to get more buy-in. However, this may provide an opportunity for the opposition to garner more support.
- Approach and meet with the newspaper ahead of time to get them to participate in the process. However, the newspaper appeared to be against the utility from the start so it may not have helped.

**Comments from GHD Lead Consultant:**

1- Wait until the NPDES permit is finalized before going to Council. With the permit in draft form, the basis for the utility - increased permit requirements - was not a firm mandate, which provided reason to postpone. We could have shelved the work and the recommendation for a couple of extra months.

2- Implement targeted public outreach. Jan did host a few public meetings in advance of the council meeting aimed at educating the general public, but we did not implement an outreach program targeted at generating support for the utility. At a minimum, we should have reached out to local environmental organizations that would be expected to support the utility so that we would have had some supporters at the council meeting.

3- Call the Committee members to request their attendance at the Council meeting. I think we did a great job with the Committee, and it seemed as though some of the Council members felt a bit bad about going against the Committee recommendation. Having them speak at the meeting in favor of the utility would have helped. As it happened, only one Committee member spoke at the meeting.

I think that's it. The main things would be waiting until there is an undeniable need, and giving the Council the ammo to pass a new fee by having some supporters in the room during the hearing. The best way to get those supporters is through targeted outreach. This could also help to correct some of the misinformation that was being spread, but the main purpose would really have been to identify and rally some supporters.

One of the strengths of Dover's process was that it was open and transparent and support from a very well-balanced committee helped the overall cause, but we could have used more outreach in advance of the vote. I would strongly encourage others to take the time to do this, even if they do not think it is necessary.

**3. Next Steps:**

The City Council voted not to establish a Stormwater Utility in February 2011, indicating that it would be premature to do so at this time. The current economic climate will need to brighten substantially and the reality of an increasing storm water budget to meet regulatory

requirements on the City General Fund. Two conditions will need to change before the establishment of a utility for storm water would be politically acceptable.

#### **4. Appendices: Material required in grant agreement deliverables**

Appendix A: Grant Application

Appendix B: Consultant RFP

Appendix C: Consultant BID Results

Appendix D; Consultant Contract: Sterns and Wheler Stormwater Study

Appendix E: Stormwater Committee Resolution

Appendix F: Stormwater Committee Governing Procedures

Appendix G: December, 2009 Progress Report

Appendix H: June, 2010 Progress Report

Appendix I: Meeting or workshop promotional materials

- Stormwater Utility Ad-hoc Committee Webpage
- Stormwater Utility Workshop Webpage

Appendix J: Final Feasibility Study – Includes:

- Research and Recommendations
- Meeting minutes and/or workshop summaries
- Stakeholder presentations
- Public Outreach Plan

Appendix K: Related outreach documents, presentations, and press

- Foster's Article #1: *Dover Residents Blasts Stormwater Utility Plan*
- Foster's Article #2: *Dover Council Rejects Stormwater Utility Plan*
- Foster's Announcement of Q and A Session

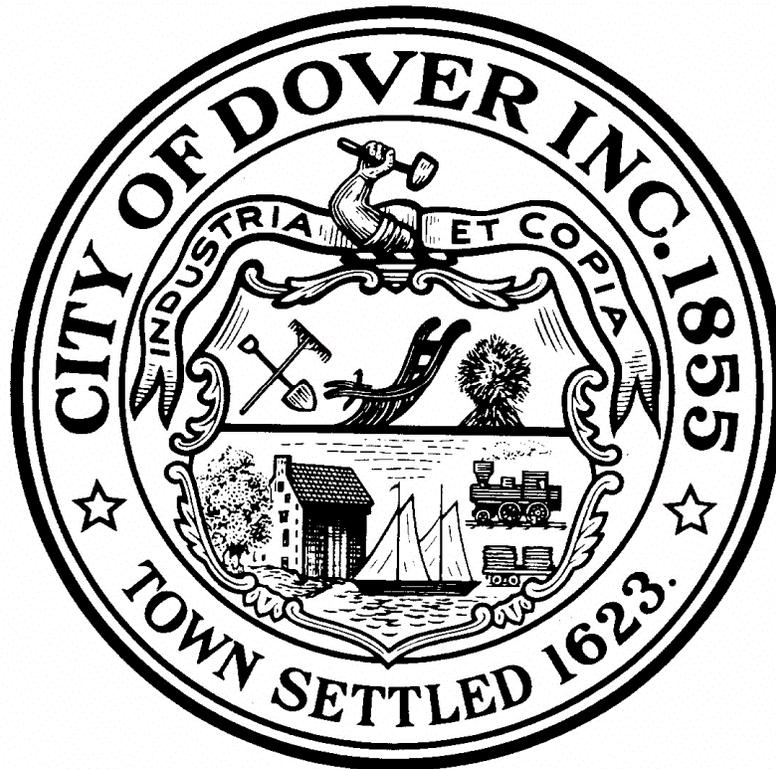
**Appendix A:**

**Grant Application**

**City of Dover New Hampshire  
Grant Proposal To Conduct a  
Municipal Stormwater Feasibility Study**

**Submitted To NHDES**

**March 11, 2009**



Prepared By: Dean Peschel  
Dover Environmental Project Manager

## **City of Dover Proposal to Investigate the Feasibility of Establishing a Municipal Stormwater Utility**

### ***Background:***

The City of Dover with a population of nearly 30,000 is a MS4 community subject to the US EPA Phase II stormwater regulations. Dover like many other communities around the country has directed many resources to maintain its sanitary sewer system following separation projects during the 1970's. The City established a sewer utility which relies on users to pay fees to finance its operations. The storm drainage system left to convey runoff from the streets remained the responsibility of the Highway Division. The drainage system is funded from the General Fund portion of the City budget and has received a low priority compared to other City needs. Consequently, older portions of the stormwater system have fallen into disrepair. The EPA Phase II stormwater regulations adopted in 2003 were developed in recognition that stormwater is a major contributor to surface and groundwater quality degradation. The regulations require regulated communities to develop and implement a Stormwater Management Plan to better manage and ultimately improve the water quality of stormwater discharges to our streams, lakes, river and estuaries. In order for the City of Dover to meet the long term commitment that will be required by EPA to meet the goal of improving water quality discharging from our stormwater collection system, it is clear that significantly more funding will be necessary for years to come. How Dover will accomplish this needs exploration. The General Fund relies on the City's property tax as the primary source funding for City services. It is subject to the many variables such as competing programs like schools, and public safety; and public sentiment about the affordability of local taxes, which makes reliability of funding from year to year somewhat unpredictable. The other potential source of revenue to fund a stormwater program is the establishment of a Stormwater Utility. The public water and wastewater systems in Dover are utilities and collect revenue via user fees from customers to finance their operations.

Dover staff, Planning Board, and Conservation commission members along with interested residents have been engaged during the last two years with NROC program focusing on stormwater in Dover. The initial NROC effort resulted in two presentations regarding stormwater in Dover to determine the most pressing issues relating to stormwater. The first was given to City staff including Public Works, Utilities, Facilities and Grounds, Inspection services, Police and Fire. The second presentation was geared toward the Boards, Commissions, the City Council as well as the public at large. Both presentations sought to educate the audience about stormwater and its impacts to natural resources, explain what stormwater efforts are under way in Dover, and ask what issues need more attention. Funding future stormwater requirements was at the top of the list. A third presentation was given at a Dover City Council workshop on March 4, 2009. The purpose of the presentation was to review with the City Council elements of the Phase II program, highlight what has been accomplished during the first permit, explain what is proposed in the second permit and implications on the proposed FY 2010 budget as well as the following 4 years, and most importantly begin a dialogue on how the City of Dover

wants to fund the stormwater program in the future. I have included the slides from the March 4<sup>th</sup> workshop presentation as a reference document to the application.

A DIMS study was conducted for the city with assistance from Barbara McMillan of the NHDES Coastal Program and Lisa Loosigan an intern. A copy of the DIMS Study findings accompanies this grant request as it contains most of the required demographic and baseline information required in the grant application.

***Compelling Case:***

There are a number of drivers that make for a compelling case to consider establishing a Stormwater Utility in Dover. The EPA mandate has placed stormwater and the need for improving the management of stormwater front and center. The age and condition of the stormwater infrastructure in the urbanized area of the city demands attention following many years of neglect. Current economic conditions and a 2% annual increase tax cap on the General Fund budget will make additional funding for stormwater improvements very difficult. Dover currently has a water utility and a wastewater utility. The City also adopted a pay as you throw solid waste program in concert with an aggressive weekly curbside recycling program in the 1990's. The City has also implemented a heavily dependent user fee recreation program to maintain and expand its extensive recreational facilities. Dover residents are aware of and enjoy the quality of life they enjoy and wish to preserve it. Development has not only changed the character of the community, but has also placed strains on the city's infrastructure and schools. In an effort to retain the rural character, limit development, and preserve open space Dover has invested several million dollars in protecting open space through conservation easements and fee simple purchases of land. All of these factors support the concept that Dover is willing to protect and preserve natural resources that contribute to quality of life, and that the community is cost conscious and willing to adopt user fee based services to pay for needed and desired programs.

The DIMS report also provides additional information to support the case to explore a stormwater utility in Dover.

***Program Priorities:***

The Dover stormwater program is currently a patch work of individual activities conducted by numerous entities and individuals in City government to meet the current EPA mandate and maintain the existing infrastructure. As the EPA mandate broadens and requires more and more from the regulated communities it will demand more funding to fulfill those mandate. The first priority of the program is to establish a reliable funding stream to support the stormwater program.

Assessing the condition of the entire stormwater system and developing a rehabilitation plan for the aged portions in dire need of upgrading and replacement is necessary. Recent flooding during the past few years has shown that some road culverts and underground storm piping are inadequate and must be addressed to prevent similar flooding in the future. The identification of opportunities to reduce runoff volumes in watersheds with a

high percentage of impervious cover and the implementation of innovative solutions such as rain barrels and rain gardens will relieve some of the flooding pressures.

Step up the implementation of the IDDE program that the city and NHDES have cooperatively developed in Dover over the past 10 years. Many illicit connections have been discovered and remediated during the 10 years. An IDDE program was developed in 2007 for the city where priority areas were identified. While some work has been accomplished and additional illicit connections removed from the drainage system, a lack of resources has held back the implementation of a concerted effort to implement the plan.

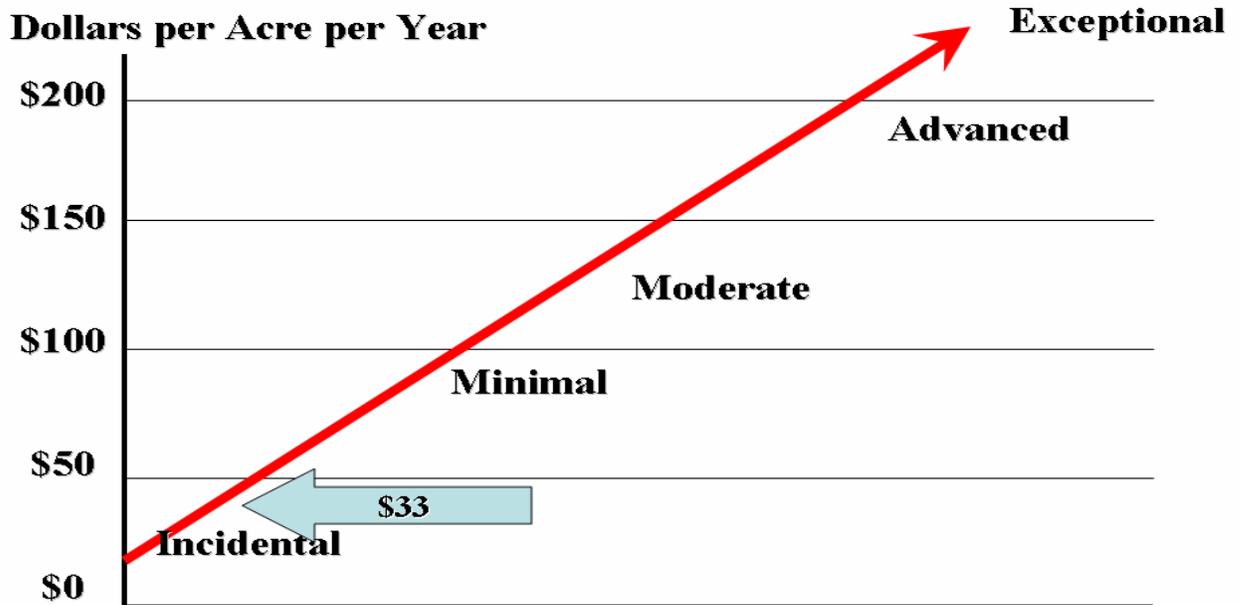
Finally, obtaining the resources necessary to carry out the catch basin and pipe cleaning program at the level needed to restore the pipe capacity following years of poor maintenance will improve flooding situations and improve the water quality of discharges from the system.

***Program Costs and Revenue:***

Program costs currently for the City of Dover are in the neighborhood of \$250,000 annually.

See the chart taken from the “Stormwater Feasibility Study” for Manchester NH prepared by CDM Engineers, Figure1. Dover’s current expenditures for operating its stormwater system, when compared to other communities around the United States, show an incidental level of stormwater program investment. The values on the chart are expressed in terms of dollars per developed acre per year spent on stormwater and provide a broad level of comparison and bracketing for planning purposes.

# Stormwater Program Costs



**Figure 1** ( Taken from the “Stormwater Feasibility Study” for Manchester NH prepared by CDM Engineers)

As you can see on Figure 1 Manchester is spending \$33 per developed acre annually. Dover has an estimated 8,000 developed acres resulting in a \$32 per acre current annual funding, or an incidental investment level. Assuming a \$125 per acre level of funding to bring Dover to a moderate investment level, Dover would expect to spend \$1,000,000 annually. While this may seem shocking Table 2 offers a side by side comparison of the Dover Stormwater system and Wastewater collection system.

<i>Stormwater System</i>	<i>Sewer System</i>
2857 Catch Basins	2835 Sewers Manholes
650 Manholes	Pump Stations
65 miles of pipe	119 miles of pipe
140 culverts	
101 miles of open drainage	
204 discharges	
Annual Budget \$250,000	Annual Budget \$4,300,000

**Table 2**

The comparison points out the similar size and huge disparity in annual funding of the two systems. While pump station maintenance and electrical costs account for a portion of the difference, a field inspection of the two systems would immediately reveal the sad consequences of the disparity in maintenance. While \$1,000,000 may be a goal to aim toward, it is likely the implementation of a budget would be phased in over time, and reflect the actual needs of the Dover system resulting from a plan based on existing conditions of the infrastructure and program requirements defined in the Stormwater Management Plan to fulfill mandates. Such a budget would be developed in a conceptual form during the feasibility study.

***Implementation Needs and Potential Barriers:***

The attached DIMS report comprehensively details the implementation needs and potential barriers for the establishment of a stormwater utility in Dover. To summarize the need four primary drivers are:

- aging neglected stormwater infrastructure,
- maintain quality of life
- flooding, and
- finding the money to pay cost to meet regulatory mandates in a tight municipal budget environment

To summarize the potential barriers include:

- tight budget –Tax cap
- lack of awareness regarding stormwater by public
- gaining consensus on fairness of who pays

***Roadmap:***

- Apply for and win Stormwater Utility Grant
- Identify a qualified, experienced consultant through RFQ to partner with City staff to conduct a feasibility study
- Engage local stakeholders in stormwater utility feasibility process
- Conduct the feasibility study including the six topics outlined in the NHDES RFQ
- Prepare and present feasibility report to City Council with recommendation based on report.
- If the City Council decides to move forward in the establishment of a stormwater utility, a program development would be set in motion and could take the form of a Stormwater Utility Implementation Plan. The plan would detail the following elements:
  - Development of a Utility budget
    - O & M costs
    - Capital Improvements
    - EPA Phase II regulatory obligations
  - Identify an equitable user fee formula
  - Update City ordinances and regulations to provide needed authorities
  - Identify billing and revenue collection methodology

# **DIMMS Study**

*(Does It Make Sense?)*

**Stormwater Presentation to  
Dover City Council  
March 4, 2009**

**Appendix B:**

**Consultant RFP**

DANIEL R. LYNCH  
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[d.lynych@dover.nh.gov](mailto:d.lynych@dover.nh.gov)

ANN M. LEGERE  
Purchasing Agent  
[a.legere@dover.nh.gov](mailto:a.legere@dover.nh.gov)



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## *City of Dover, New Hampshire* OFFICE OF THE FINANCE DIRECTOR

November 24, 2009

### **REQUEST FOR PROPOSAL #B10034** **Municipal Stormwater Utility Feasibility Study**

You are cordially invited to submit a Proposal for **Municipal Stormwater Utility Feasibility Study** in accordance with the attached specifications, terms and conditions. Prospective respondents are advised to read this information over carefully prior to submitting a proposal.

**Six (6) copies of the Proposal must be submitted in a sealed envelope, plainly marked:**

**RFP #B10034 - Municipal Stormwater Utility Feasibility Study**

**Purchasing/Finance Office  
City of Dover  
288 Central Ave 2<sup>nd</sup>. Floor  
Dover NH 03820**

All proposals/bids must be received by **December 22, 2009 at 2:30 p.m. EST**

AML:kjn  
Attachments

**\*IMPORTANT:** In order to be notified of any future bids associated with your service, please visit our new web page, [www.dover.nh.gov](http://www.dover.nh.gov) proceed to the Finance/Purchasing/Bids page and add your company to our vendor database.. *Contracted Service Code 15 - Engineers*

*Vendors wishing to respond to a bid request with alternates to specifications must notify the Purchasing Office no less than five (5) business days prior to the bid request opening date. If the proposed changes are acceptable, the City will advise other potential respondents, thereby maintaining equality in the bid process. Failure to advise the City could result either in rejection of the alternate proposal or in an untimely extension of the sealed bid process.*

*Vendors may be asked, as part of the bid evaluation process, to supply company financial information. This data will be held in the strictest confidence and be utilized only to help assess the stability of a responding firm. The records will be returned to you after identifying the successful respondent to the bid request.*



CITY OF DOVER

## REQUEST FOR BID, PROPOSAL, QUOTATION

Request Type	RFP	Number:	<b>B10034</b>
Title	<b>Municipal Stormwater Utility Feasibility Study</b>		
Date	Nov 23, 2009		

### **I. INTRODUCTION**

The City of Dover is requesting written proposals from qualified applicants to assist with a stormwater utility feasibility study.

Sealed proposals, plainly marked, **RFP #B10034 “MUNICIPAL STORMWATER UTILITY FEASIBILITY STUDY”** addressed to the Finance/Purchasing Department, Dover City Hall, 288 Central Avenue, 2<sup>nd</sup>. floor Dover, New Hampshire, 03820. Proposals will be accepted until **December 22, 2009 at 2:30 p.m.**

**PROPOSALS RECEIVED AFTER 2:00 P.M. WILL BE PLACED IN THE FILE UNOPENED AND WILL NOT BE CONSIDERED.**

Proposal specifications may be obtained from the Finance/Purchasing Department on the top floor at the above address, or at [www.dover.nh.gov](http://www.dover.nh.gov). Addenda to this request for proposal, if any, including written answers to questions, will be posted on the City of Dover website at <http://www.dover.nh.gov/finbids.htm> under the proper heading. Addenda and updates will **NOT** be sent directly to vendors. Questions may be addressed to the Purchasing Agent.

Firms may contact Dean Peschel with the City of Dover at 603-516-6094 for additional information.

If you have any questions pertaining to the submittal and review process of this request for proposal please contact Ann M. Legere, Purchasing Agent at: [a.legere@dover.nh.gov](mailto:a.legere@dover.nh.gov)

### **II. GENERAL REQUIREMENTS**

Vendors making proposals must respond in writing to all requirements of this Request for Proposal (RFP). Responses should reflect detailed considerations of the issues and opportunities presented by this specific project. Any additional information or tasks that are felt to be relevant by the responding firm should be included together with the submittal requirements.

No late, email or facsimile proposals will be accepted.

Costs incurred for the preparation of a proposal in response to this RFP shall be the sole responsibility of the vendor submitting the proposal. The City of Dover reserves the right to select or reject any vendor that it deems to be in the best interest to accomplish the project specified. The City reserves the right to accept the proposal on one or more items of a proposal, on all items of a proposal or any combination of items. The City reserves the right to discontinue the selection process at any time prior to the awarding of a contract. The City reserves the right to waive defects and informalities of the proposals.



CITY OF DOVER

## REQUEST FOR BID, PROPOSAL, QUOTATION

Request Type RFP

Number: **B10034**

Title **Municipal Stormwater Utility Feasibility Study**

Date Nov 23, 2009

### **III PROJECT REQUIREMENTS**

#### **INTENT OF SOLICITATION**

The City of Dover (City) is soliciting competitive proposals from qualified applicants to conduct a stormwater utility feasibility study for the City. The feasibility study will cover governance, public outreach, and identify program priorities - problems and needs, funding development, and database management issues. The study will evaluate the different types of stormwater funding mechanisms, ranging from annual taxes to user fees, various types of user fees as well as assess the implementation costs associated with a stormwater utility. Ultimately the study will identify the most appropriate potential solutions for the City of Dover as well as bringing the issue to the forefront of policy makers, administrators and residents.

For a more complete description of service requirements refer to **SECTION V, SCOPE OF SERVICES**.

Addenda to this proposal, if any, including written answers to questions, will be posted on the City of Dover website at <http://www.dover.nh.gov/> under the project heading. Addenda and updates will **NOT** be sent directly to firms. Contractors submitting a proposal should check the web site daily for addenda and updates after the release date. Firms should print out, sign and return addenda with the proposal. Failure to do so may result in disqualification.

### **IV INFORMATION AVAILABLE**

#### **BACKGROUND**

The City of Dover, located in Seacoast New Hampshire, has a population of approximately 29,000 and consists of approximately 28 square miles. Dover operates under the Council-Manager form of government; 9 Councilors serve for a 2-year term and the City Manager is appointed by the Council. The Dover Mayor and City Council are aided in governing the City by various volunteer advisory boards and commissions.

Under the City Manager's direction, are the Finance Department and the Community Services Department. The Finance Department serves residents, officials and all City departments with financial accountability, timely reporting of financial results and prudent cash management. The department also monitors and analyzes the activities of expenditures and revenues; collects revenues; prepares documentation and coordinates the sale of bonds to fund capital projects; and administers the purchasing procedures.

The Community Services Department consists of eight Divisions. Of the eight Divisions the Highway, Environmental and Sewer Divisions implement the stormwater management



CITY OF DOVER

## REQUEST FOR BID, PROPOSAL, QUOTATION

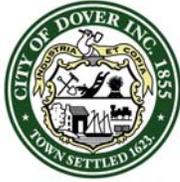
Request Type	RFP	Number:	<b>B10034</b>
Title	<b>Municipal Stormwater Utility Feasibility Study</b>		
Date	Nov 23, 2009		

program. The Highway Division's primary responsibility is maintaining all City streets, including cleaning and plowing more than 100 miles of streets - and 49 miles of sidewalks. It also maintains the City's stormwater drainage system with more than 2800 catch basins, 65 manholes, 65 miles of storm sewers, more than 200 discharge locations and over 100 miles of open drainage.

The Sewer Division performs catch-basin cleaning primarily on an emergency basis and is responsible for implementing the Illicit Discharge Detection and Elimination program.

The City of Dover is a MS4 community subject to the US EPA Phase II stormwater regulations. Dover like many other communities around the country has directed many resources to maintain its sanitary sewer system following separation projects during the 1970's. The City established a sewer utility which relies on users to pay fees to finance its operations. The storm drainage system left to convey runoff from the streets remained the responsibility of the Highway Division. The drainage system maintenance is funded from the General Fund portion of the annual City budget and has received a low priority compared to other City needs. Large scale improvements are financed through the Capital Improvements Plan budget process also under the General Fund. Consequently, older portions of the stormwater system have fallen into disrepair. The EPA Phase II stormwater regulations adopted in 2003 were developed in recognition that stormwater is a major contributor to surface and groundwater quality degradation. The regulations require regulated communities to develop and implement a Stormwater Management Plan to better manage and ultimately improve the water quality of stormwater discharges to our streams, lakes, river and estuaries. In order for the City of Dover to meet the long term commitment that will be required by EPA to meet the goal of improving water quality discharging from our stormwater collection system, it is clear that significantly more funding will be necessary for years to come. How Dover will accomplish this needs exploration. The General Fund relies on the City's property tax as the primary source funding for City services. It is subject to the many variables such as competing programs like schools, and public safety; and public sentiment about the affordability of local taxes, which makes reliability of funding from year to year somewhat unpredictable. The other potential source of revenue to fund a stormwater program is the establishment of a Stormwater Utility. The public water and wastewater systems in Dover are utilities and collect revenue via user fees from customers to finance their operations.

Dover staff, Planning Board, and Conservation commission members along with interested residents have been engaged during the last two years with NROC program focusing on stormwater in Dover. The initial NROC effort resulted in two presentations regarding stormwater in Dover to determine the most pressing issues relating to stormwater. The first was given to City staff including Public Works, Utilities, Facilities and Grounds, Inspection services, Police and Fire. The second presentation was geared toward the Boards, Commissions, the City Council as well as the public at large. Both presentations sought to educate the audience about stormwater and its impacts to natural resources, explain what stormwater efforts are under way in Dover, and ask what issues need more attention. Funding future stormwater requirements was at the top of the list.



CITY OF DOVER

## REQUEST FOR BID, PROPOSAL, QUOTATION

Request Type	RFP	Number:	<b>B10034</b>
Title	<b>Municipal Stormwater Utility Feasibility Study</b>		
Date	Nov 23, 2009		

A third presentation was given at a Dover City Council workshop on March 4, 2009. The purpose of the presentation was to review with the City Council elements of the Phase II program, highlight what has been accomplished during the first permit, explain what is proposed in the second permit and implications on the proposed FY 2010 budget as well as the following 4 years, and most importantly begin a dialogue on how the City of Dover wants to fund the stormwater program in the future.

### **V SCOPE OF SERVICES**

The feasibility study should take a group of staff, elected officials, and citizens through all the key aspects of utility development without committing to utility development until all concerned agree it is the right way to go. It is expected that the consultant will work collaboratively with the municipal staff, elected officials, utility stakeholders and partners, and interested citizens to complete the tasks outlined in this Scope of Services.

#### **Task 1. Stormwater Utility Development Workshops**

Task Description: Develop workshop agendas and hold a start-up workshop, a progress discussion workshop, and a final workshop to present options. Attendees should include municipal staff, elected officials, and invited citizens and partners. The workshops should provide an overview of current stormwater funding mechanisms and steps for setting up a stormwater utility, discussion of existing stormwater program; problems, needs, and goals, costs, revenues, and outlining plan for next steps. Workshops should include brainstorming of advantages and disadvantages of adopting a stormwater utility.

**Task 1 Deliverables:** Coordinate, organize and facilitate workshops including the preparation of workshop agendas, workshop promotional materials, handouts, and workshop summary reports (recording discussion and plan for next steps).

#### **Task 2. Stormwater Program Analysis and Planning**

Task Description: Analyze the current stormwater program and develop a stormwater program plan under a proposed stormwater utility. The plan should include:

- A. A description of the current municipal stormwater program:
  1. The municipal departments and staff involved in managing and implementing the stormwater program and their roles, duties, and responsibilities.
  2. The current stormwater activities implemented under the existing municipal stormwater program.
  3. Identification of the problems, needs, issues, and goals of the existing municipal stormwater program.
  
- B. A description of the future, municipal stormwater program managed under a stormwater utility:



CITY OF DOVER

## REQUEST FOR BID, PROPOSAL, QUOTATION

Request Type RFP Number: **B10034**  
Title **Municipal Stormwater Utility Feasibility Study**  
Date Nov 23, 2009

1. The program priorities and basic objectives including how the stormwater program is to interact with other city programs.
2. Evaluate and recommend operation/division/structural changes necessary to manage stormwater requirements within utility framework.
3. Budget and revenue requirements including program capital and operation and maintenance needs and costs.
4. Cost of service analysis
5. The process for obtaining local approval and interlocal agreements (if applicable) for establishing a municipal stormwater utility.
6. Identification of the legal entity and staffing for the stormwater utility and the associated process for establishment.
7. The next steps for Dover's stormwater utility implementation plan.

**Task 2 Deliverables:** Documentation of stormwater program analysis.

### **Task 3. Compelling Case**

Task Description: Building on workshop input, identify advantages and disadvantages of adopting a stormwater utility for purposes of needs identified in the stormwater program analysis.

**Task 3 Deliverables:** Compelling case analysis and recommendations for Dover.

### **Task 4. Education & Outreach Strategies**

Task Description: Identify outreach strategies addressing barriers to utility implementation. Identify target audiences, and design an outreach plan with messages and methods to achieve program buy-in.

**Task 4 Deliverables:** Stormwater utility implementation outreach plan for stormwater utility support and up front outreach incorporated into process. Public meetings associated with Task 1.

### **Task 5. Data Compilation for Rate Methodology**

Task Description: Identify and assess existing data sources, including existing reports and GIS data, data gaps and potential sources to fill the gaps for the purpose of laying out a path and estimating costs to support master account file database development. Data should include:

- Parcel Identification
- Land Use
- Existing Utility Database Accounts
- Parcel Ownership Database Accounts
- Parcel Ownership & Address
- Impervious Surface Coverage



CITY OF DOVER

## REQUEST FOR BID, PROPOSAL, QUOTATION

Request Type RFP

Number: **B10034**

Title **Municipal Stormwater Utility Feasibility Study**

Date Nov 23, 2009

**Task 5 Deliverables:** A summary of identified data sources, identified data gaps and potential sources to fill the gaps, as well as analysis of the effort required to compile the data.

### **Task 6. Rate Structure Analysis**

Task Description: Provide a cost/revenue analysis utilizing a range of proposed potential utility rates, and identify realistic potential rate methodologies, including:

- Impervious Area
- Impervious Area + Gross Area
- Gross Area/Intensity of Development/Land Use
- Base Fee & Impervious Area Rate
- Credit Allowances
- Others

**Tasks 6 Deliverables:** Rate and rate methodology recommendations.

### **Task 7. Billing Methodology**

Task Description: Working with municipal billing and related planning staff, review and recommend a billing methodology.

A. Investigate the following billing system options:

- Existing Public Utility Bill
- Tax Bill
- Stand Alone Bill

B. Address the following issues related to billing:

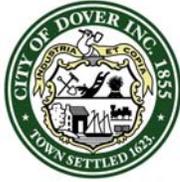
- Billing frequency
- Billing database source
- Billing recipient (e.g., the owner or the tenant)
- Long term database management
- Procedure for handling delinquencies
- Appeals process

**Task 7 Deliverables:** Billing summary and methodology recommendations.

### **Task 8. Recommendations**

Task Description: Evaluate the impact of the new stormwater program on existing staff and recommend operation/division/structural changes necessary to manage stormwater requirements within utility framework.

**Tasks 8 Deliverables:** Submittal of draft Feasibility Study Report and plan for the City and New Hampshire Department of Environmental Services (NH DES) review. Incorporate changes.



CITY OF DOVER

## REQUEST FOR BID, PROPOSAL, QUOTATION

Request Type	RFP	Number:	<b>B10034</b>
Title	<b>Municipal Stormwater Utility Feasibility Study</b>		
Date	Nov 23, 2009		

### **Task 9. Final Feasibility Study Report**

Task Description: Prepare final draft Feasibility Study Report and plan.

**Tasks 9 Deliverables:** Submittal of final Feasibility Study Report and plan for the City.

### **Task 10. Presentation and Final Recommendations**

Task Description: Present final Feasibility Study Report and recommended options to City Council.

**Task 10 Deliverable:** Presentation of Feasibility Study Report and recommended options to City Council.

## **VI. SUBMITTAL REQUIREMENTS**

Each applicant shall submit six (6) copies of its proposal. The proposal shall be submitted in two-parts, consisting of a "Non-Price Proposal" and a "Price Proposal". Submittals shall consist of and be evaluated on, the following:

i) Qualifications of the Firm

This section shall describe the firm and shall include identification of the team and a description of relevant experience.

Team

Provide the names, with their resumes, of all professional members of the team. Each team member's educational and experience background and special skills shall be included.

Relevant Experience

Provide the details of experience and past performance of the Firm on comparable projects for other municipalities and/or utilities. This item should cover, at a minimum, the substantive nature of comparable projects. Firms are required to give sufficient information of their experiences to permit the City to understand and verify the nature of the contributions made by the firm to the projects listed.

ii) Scope of Services

Describe in narrative form the firm's approach and technical plan for accomplishing the work listed herein. The firm shall provide a detailed summary (not to exceed 15 pages) of how it will develop the required tasks in accordance with the concerns and criteria listed herein.

iii) Commitments

Provide a discussion of how the firm will assure adequate and timely completion of this project; a description of the firm's overall capability and



CITY OF DOVER

## REQUEST FOR BID, PROPOSAL, QUOTATION

Request Type RFP

Number: **B10034**

Title **Municipal Stormwater Utility Feasibility Study**

Date Nov 23, 2009

assurance that it can meet its' commitment to successfully complete this project.

iv) Project Schedule

Provide a detailed project schedule. The City anticipates the study to commence on or about February 2010 and shall be completed no later than June 30, 2011.

v) References

Provide the name, title, locations and phone number of persons who can substantiate the firm's referenced experiences.

vi) Estimate of Work Effort

The firm shall submit an estimated summary of the level of effort (hours of work) allocated for each discipline per task described in the Scope of Work as part of the Proposal. **The fees associated with the Scope of Work per level of effort for discipline and task shall be submitted under separate cover on the form provided in Section VIII in a sealed envelope.**

### VII. SELECTION CRITERIA

#### Description of the Procurement Process

*Each proposal shall be evaluated based on the following criteria:*

i. Evaluation of Proposals

*The City will review and evaluate the written responses to the Request for Proposals (RFP). Firms with no prior experience and submittals that do not meet the minimum requirements will not be considered. The City will rank all proposals based on the criteria.*

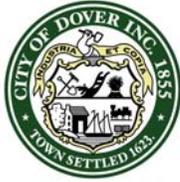
ii. Interview

The City may select up to three qualified firms to interview. Each of the selected qualified consultants will participate in a detailed interview to more fully discuss their approach to this project and to answer questions posed by the City. The price portion of the selected firm(s) will be opened prior to any interviews.

iii. Selection

The firms will be re-ranked after the interview. The top ranking candidate will be invited to negotiate a contract with the City. Should the City and the selected firm not be able to reach an agreement, the City will then negotiate with the second-highest ranked firm. The City reserves the right to





CITY OF DOVER

# REQUEST FOR BID, PROPOSAL, QUOTATION

Request Type RFP  
Title **Municipal Stormwater Utility Feasibility Study**

Number: **B10034**

Date Nov 23, 2009

## VIII. PRICE PROPOSAL FORM

To be placed in a separate sealed envelope

This form shall be filled in by the qualified applicant. Prices shall be written in both words and numerals and the extensions made by him/her. In case of discrepancy between words and numerals, the **amount shown in words shall govern.**

Project involving City of Dover's "**Municipal Stormwater Utility Feasibility Study**", in accordance with the Scope of Services, the following:

Task No.	Item Description	Unit Price (Words and Numbers)	Total
1	Stormwater Utility Development Workshops		
2	Stormwater Program Analysis and Planning		
3	Compelling Case		
4	Education & Outreach Strategies		
5	Data Compilation for Rate Methodology		
6	Rate Structure Analysis		
7	Billing Methodology		
8	Recommendations		
9	Final Feasibility Study Report		
10	Presentation and Final Recommendations		

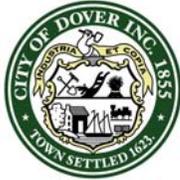
**Total** \_\_\_\_\_

Submitted by:.....  
(Name of Firm)

Signature: .....

Print Name:.....

Title: .



CITY OF DOVER

## REQUEST FOR BID, PROPOSAL, QUOTATION

Request Type RFP

Number: B10034

Title **Municipal Stormwater Utility Feasibility Study**

Date Nov 23, 2009

### BID, RFP AND QUOTE TERMS AND CONDITIONS

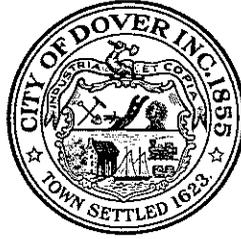
1. **BID ACCEPTANCE AND REJECTIONS: The City of Dover reserves the right to accept any bid, and to reject any or all bids; to award the bid to other than the low bidder if deemed "bid most advantageous to the City"; to accept the bid on one or more items of a proposal, on all items of a proposal or any combination of items of a proposal and to waive any defects in bids.**
2. **FINAL BID PRICE: Terms and FOB point are always part of the bid. FOB POINT IS ALWAYS TO BE DOVER, NH UNLESS OTHERWISE INDICATED BY THE BIDDER. IT IS THE BIDDER'S RESPONSIBILITY TO SO DESIGNATE A FOB POINT OTHER THAN DOVER. If the bidder has any special payment or delivery clauses which could effect the final delivery price of an item up for bid, that too shall be made part of the bid. If, however, this is not included in the bid, the seller will be solely responsible for any increased prices due to any circumstances.**
3. **LATE PROPOSALS/BIDS: Any bids received after specified date and time will not be considered, nor will late bids be opened.**
4. **PAYMENT TERMS: It is the custom of the City of Dover to pay its bills within 20 - 30 working days following delivery of, and receipt for, all items covered by the purchase order. In submitting bids under these specifications, bidders should take into account all discounts, both trade and time, allowed in accordance with the above payment policy.**
5. **BRAND NAMES: When the item is offered of a brand that is not known for use and/or reputation and financial stability is not well and favorably known to these officials, bids on such unknown brand may be rejected because of this lack of knowledge alone. Prospective bidders with such unknown brand should give information concerning it to the City Purchasing Agent so that it may be checked into for bids for the coming year. The bidder will state in the proposal the brand name and any guarantees of the material he/she proposes to furnish. The brand name is to be for the material that meets all specifications.**
6. **SUBCONTRACTORS: Where a project involves utilizing subcontractors, and the project is completed satisfactorily, the City of Dover reserves the right to request proof of payment to subcontractors by the general contractor prior to making final payment to the general contractor.**
7. **PROPER DOCUMENTATION: Any respondent to a bid request should sign off on and return to the Purchasing Department the original Bid Documentation Package which explains the scope of the bid request. Said signature, in the spaces provided, indicates receipt of, familiarity with and understanding of, and acceptance of the specifications provided, except as otherwise noted by the respondent.**
8. **BID RESULTS: The Purchasing Office will NOT respond to phone inquiries for Bid Results, other than to identify the apparent low bidder and his total bid price quotation. Individuals or company representatives may secure a comprehensive bid analysis of a particular bid request by either attending a bid opening (which is open to all interested parties); by coming to City Hall after a bid opening and asking to look through the file; by visiting our website at [www.dover.nh.gov](http://www.dover.nh.gov), or by sending a written request for the bid analysis along with a self-addressed stamped envelope.**

**Appendix C:**

**Consultant BID  
Results**

DANIEL R. LYNCH  
Finance Director  
d.lynch@dover.nh.gov

ANN M LEGERE  
Purchasing Agent  
a.legere@dover.nh.gov



288 Central Avenue  
Dover, New Hampshire 03820-4169

(603) 516-6030  
Fax: (603) 516-6097  
www.dover.nh.gov

***City of Dover, New Hampshire***  
OFFICE OF THE FINANCE DIRECTOR

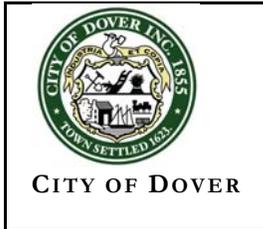
**Bid Results**  
**Municipal Stormwater Utility Feasibility Study**  
**#B10034**

<i>Vendor</i>
Hazen & Sawyer 24 Federal St A5 Boston, MA 02110
MFSG 911-A Commerce Road Annapolis, MD 21401
AMEC Earth & Environmental 502 W. Germantown Pk Ste 850 Plymouth Meeting, PA 19462
Hoyle Tanner and Associates 150 Dow Street Manchester, NH 03101
Stearns & Wheeler 1545 Lyannaough Road Hyannis, MA 02601
Quantum Construction -NB
Underwood Engineers-NB

*Dan*

## **Appendix D:**

# **Consultant Contract: Stearns and Wheeler Stormwater Study Agreement**

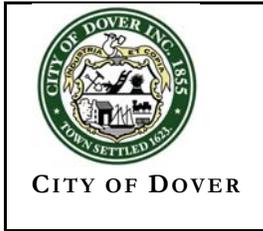


288 CENTRAL AVENUE  
DOVER, NH 03820  
WWW.CI.DOVER.NH.US  
603.516.6000

## STORM WATER UTILITY FEASIBILITY STUDY AGREEMENT

**NOW COMES** the **CITY OF DOVER**, a municipal corporation, 288 Central Avenue, Dover New Hampshire 03820 and **Stearns and Wheler Engineers, Inc., a New York corporation registered to do business in the State of New Hampshire, (the “Vendor”), 1545 Iyannough Road, Hyannis, Massachusetts 02601** who for valuable consideration agree as follows:

1. **Purpose.** This contract refers to and incorporates the provisions of a Request for Proposal #B10034 entitled “Municipal Storm Water Utility Feasibility Study” issued by the City of Dover. Specifically, this agreement is a study regarding the creation of a storm water utility in the City of Dover.
2. **Scope of Services.** The Vendor shall perform all work required by the Contract Documents and the work described in the Proposal submitted by the Vendor. The Scope of Services includes the services as contained in the RFP #B10034 and the response of the Vendor. RFP #B10034 shall govern to resolve inconsistencies in the contract between the parties including, but not limited to the Scope of Services. The Scope of Services is detailed in Appendix A and includes Tasks 1-10.
3. **Changes in the Cost of the Work and the Scope of Services.** Changes to the cost of the work and the Scope of Services shall be made in writing by mutual agreement prior to the performance of the work.
4. **Contract Documents.** The Contract Documents shall consist of:
  - i. RFP #B10034 issued by the City of Dover;
  - ii. Response of the Vendor by cover letter dated December 22, 2009(7 pages)
  - iii. Storm Water Feasibility Study Agreement(3 pages);
  - iv. Exhibit A Scope of Services (\_\_pages)
5. **Term.** The Vendor shall commence work upon the Notice to Proceed. The start of services shall be upon the execution of this agreement. The end of services shall be \_\_\_\_days from the Notice to Proceed.
6. **Cost and Payment.** The City of Dover shall pay the Vendor an amount not to exceed Forty-nine thousand seven hundred thirty seven dollars (\$49,737) for professional



288 CENTRAL AVENUE  
DOVER, NH 03820  
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603.516.6000

services within the Scope of Services.

- a. The City of Dover shall pay the Vendor within thirty (30) days upon the completion of the installation and presentation of the invoice supplied by the Vendor.

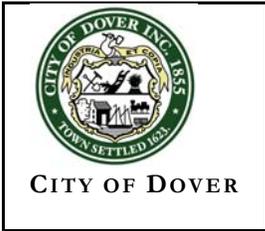
**7. Insurance.**

- a. The Vendor shall secure and maintain for the duration of this agreement a General Liability Insurance policy or policies at no cost to the City of Dover. The coverage of said insurance policy shall be in the amount of One Million Dollars (\$1,000,000). An insurance certificate shall be supplied to the City of Dover. The City of Dover shall be named as an additional insured. A condition of the insurance coverage shall be thirty (30) day notice to the City of Dover upon cancellation.
- b. The Vendor shall secure and maintain for the duration of this agreement Automobile Liability Insurance covering the operation of all motor vehicles, including those hired and borrowed, used by the Vendor in connection with this agreement at no cost to the City of Dover. The coverage of said insurance policy shall be in the amount of Five Hundred Thousand dollars (\$500,000) for all damages arising out of bodily injuries to or death of one person and subject to that limit for each person, a total limit of One Million dollars (\$1,000,000) for all damages arising out of bodily injuries to or death of two or more person in any one accident or occurrence. An insurance certificate shall be supplied to the City of Dover
- c. The Vendor shall maintain statutory Workers' Compensation insurance coverage for all of its employees at the project as required by the State of New Hampshire.

8. **Indemnification.** To the fullest extent permitted by law, the Vendor agrees to indemnify and hold harmless the City of Dover from any claims, losses, damages or expense (including reasonable attorneys' fees) arising out of the death or, injuries, or damages to any person , or damage or destruction of any property, in connection with the Vendor's services under this agreement to the extent caused by the negligent acts, errors, or omissions of the Vendor or its officers, directors, employees, agents or independent professional associates, or any of them.

9. **Warranty:** *No provisions*

10. **Ownership of documents.** The City of Dover shall retain ownership of the documents and designs prepared for the City of Dover by the Vendor pursuant to the provisions of this agreement to the extent the Vendor has been paid for the services to prepare the documents and designs.



288 CENTRAL AVENUE  
DOVER, NH 03820  
WWW.CI.DOVER.NH.US  
603.516.6000

11. **Dispute resolution.** Both parties are entitled to all available legal and equitable remedies within the jurisdiction of the courts of the State of New Hampshire. Venue shall be Strafford County.
  
12. **Termination.** Either party may terminate this agreement without cause upon seven (7) days written notice. Warranties shall not be subject to termination.
  
13. **Binding.** This agreement shall be binding upon all parties, their heirs, executors, administrators, successors and assigns.
  
14. **Severability.** If any of the terms and conditions of this agreement shall be finally determined to be invalid or unenforceable in whole or in part, the remaining provisions hereof shall remain in full force and effect, and be binding upon the parties hereto. The parties agree to reform this agreement to replace any such invalid or unenforceable provision with a valid enforceable provision that comes as close as possible to the intention of the stricken provision.
  
15. **Applicable law.** The law of the State of New Hampshire shall govern this agreement.

**Stearns and Wheler, Engineers**

\_\_\_\_\_  
Duly Authorized

\_\_\_\_\_  
Date

**CITY OF DOVER**

\_\_\_\_\_  
Michael Joyal, City Manager

\_\_\_\_\_  
Date

**Appendix E:**

**Stormwater Committee  
Resolution**



**CITY OF DOVER**

## CITY OF DOVER - RESOLUTION

Agenda Item#:  
**13B2**

Resolution Number: **R - 2010.03.10 – B10034 -52**

Resolution Re: Ad-hoc Stormwater Utility Feasibility Study Committee

WHEREAS: The City of Dover Community Services Department was awarded a grant from the New Hampshire Department of Environmental Services (NHDES) to conduct a feasibility study on the potential to establish a stormwater utility in Dover

WHEREAS: Stearns and Wheler Environmental Engineers and Scientists (GHD) of Hyannis Ma were selected to conduct the Stormwater Utility Feasibility Study

WHEREAS: The Stormwater Utility Feasibility Study will be a facilitated process and will potentially change the way City stormwater operations and improvements are paid for; and

WHEREAS: It is important that the various interested stakeholders are involved in the process

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND DOVER CITY COUNCIL THAT:

An Ad-Hoc Stormwater Utility Study Committee is hereby established. Said committee shall consist of nine (9) members; membership to be comprised as follows: two (2) city councilors, one (1) member of the Planning Board, one (1) member of the Dover Utilities Commission, one (1) member from the development community, one (1) member from a non profit organization, one (1) member of the Dover Chamber of Commerce, and two (2) citizens at large to be nominated by the Mayor and appointed by vote of the City Council, the Community Services Director and Finance Director as ex-officio members. The City Councilors appointed shall be the Chair and Vice Chair as designated by the Council.

The purpose of the shall be to participate in the Stormwater Utility Feasibility Study and report to the City Council upon completion of the study with its findings and a recommendation for future funding of stormwater operations and improvements by no later than October 6, 2010.

### AUTHORIZATION

Approved as to Funding: Daniel R. Lynch  
Finance Director

Sponsored by: Mayor Scott Myers  
By request

Approved for Legal Compliance: Allan B. Krans, Sr.  
City Attorney

Recorded by: Karen Lavertu  
City Clerk



**CITY OF DOVER**

## CITY OF DOVER - RESOLUTION

Agenda Item#:  
**13B2**

Resolution Number: **R - 2010.03.10 – B10034 -52**

Resolution Re: Ad-hoc Stormwater Utility Feasibility Study Committee



**CITY OF DOVER**

## CITY OF DOVER - RESOLUTION

Agenda Item#: **13B2**

Resolution Number: **R - 2010.03.10 – B10034 -52**

Resolution Re: **Ad-hoc Stormwater Utility Feasibility Study Committee**

### DOCUMENT HISTORY:

First Reading Date:	Public Hearing Date:
Approved Date:	Effective Date:

### DOCUMENT ACTIONS:

VOTING RECORD		
Date of Vote:	YEAH	NAY
Mayor Scott Myers		
Deputy Mayor, Dean Trefethen, At Large		
Councilor Robert Carrier, Ward 1		
Councilor William Garrison III, Ward 2		
Councilor Jan Nedelka, Ward 3		
Councilor Dorothea Hooper, Ward 4		
Councilor Catherine Cheney, Ward 5		
Councilor Gina Cruikshank, Ward 6		
Councilor Karen Weston, At Large		
Total Votes:		
Resolution does   does not pass.		



**CITY OF DOVER**

## CITY OF DOVER - RESOLUTION

Agenda Item#:  
**13B2**

Resolution Number: **R - 2010.03.10 – B10034 -52**

Resolution Re: Ad-hoc Stormwater Utility Feasibility Study Committee

### RESOLUTION BACKGROUND MATERIAL:

The City of Dover Community Services Department was awarded a grant from the New Hampshire Department of Environmental Services (NHDES) to conduct a feasibility study on the potential to establish a stormwater utility in Dover. A stormwater utility would implement a user fee system similar to the existing water and sewer utilities in Dover. Instead of generating funds for stormwater based on property values through the general fund, a stormwater utility charges user fees based on a property's impact to the operation of the stormwater system.

Dover's infrastructure is a combination of relatively new and very old structures. Like most other Cities across the country the level maintenance has been low primarily as a result of competing budget needs throughout the City of Dover. The US Environmental Protection Agency (EPA) established Phase II Stormwater Regulation and issued the first General Permit in 2003. The first General Permit expired in 2008 but is in force until the second General Permit is issued. The second permit has been published in the Federal Register and calls for actions by the regulated cities with significant cost implications which increase each subsequent year of the five year permit. It is clear that water quality concerns by both EPA and NHDES will force Dover and the other regulated communities to make substantial investments in our stormwater systems to reduce flooding and improve water quality in our streams, lakes and rivers.

An RFP was issued to identify a qualified consultant to assist the City of Dover in conducting a Stormwater Utility Feasibility study. Stearns and Wheler LLC an Environmental Engineering firm has been selected conduct the study. Stearns and Wheler's approach recognizes the feasibility study needs to be a public process which is inclusive. An Ad Hoc Stormwater Feasibility Study Committee will be established which has representation of the various stakeholders that will be affected by alternative funding strategies. A series of five facilitated meetings will guide the Committee through a process which examines alternative funding strategies and will result in a recommendation to the City Council on whether the establishment of a stormwater utility is right for Dover.



**CITY OF DOVER**

## CITY OF DOVER - RESOLUTION

Agenda Item#:  
**13B2**

Resolution Number: **R - 2010.03.10 – B10034 -52**

Resolution Re: Ad-hoc Stormwater Utility Feasibility Study Committee



CLIENTS | PEOPLE | PERFORMANCE

Accomplish **More** Together

# Appendix F:

# Stormwater Committee Governing Procedures



Accomplish **More** Together

## City of Dover

# Municipal Stormwater Utility Feasibility Study

## Governing Procedures

Revision date: 31 Aug 2010

### *Introduction*

The Stakeholder Committee (SC) for the City of Dover's Municipal Stormwater Utility Feasibility Study is a diverse committee organized with the primary objective of evaluating the feasibility of a stormwater utility to fund needed stormwater management activities. Members of the SC have been recruited based on their ability to represent the views of an interest group within the community, commit time to take part in the process, and work collaboratively with other SC members, project staff (i.e., project manager, facilitators, other project consultants), and City officials.

The SC is comprised of varied representatives including residents, industry, community leaders/representatives, public agencies and key local stakeholders. SC members will learn about local stormwater issues while contributing to the overall knowledge base. SC members will provide input on various aspects of the feasibility study and assist in developing recommendations for implementation. Member opinions, recommendations, and other contributions are important factors in the success of this project.

For any committee process to go smoothly, it is helpful for those involved to agree at the onset on the purpose of the process and on the procedures by which the group will govern its discussions and decision making. From the outset, the SC must work to help fulfill the project's two primary goals (1) complete all project tasks, and (2) complete the project on time and within budget.

### *A. Representation and Participation*

1. The goal of this process is to have SC members engaged in discussion and reach recommendations on pertinent issues. Straw votes may be taken from time to time to gauge the level of agreement on specific issues. Efforts should be made to accommodate the concerns of all parties.
2. The SC will serve in an advisory capacity. As often as possible, project staff will incorporate or otherwise reflect the comments and recommendations of the committee members into the work products. If the comments and recommendations of the members are not consistent with the City's expectations for the project, discussions will be held at the SC meetings to fully explain positions.
3. SC members should be aware of the budget and schedule constraints that drive the project and realize that some decisions may be guided by these constraints.
4. The SC is committed to participating in this process for the five (5) SC meetings.



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5. Unless agreed upon by the majority, new members will not be added to the SC once the first meeting is held.
6. Any current member may terminate membership upon submittal of thirty (30) days written notice to the SC. Upon termination, the former member shall have no obligation of any type of support to participate in the SC. Any resigning member who wishes to maintain his or her organization's presence on the SC must submit in writing a request for the replacement member who shall be appointed by majority at the next SC meeting.
7. SC membership is completely voluntary and is not a paid position.
8. Members will be asked to abide by the following procedures to cultivate a venue for constructive discourse. Additional guidelines are provided at the end of this document.
  - ▶ Let one person speak at a time.
  - ▶ Treat one another with courtesy.
  - ▶ Be honest, fair, and as candid as possible.
  - ▶ Respect time constraints and be succinct.
  - ▶ Civility is required.
  - ▶ The personal integrity and values of each member will be respected by other members including the avoidance of personal attacks and stereotyping.
  - ▶ The motivations and intentions of members will not be assumed nor criticized.
  - ▶ Come with an open mind and respect for other' interests and differing opinions.
  - ▶ Think outside the box and welcome new ideas.
  - ▶ Commitments will not be made lightly and will be kept.
  - ▶ Delay will not be employed as a tactic to avoid an undesired result.
  - ▶ Disagreements will be regarded as problems to be solved rather than as battles to be won.
9. Every member will check back with their respective organization or constituency and will keep them aware of the ongoing SC process and actions. Input from senior staff and/or governing boards of the members will be communicated back to the SC at its next meeting. Any dissension from the respective organizations' decision-making bodies that could affect acceptance of SC recommendations will be clearly communicated at each meeting so a solution can be sought.
10. Issues will be brought to the SC first. Members will not communicate their concerns and issues outside of the project without first bringing issues to the SC.
11. Every member is responsible for communicating their position on issues under consideration. It is incumbent upon each member to state the interests of the organization or group they represent. Voicing these interests is essential to enable meaningful dialogue and full consideration of issues by the SC. If a SC member does not attend a SC meeting or communicate their viewpoint on an issue,



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it is assumed that they agree with decisions and recommendations made by the SC. If a member's interest is conveyed to another member or project staff outside of a meeting, the source of that comment will be clearly conveyed to the SC.

### *B. Operational Functions*

1. SC members will develop a calendar of all scheduled meetings at the first meeting. If a meeting needs to be rescheduled, every attempt will be made to select a date when a majority of the SC members can attend.
2. Each SC meeting is anticipated to require two hours. The meetings will be held at the City of Dover's Council Chambers unless a location(s) preferred by SC members is selected.
3. Written materials to be discussed at the SC meetings will be mailed a minimum of 6 working days before the meeting date. Materials must be reviewed by members prior to the meeting in an effort to maximize time for constructive discussion.
4. The project staff will prepare a list of the key issues, recommendations, and action items based on discussions and results of SC meetings. These summaries will be submitted to the SC members prior to the next meeting.

### *C. Decision Process*

1. This process has been established to have SC members contribute their knowledge and opinions to the overall project. Although consensus (when all members are in full or substantial agreement) would be desirable, a majority opinion on key recommendations is adequate. The decision-making goal is to have the majority of members agree on the item at hand, with no member objecting to a decision or an agreement.
2. If, after a thorough discussion, substantial agreement is not reached, then a vote will be taken. SC members can vote "yes" or "no" (active opposition to a particular decision). If a majority of attending members register a "no" vote, then the proposal is not advanced as an agreed-upon SC recommendation. If substantial agreement is not reached, but a majority of attending members register a "yes" or "neutral" vote, City staff may move forward with a clear delineation of majority and minority viewpoints, the reasons why such differences continue and how the SC will continue to move forward despite these differences. Inclusion of such a description of remaining areas of disagreement in the meeting summary notes is consistent with support for the plan as a whole.
3. The SC's final agreement on the recommended approach is expected to take the form of a written statement, signed by the SC members. The statement will be included in the final report and presented to the City Council at the conclusion of the project.
4. As part of the process of making decisions and developing recommendations, members are encouraged to brainstorm and think creatively. Members are encouraged to put forward tentative proposals for consideration which may later be withdrawn.



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5. Preconceived conclusions on issues under discussion by the SC should be avoided to facilitate an objective result.

### *D. Development of Work Products*

1. The SC will help develop and support the recommendations for implementation. To ensure an efficient and productive use of SC member time, and to be able to achieve the highest quality products, project staff will develop draft work products for review and comment by SC members. Members will offer specific advice about various components of the overall approach and specific tasks in progress.
2. SC member comments on written documents under consideration should be made on the actual documents and submitted to project staff so they can be easily understood and integrated into the revised text of a document. It is understood that the SC's primary goal for written products is to agree on substantive policies, principles, and recommendations and not to debate the detailed wording of documents.
3. As SC members discuss and make decisions on issues and work products, the project staff will assist SC members by drafting language that reflects the viewpoints of the group. Draft statements or edits to work products that are prepared in this manner will then be circulated for review by all SC members.
4. Members are asked to provide pertinent information for items under discussion at all meetings. This means that members have an obligation to share any specific information, including possible or pending decisions within or by the organizations they represent, as well as information in the form of reports, memos, and studies which may affect the discussions and recommendations by the members. Tentative or sensitive information will be treated as such.

### *E. Observers*

1. Observers, including members of the public and representatives of the media, are welcome to attend SC meetings, and are requested to identify themselves to the facilitators prior to the start of each meeting. Facilitators will provide a copy of these governing procedures to observers, if necessary. Members of the public are encouraged to contribute constructive comments and feedback during the specified Citizens' Forum period. Public comments will be limited to five minutes per commenter.

### *F. Media Contact*

1. If approached by the media, members of the SC will be careful to present only their own views and not those of other members on the SC. Members are encouraged to suggest that media representatives contact other SC members who may have different points of view.



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2. While the SC is studying, discussing, or evaluating issues, members will not initiate media contact or make public statements except as mutually agreed. No statements prejudging outcomes will be made to the media.
3. If it so desires, the SC may form a media working group, representing all interests serving on the SC, to jointly draft periodic press releases to accurately convey the proceedings of the SC to the media. These press releases will then be coordinated and released by the project staff, with their professional input. If consensus is reached on items to release to the media, a SC spokesperson will be appointed to highlight only those issues agreed upon by the entire SC.

### *G. Amendments*

These guidelines will be implemented after discussion and modification at the first SC meeting. Amendments to these guidelines will be approved by a majority approval of the SC present at any given regularly scheduled meeting.



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## Appendix: Principles and Ground Rules for Constructive Dialogue

*Adapted from The Mutual Learning Model, developed by Robert Schwarz*

Principles	Ground Rules
<ul style="list-style-type: none"> <li>▶ I have valid information to offer; others have different valid information to offer also</li> <li>▶ Each of us may see things the others do not</li> <li>▶ Differences are opportunities for learning</li> <li>▶ People are acting with integrity given their situations</li> </ul>	<ol style="list-style-type: none"> <li>1. Share all relevant information.</li> <li>2. Speak so others can hear you.</li> <li>3. In the interest of time, if one person has made statement you agree with, no need to repeat it or say it again in your own words. If you have something to add, however, feel free to speak up.</li> <li>4. Listen hard.</li> <li>5. Ask real questions, not statements disguised as questions.</li> <li>6. Use specific examples and agree on the meaning of important words.</li> <li>7. Focus on interests, not positions.</li> <li>8. Test assumptions and inferences.</li> <li>9. Explain reasoning and intent.</li> <li>10. If/when we get stuck, let's work together to design an approach for moving forward.</li> </ol>

**Appendix G:**

**December, 2009  
Progress Report**



**Appendix H:**

**June, 2010 Progress  
Report**

## Semi-Annual Progress Report Form

Reporting Period:  January 1 – June 30    July 1 – December 31   Year: 2010   Project #: 05082009

Project Title: Dover Municipal Stormwater Utility Feasibility Study

Organization: City of Dover

### Summary of Work

Task #	Task Duration	Task Status	Payment Summary	Match Summary	Procurement Summary	Comments
	Start and end dates	If not yet completed please estimate completion date.	Request submitted (Y/N), date & amount.	Documentation submitted (Y/N), date & amount.		
1	Nov 2009- March 2010	<input checked="" type="checkbox"/> Completed      date: <input type="checkbox"/> In progress <input type="checkbox"/> To be completed	n	n		
2	May 2010	<input type="checkbox"/> Completed      date:October 2010 <input checked="" type="checkbox"/> In progress <input type="checkbox"/> To be completed	n	n		
		<input type="checkbox"/> Completed      date: <input type="checkbox"/> In progress <input type="checkbox"/> To be completed				
		<input type="checkbox"/> Completed      date: <input type="checkbox"/> In progress <input type="checkbox"/> To be completed				
		<input type="checkbox"/> Completed      date: <input type="checkbox"/> In progress <input type="checkbox"/> To be completed				
		<input type="checkbox"/> Completed      date: <input type="checkbox"/> In progress <input type="checkbox"/> To be completed				
		<input type="checkbox"/> Completed      date: <input type="checkbox"/> In progress <input type="checkbox"/> To be completed				
		<input type="checkbox"/> Completed      date: <input type="checkbox"/> In progress <input type="checkbox"/> To be completed				
		<input type="checkbox"/> Completed      date: <input type="checkbox"/> In progress <input type="checkbox"/> To be completed				

Certified by: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

## **Appendix I:**

# **Meeting/Workshop Promotional Materials**

- Ad-hoc Cmt Webpage**
- Workshop Webpage**

## **Ad-Hoc Stormwater Study Committee**

### **Ad-Hoc Stormwater Utility Feasibility Study Committee**

WHEREAS: The City of Dover Community Services Department was awarded a grant from the New Hampshire Department of Environmental Services (NHDES) to conduct a feasibility study on the potential to establish a stormwater utility in Dover

WHEREAS: Stearns and Wheler Environmental Engineers and Scientists (GHD) of Hyannis Ma were selected to conduct the Stormwater Utility Feasibility Study

WHEREAS: The Stormwater Utility Feasibility Study will be a facilitated process and will potentially change the way City stormwater operations and improvements are paid for; and

WHEREAS: It is important that the various interested stakeholders are involved in the process

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND DOVER CITY COUNCIL THAT:

An Ad-Hoc Stormwater Utility Study Committee is hereby established. Said committee shall consist of nine (9) members; membership to be comprised as follows: two (2) city councilors, one (1) member of the Planning Board, one (1) member of the Dover Utilities Commission, one (1) member from the development community, one (1) member from a non profit organization, one (1) member of the Dover Chamber of Commerce, and two (2) citizens at large to be nominated by the Mayor or any City Councilor and appointed by vote of the City Council, the Community Services Director and Finance Director as ex-officio members. The City Councilors appointed shall be the Chair and Vice Chair as designated by the Council. The purpose of the shall be to participate in the Stormwater Utility Feasibility Study and report to the City Council upon completion of the study with its findings and a recommendation for future funding of stormwater operations and improvements by no later than October 6, 2010.

Reference City of Dover Resolution R - 2010.03.10 – B10034 -52, Ad-hoc Stormwater Utility Feasibility Study Committee.

## City Council to hold workshop on stormwater utility study

Department Posting:Community Services

posted on:01/04/2011



The City Council will discuss the results of a stormwater utility feasibility study at a workshop on Wednesday, Jan. 5, 2011. The workshop follows a special meeting at 7 p.m. in Council Chambers at City Hall.

The City Council last year formed the Ad-hoc Stormwater Utility Feasibility Study Committee and charged the group with assessing the City's options for meeting new, more stringent Environmental Protection Agency restrictions on the discharge of stormwater and determining whether the creation of a stormwater utility is necessary.

The study committee weighed several options presented by GHD, an environmental consulting firm hired by the City. The study was funded by a New Hampshire Department of Environmental Services grant.

Maintaining the stormwater system under the current system costs Dover taxpayers approximately \$900,000 each year, including personnel and infrastructure costs. In order to comply with the new standards mandated by the EPA, the City anticipates needing an additional \$250,000 to \$300,000 per year to manage stormwater. To cover the costs of maintaining the stormwater system, implementing necessary upgrades, complying with additional mandatory permitting requirements and administering the stormwater program, the committee is recommending the City Council create a stormwater utility that will generate \$1.2 million in fiscal year 2012. If the utility is created, the average residential user would pay between \$7 and \$8 per month. Over a period of six years, the fees would be adjusted to generate \$2 million annually, which is the estimated amount needed to fund a 100-year replacement plan for the existing stormwater system, or one percent of the system per year.

If a stormwater utility is created, the operation and maintenance of the stormwater system will no longer be derived from the general fund, which will result in fewer tax dollars needed for stormwater activity. As with water and sewer bills, tax-exempt properties would be affected by the fee.

The City Council also has the option to forgo the creation of a stormwater utility and raise the additional \$300,000 from property taxes.

The committee's additional recommendations include billing single-family residences at a flat rate, allowing for a credit system and not charging for undeveloped or vacant property; including stormwater charges with water and sewer bills; and phasing in the stormwater charge over a six-year period.

The committee is also recommending several steps to implement the plan, including the preparation and adoption of a utility formation ordinance; assembling a committee to advise on implementation of the plan; launching a public outreach campaign; completing additional mapping of impervious land within the City; developing formal rate policies; refining the financial plan; developing a credit manual; drafting billing procedures; and adopting formal rules for the utility.

Portions of the City's stormwater system date back to the 1800s and are in dire need of replacement. Other sections are old, and although functional, will need to be replaced in the near future. The City's stormwater infrastructure includes 650 manholes, 65 miles of pipe, 204 discharge locations, 101 miles of open drainage, 140 culverts and 2,857 catch basins.

"While our focus was on stormwater, the committee was keenly aware that the cost impacts being imposed on us affect the community as a whole," said City Councilor Jan Nedelka, who chaired the committee. "We strove to balance the impact on Dover's taxpayers, the downtown core, future expansion, existing commercial and industrial usage, farm use, and land conservation. What became very clear was that while there is a cost associated with meeting these new EPA mandates, the punitive financial cost of not complying was far greater. It was also clear that Dover can choose a solution that best fits our community, or it will be chosen

for us -- without local consideration."

The full report will be available soon on the City's website at <http://www.dover.nh.gov>. All of the committee's meetings have been televised on Channel 22. Meeting minutes and documentation can also be found online at the City's website.

The final meeting of the Ad-hoc Stormwater Utility Feasibility Study Committee can be seen on Channel 22 in Dover at the following times: Sunday at 6 p.m., Monday at 12 p.m., Tuesday and Wednesday at 6 a.m., Thursday at 12 p.m., and Friday and Saturday at 12 a.m. In addition, the meeting is available for on-demand viewing online at <http://www.vimeo.com/17906304>.

## **Appendix J:**

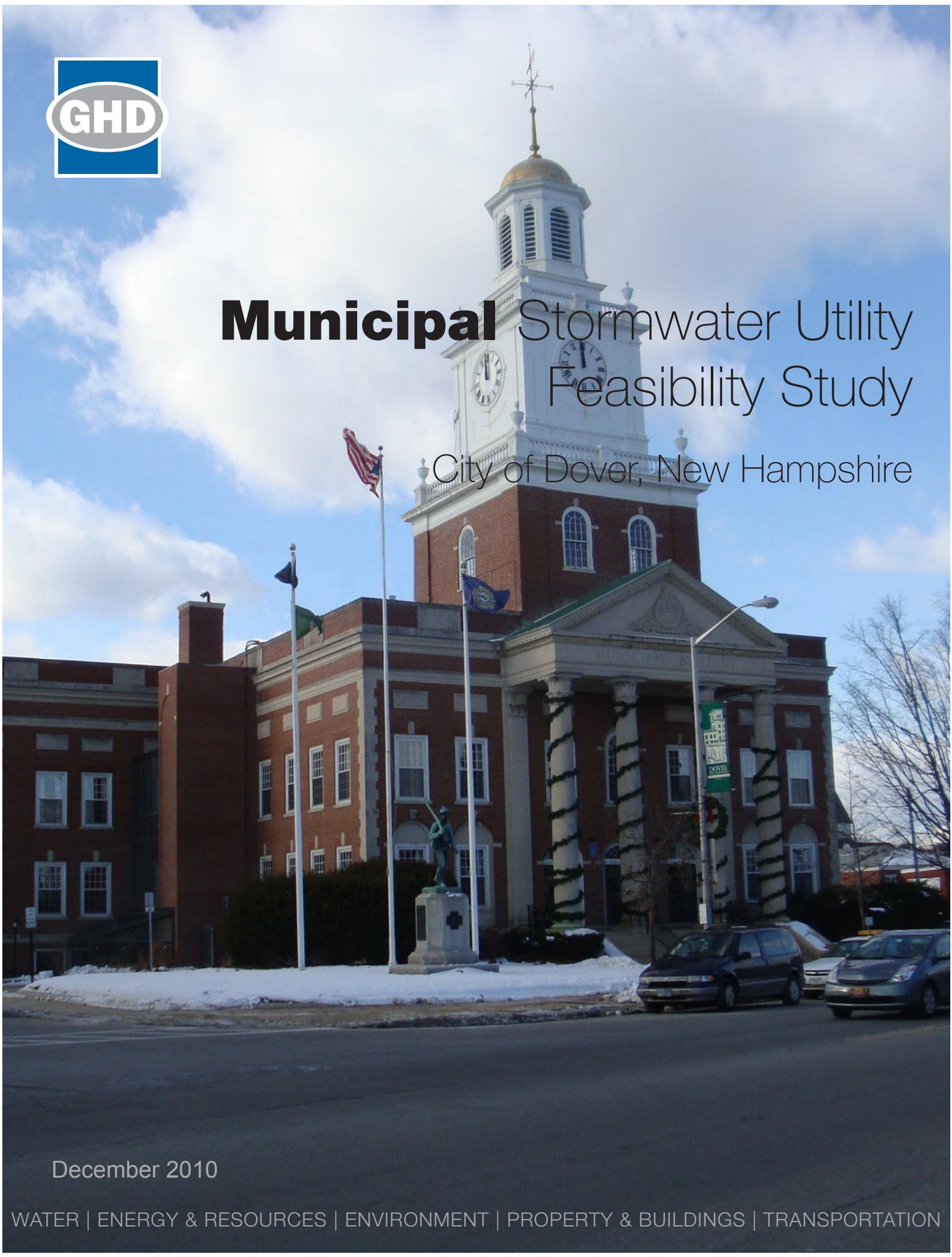
# **Final Feasibility Study Includes:**

- Research and Recommendations**
- Meeting Minutes and Workshop Summaries**
- Stakeholder Presentations**
- Public Outreach Plan**



# **Municipal** Stormwater Utility Feasibility Study

City of Dover, New Hampshire



December 2010

WATER | ENERGY & RESOURCES | ENVIRONMENT | PROPERTY & BUILDINGS | TRANSPORTATION

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## Table of Contents

<b>1</b>	<b>Introduction</b>	<b>1</b>
<b>2</b>	<b>Stormwater Program Analysis and Plan</b>	<b>3</b>
2.1	Current Program Elements	3
2.2	Current Program Structure and Cost	8
2.3	Future Stormwater Program Needs	10
<b>3</b>	<b>Compelling Case</b>	<b>13</b>
3.1	Stormwater Runoff Overview	13
3.2	Local Impacts	14
3.3	Local Priorities	16
3.4	Funding Alternatives	16
<b>4</b>	<b>Data Gap Analysis &amp; Compilation Approach</b>	<b>20</b>
4.1	Stormwater Utility Structure and Data Needs	20
4.2	Approach to Addressing Data Needs	25
<b>5</b>	<b>Rate Structure Alternatives</b>	<b>28</b>
5.1	Overview	28
5.2	Basic Rate Structure and Modification Factors	28
5.3	Common Rate Structures	29
5.4	Rate Modifiers	34
5.5	Preliminary Rate and Revenue Requirements	36
<b>6</b>	<b>Billing Summary Methodology</b>	<b>42</b>
6.1	Billing System Alternatives	42
6.2	Evaluation Criteria	42
<b>7</b>	<b>Recommendations</b>	<b>4*</b>
<b>8</b>	<b>Implementation Plan</b>	<b>4-</b>



## List of Tables

Table 2-1	Stormwater Program Departments, Functions, and Funding Mechanisms
Table 2-2	Current Stormwater Program Costs
Table 2-8	Estimated Future Program Costs
Table 3-1	Stormwater Pollutants, Sources, and Impacts
Table 3-2	Waterbodies Listed as Impaired or Threatened in Dover
Table 3-3	Potential Funding Sources For Capital and Operations Costs
Table 3-4	Program Funding Alternatives, Advantages and Disadvantages
Table 4-1	Data Needs for Alternative Program Structures
Table 4-2	Data Needs for Alternative Rate Methodologies
Table 4-3	Parcel Mapping Summary
Table 4-4	Data Needs for Alternative Rate Modifiers
Table 4-5	Data Needs for Alternative Billing Approaches
Table 4-6	Approach to Filling Data Gaps

## List of Figures

Figure 2-1	Condition of Aging Stormwater Infrastructure
Figure 2-2	Infrastructure Condition Map
Figure 4-1	Process for Initiating Data Collection
Figure 5-1	Impervious Area Only Rate Structure (Example Purposes Only)
Figure 5-2	Impervious Area Plus Gross Area Rate Structure (Example Purposes Only)
Figure 5-3	Intensity of Development Rate Structure (Example Purposes Only)
Figure 5-4	Common Methods of Assessment
Figure 5-5	Example of a Simplified Credit System
Figure 5-6	Preliminary Equivalent Residential Units by Service Type
Figure 5-7	Preliminary Rate Calculations
Figure 5-8	Preliminary Rate Forecast (2011 – 2016)
Figure 5-9	Impervious Only Rate Structure with Base Fee (Example Purposes Only)
Figure 6-1	Evaluation Criteria Matrix
Figure 6-2	Common Methods of Billing for Stormwater

## Appendices

Appendix A	Ad-Hoc Stormwater Committee Meeting Notes and Presentations
Appendix B	Supplemental Information – Current and Future Program Costs
Appendix C	Dover Stormwater Utility Public Outreach Plan, October 2010



## 1 Introduction

The City of Dover, NH (City) is home to approximately 29,000 people, and occupies approximately 28 square miles in coastal New Hampshire on the Piscataqua River. The City currently manages a multi-faceted stormwater management program, which includes ownership of a stormwater system as well as responsibility for stormwater impacts such as flooding and water quality. Stormwater program management and funding are currently decentralized, and are implemented and funded through multiple mechanisms. The City's stormwater discharges are subject to the National Pollutant Discharge Elimination System (NPDES) program, which is administered by the Environmental Protection Agency (EPA) in New Hampshire. Key changes between the existing permit and the proposed draft permit are expected to significantly increase the staffing and funding resources necessary to maintain permit compliance in future years. The City is in need of a defensible, stable, and equitable approach to funding the stormwater program.

As a result, the City has sought and obtained funding from the New Hampshire Department of Environmental Services (NHDES) Watershed Assistance Grants Program to evaluate the feasibility of developing a stormwater utility as a funding source for its municipal stormwater program. The Dover Stormwater Utility Feasibility Study was undertaken to evaluate the feasibility of establishing a municipal stormwater utility and identify a preferred approach to funding the City's stormwater program.

Recognizing the importance of public support for the preferred approach, City staff assembled an Ad-Hoc Stormwater Study Committee (Committee). The Committee includes the following members:

- Jan Nedelka (Chairperson)
- Dorothea Hooper (Vice Chairperson)
- Chad Kageleiry
- Jay Stephens
- Dana Lynch
- Gary Green
- Raymond H. Bardwell
- Chris Nash
- Dennis Ciotti

The Committee was formed to analyze the impacts and implementation considerations associated with approaches to funding the stormwater program including establishing a stormwater utility; and to determine the most appropriate funding option for Dover. Five Committee meetings were held to review and discuss topics related to establishing a stable funding mechanism for stormwater improvements. The five meetings covered the following topics:

- Meeting 1: Goals and Objectives. At this meeting, the Committee received background information on the need for effective stormwater management. Stormwater-related water quality and downstream flooding impacts were discussed, and regulatory changes including the revised



NPDES permit was reviewed. The group provided input on goals and objectives for the Feasibility Study.

- Meeting 2: Program Plan and Compelling Case. This meeting involved reviewing the City's existing stormwater program and identifying specific challenges, needs, and issues facing the program. Future program needs were presented. A facilitated discussion was held to brainstorm advantages and disadvantages of a stormwater utility, as well as alternative mechanisms to achieve the program goals.
- Meeting 3: Rate Structure Alternatives. This meeting focused on discussing the benefits and drawbacks of various rate methodologies, including preliminary cost/revenue analyses and potential credit allowances. Stakeholder concerns and preferences were discussed.
- Meeting 4: Recommendations and Draft Report. This meeting involved review of the draft report recommendations. Stakeholders were given the opportunity to comment on the recommendations prior to report finalization.
- Meeting 5: Final Report. The final report was reviewed with the Committee, and City staff requested Committee member support for the recommendations at the upcoming City Council meeting. *(TO BE COMPLETED)*

The Final Report and recommendations reflect the input and discussion generated in the five stakeholder meetings. Notes and presentations from each meeting can be found in Appendix A. This report is includes the following sections:

Chapter 1: Introduction

Chapter 2: Stormwater Program Analysis and Plan

Chapter 3: Compelling Case

Chapter 4: Data Gap Analysis and Compilation Approach

Chapter 5: Rate Structure Methodology

Chapter 6: Billing Summary Methodology

Chapter 7: Recommendations

Chapter 8: Implementation Plan

Additional detail related to program costs presented in Chapter 2 is provided in Appendix B. In addition, a Stormwater Utility Public Outreach Plan was developed as part of this project. This Plan is provided in Appendix C.



## **2 Stormwater Program Analysis and Plan**

This section provides an overview of the current stormwater management program and associated costs. In addition, future stormwater program needs are presented.

### **2.1 Current Program Elements**

The City currently manages a multifaceted stormwater management program, including the following general elements:

- Infrastructure Maintenance
- Planning Board Activities
- Regulatory Compliance
- Pollutant Diversion
- Regional Programs
- Watershed Management

Each element is described in detail below.

#### **2.1.1 Infrastructure**

City's stormwater infrastructure includes:

- 650 manholes
- 65 miles of pipe
- 204 discharge locations
- 101 miles of open drainage
- 140 culverts
- 2857 catch basins

The current stormwater system, portions of which date back as far as the late 1800s, is aging and in need of rehabilitation and replacement. Only a very small section of the system has been televised, and the actual condition of much of the system infrastructure is unknown. The City has classified the existing conveyance infrastructure based on age and anticipated condition. Currently, approximately ten miles of drainage infrastructure has been identified as being in immediate need of replacement. The following figure illustrates the current condition of a segment of the City's stormwater infrastructure classified as being in need of immediate replacement.



**Figure 2-1 Condition of Aging Stormwater Infrastructure**



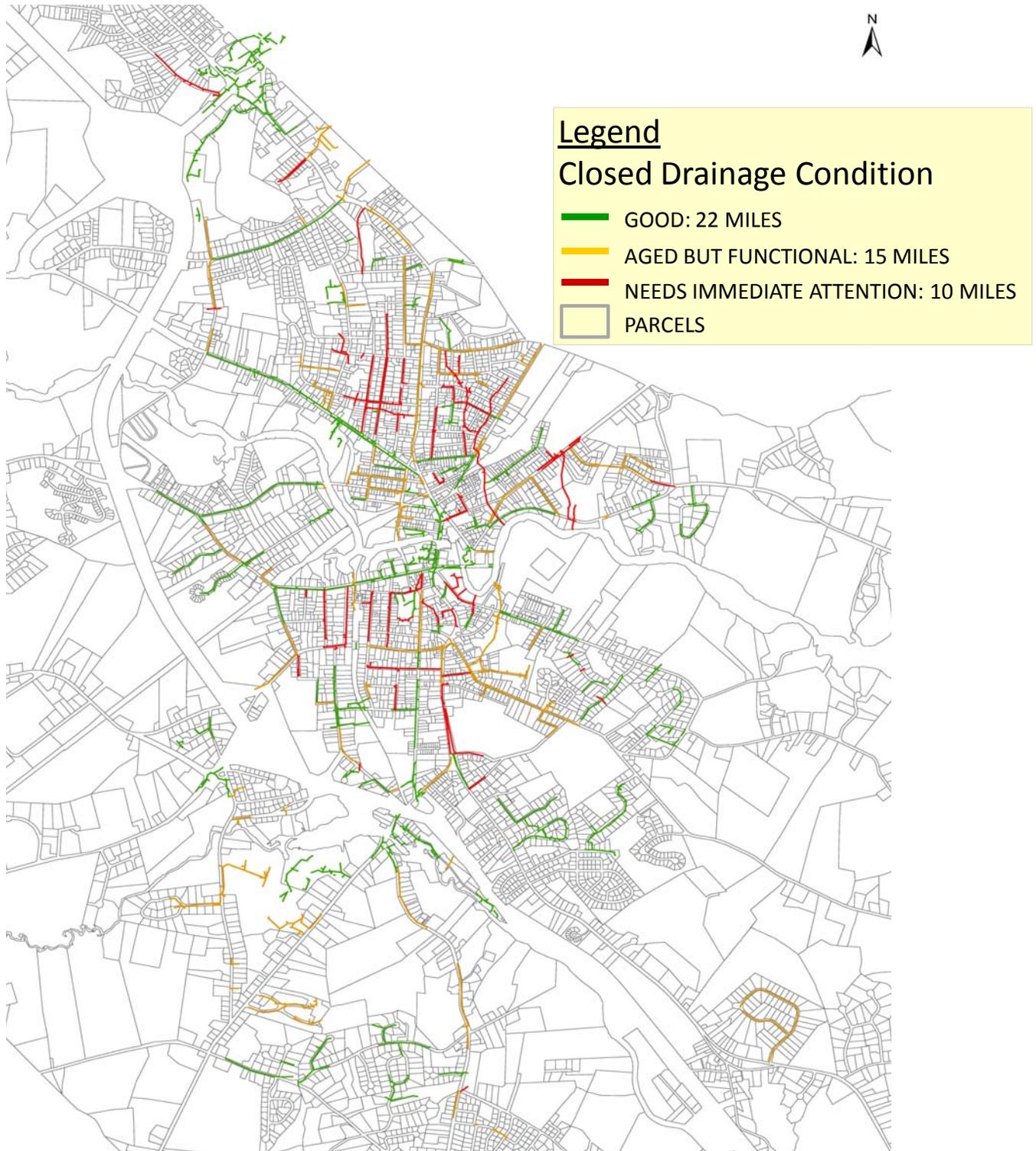
In addition to the ten miles in need of immediate attention, the City has classified an additional fifteen miles of pipeline as being aged but functional. This infrastructure should be prioritized for inspection and renewal following the areas in need of immediate attention. The figure on the following page illustrates the classification of the majority of the City's stormwater conveyance infrastructure based on anticipated condition.

The City's stormwater infrastructure maintenance program includes a significant catch basin cleaning effort, through which approximately half of the catch basins are cleaned each year. In 2009, nearly 1,400 catch basins were cleaned. The City also manages an active illicit discharge detection and elimination (IDD&E) program. Illicit discharges enter the system through either direct connections such as wastewater piping that connects to a storm drain or through indirect connections such as infiltration into the storm sewer from cracked sanitary systems. In its efforts to identify and eliminate such illicit discharges, the City has developed and continues to maintain a map of its infrastructure, including catch basins, drain manholes, pipes, and discharge points. The City has also initiated dry weather sampling of storm water outlets in the downtown area for fecal coliform bacteria, which can be used in combination with techniques such as smoke testing and dye testing to determine the source of potential illicit discharges (City of Dover, 1999).

The City has also partnered with local businesses to implement a catch basin stenciling effort called the "Yellow Fish Road Program". The program involves catch basin stenciling as well as distribution of door hangers, bumper stickers, and articles in both the local media and a local newsletter which discuss the potential water quality impacts of stormwater (City of Dover, 1999).



Figure 2-2 Condition of Closed Drainage<sup>1</sup>



<sup>1</sup> Map reflects approximately 47 miles of closed drainage in the City core. Approximately 18 additional miles of closed drainage are located outside of the mapped area.



### **2.1.2 Planning Board Activities**

A variety of activities undertaken by the City Planning Board assist in reducing the potential impacts of stormwater associated with new development. These activities include:

- **Site Plan Review:** The City Engineer's office reviews all subdivision and site plan applications. Amendments to the subdivision and site review regulations passed in 2009 strengthen the stormwater requirements by encouraging the use of low impact development (LID) techniques, requiring that all projects disturbing more than one acre of land submit plans to the Planning Board for review and approval, providing the authority to regulate projects disturbing less than one acre of land when they are conducted in proximity to sensitive ecological areas, and establishing a subcommittee to evaluate porous pavement.
- **Stormwater Operations and Maintenance Plans:** Projects are required to submit stormwater O&M plans for Planning Board review.
- **Inspections:** The City Engineer's office performs inspections of temporary and permanent erosion control and stabilization measures.

In addition, Zoning Ordinances 170-28.3 and 170-27 establish stormwater controls. Zoning Ordinance 170-28.3 protects groundwater quality by limiting allowable land uses within primary and secondary groundwater protection zones surrounding supply wells. It limits allowable impervious surfaces in poorly drained areas, requires Conservation Commission review for developments that also require Planning Board approval, and it establishes nitrogen and infiltration limits. Zoning Ordinance 170-27 establishes a Conservation District. The Conservation District encompasses areas within 100 feet of the mean high water of any waterbody subject to tidal action; areas within 50 feet of a stream, brook, or other freshwater body; certain parcels owned by the City of Dover; and all areas with slopes in excess of 20 percent. A Conditional Use Permit granted by the Planning Board is required for development within the Conservation District. Planning Board approval will not be granted for development within the Conservation District without Conservation Commission review.

### **2.1.3 Regulatory Compliance**

The City's stormwater discharges are subject to the NPDES program. The NPDES program is administered by the EPA in New Hampshire. It requires regulated entities, including the City of Dover, to comply with the Municipal Separate Storm Sewer System (MS4) General Permit. The MS4 Permit requires specific activities to be undertaken in the following areas:

- Public Education and Outreach
- Public Involvement and Participation
- Illicit Discharge Detection and Elimination
- Pre- and Post-Construction Site Stormwater Runoff Control
- Pollution Prevention and Good Housekeeping in Municipal Operations

In addition, the City must prepare a written Stormwater Management Plan (SWMP). The City's 1999 SWMP outlines how the City will upgrade its system in order to meet permit levels. The statewide MS4 permit is being revised, and the draft permit is currently out for public review and comment. Key changes



between the existing permit and the proposed draft permit, coupled with improvements identified in the City's SWMP, represent a significant increase in the staffing and funding resources necessary to maintain compliance with the MS4 permit in future years.

#### **2.1.4 Pollutant Diversion**

The City has several programs in place designed to prevent potential pollutants from coming into contact with surface runoff. This is accomplished primarily by encouraging proper disposal of waste. The City has an extensive recycling program in place that includes curbside pickup as well as onsite recycling. The recycling program includes waste motor oil collection, waste antifreeze recycling, and an annual household hazardous waste collection which includes paints, solvents, pesticides, and other hazardous materials. Fifty-two percent of the City's waste stream is now recycled. In addition, the City has a pet waste pickup program designed to encourage proper disposal of pet waste (City of Dover, 1999).

#### **2.1.5 Participation in Regional Programs**

Dover participates in several regional programs that support the stormwater program objectives. These programs include:

- **NH Seacoast Stormwater Coalition:** This Coalition includes representatives from Dover, Durham, Exeter, Portsmouth, Rochester, Somersworth, and the University of New Hampshire. Participation provides assistance with public awareness, training of staff, bulk pricing, and other benefits.
- **Southeast Watershed Alliance:** The Southeast Watershed Alliance is a regional organization of municipalities in New Hampshire's coastal watershed. It was formed to establish a regional framework for coastal watershed communities, regional planning commissions, the state, and other stakeholders to collaborate on planning and implementation measures to improve and protect water quality and more effectively address the challenges of meeting clean water standards.
- **Natural Resources Outreach Coalition (NROC) Consultation:** The City engaged with the NROC program to discuss stormwater management priorities for the City. Stakeholder meetings identified two key target areas: encouraging low impact development techniques in development and redevelopment and exploring the feasibility of a stormwater utility.

Participation in these programs assists the City in efficiently achieving its stormwater management objectives.

#### **2.1.6 Watershed Management**

The City has initiated watershed assessment and management efforts aimed at addressing issues in select watersheds that are heavily impacted by runoff. Among these efforts are the Willand Pond Watershed Assessment and Alternatives Analysis and the Berry Brook Watershed Management Plan.

The Willand Pond Watershed Assessment was initiated in response to a cyanobacteria bloom that resulted from a rise in phosphorus levels, caused by periodic flooding of both the pond and the adjacent forest floor. The project was undertaken as a joint study completed by Dover, Somersworth, and the NHDES. The flooding and associated rise in phosphorus were found to be the result of excess precipitation, obstructions blocking the pond's natural outlet, and stormwater runoff from commercial



parking lots constructed in the watershed in recent years. Recommendations included addressing the water level issue by reactivating an abandoned water supply well, and implementing stormwater quality treatment improvements for existing and future development (City of Dover, 2009).

The Berry Brook Watershed Assessment and Management Plan was initiated to address water quality issues in the Berry Brook watershed. Plan recommendations include encouraging LID techniques, stream restoration, and implementation of water quality best management practices (BMPs) at the Horne Street School (City of Dover, 2008).

## 2.2 Current Program Structure and Cost

The City’s current stormwater management program is decentralized, with functions and costs spread among multiple City departments. This section describes the current program structure and associated costs. Additional detail on current and future costs

### 2.2.1 Program Structure and Funding Mechanisms

The primary department responsible for stormwater management is the Community Services Department. Under Dover’s Council-Manager form of government, 9 Councilors serve for a 2-year term and the City Manager is appointed by the Council. The Community Services Department falls under the City Manager’s direction. The Community Services Department consists of eight Divisions, including the Highway, Environmental and Sewer Divisions, which are primarily responsible for implementing stormwater management activities. The Highway Division maintains the stormwater drainage system, while the sewer division performs emergency catch-basin cleaning and implements the Illicit Discharge Detection and Elimination program.

Stormwater-related activities undertaken by the sewer department are funded through fees paid by sewer utility users. Maintenance of the storm drainage system implemented by the Highway Division is funded from the General Fund portion of the City budget. Similarly, large-scale stormwater improvements are financed through the Capital Improvements Plan (CIP) budget process also under the General Fund. The following table depicts the general separation of stormwater-related functions and costs.

**Table 2-1 Stormwater Program Departments, Functions, and Funding Mechanisms**

Department	Stormwater Functions	Funding Mechanism
Highway Division	Storm drainage system maintenance, street sweeping	General Fund
Sewer Department	Emergency catch-basin cleaning, Illicit Discharge Detection & Elimination program	Sewer Rates
Engineering / Utilities	Inspections, Capital Projects	General Fund



### 2.2.2 Program Costs

Because stormwater management functions and funding are decentralized, stormwater-related costs are spread among the Administrative, Streets and Drains, Sewer, and Water portions of the City budget. By reviewing the specific functions related to stormwater and determining the percentage of each budget dedicated to implementing stormwater programs, the true cost of the current stormwater program can be determined. Costs are typically budgeted in the following categories: Personnel Services, Purchased Services, Supplies, Capital Outlay, and Other Expenses. The following table presents an overview of current program costs based on information contained in the budget for fiscal year (FY) 2011.

**Table 2-2 Current Stormwater Program Costs**

<b>Cost Category</b>	<b>Stormwater Program Costs (FY 2011)</b>
Personnel Services	\$501,800
Purchased Services	\$83,800
Supplies	\$163,610
Capital Outlay	\$150,000
Other Expenses	\$900
<b>Total Stormwater Personnel Costs</b>	<b>\$900,100</b>

Current stormwater-related costs in each area are described in further detail below. Additional detail on current and future costs is provided in Appendix B.

- Personnel Services: The stormwater program is implemented by a variety of staff. Personnel Services costs include pay, insurance, FICA, medicare, retirement, staff development, worker's compensation, and FSA fees.
- Purchased Services: The Purchased Services portion of the existing stormwater program is captured within the Streets and Drains budget. Purchased services include medical and consulting services, water and sewage usage, maintenance charges, equipment rentals, property insurance, vehicle and equipment insurance, public liability insurance, and telecommunications.
- Supplies: The Supplies portion of the existing stormwater program is captured wholly within the Streets and Drains budget. The supplies budget includes office supplies, operating supplies, clothing and uniforms, vehicle fuels, food, maintenance supplies, fleet maintenance charges, and minor equipment, furniture and fixtures.
- Capital Outlay: The Capital Outlay portion of the existing stormwater program is captured within the Streets and Drains budget, and includes land improvements, general street and sidewalk improvements, general drainage improvements, machinery and equipment, and bridges.
- Other Expenses: The Other Expenses portion of the existing stormwater program is captured within the Streets and Drains budget, and includes dam registrations.



## 2.3 Future Stormwater Program Needs

As described previously, a sizeable portion of the City's stormwater infrastructure is in need of immediate attention, which will require capital investment not currently budgeted. Similarly, the City anticipates a significant increase in costs associated with MS4 permit compliance in coming years. By establishing an estimate of projected future expenses, the City can better prepare for the funding challenges facing stormwater management in the future.

The City's anticipated future program costs are presented in Table 2-8. Future program costs are anticipated to range from approximately \$1.9 to \$3.2 million per year over the next six years. This represents an average annual cost of approximately \$2.7 million per year, for an average increase of \$836,000 per year over currently budgeted costs.

The following line items capture the costs associated with currently planned projects that are included in the FY 2011 – 2016 CIP:

- **Catch Basin Spoils Facility:** This line item includes \$30,000 in FY 2011 and \$150,000 in FY 2012 for construction of a catch basin spoils facility, which is currently captured in the FY 2011 – 2016 capital budget. In addition, ongoing costs associated with facility maintenance and spoils disposal will be required. A \$10,000 per year budget has been included as a placeholder for these ongoing maintenance and disposal costs for FY 2012 - 2016.
- **Street Reconstruction Renewal / Replacement Items:** A variety of street reconstruction projects included in the FY 2011 – 2016 CIP Budget include stormwater components. Projects budgeted in this line item are summarized in the following table.
- **System Expansion and Improvements:** There are some areas of the City which are not currently serviced or are underserved by the stormwater system. The City's CIP Budget includes several street reconstruction projects that will extend or improve stormwater service. The budget for the construction component of these projects is included in this line item. In future years, this line item may be expanded to include required stormwater treatment. Projects budgeted in this line item are summarized in Appendix B.

In addition to the baseline costs associated with maintaining the existing level of service, future budget line items have been included to capture drainage projects that are currently planned and budgeted in the FY 2011 - 2016 CIP Budget, as well as project expenditures not currently captured in the City's budgets. In addition to maintaining the current level of service and implementing the planned projects identified above, the following line items have been included to reflect the increased costs associated with operating the system over the coming six-year period.

- **Increased Cost of NPDES Permit Compliance:** As described previously, the cost of complying with the revised MS4 permit will represent a significant increase over current compliance costs. This line item captures the anticipated incremental increase in permit compliance costs.
- **Stormwater Utility Implementation and Administration:** Should the City decide to pursue stormwater utility, costs associated with utility implementation and ongoing administration will be incurred. This line item includes \$100,000 for utility implementation and an estimated \$5,000 per year for ongoing program administration.



**Table 2-3 Estimated Future Program Costs**

<b>Cost Category</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Current Level of Service	\$900,116	\$900,116	\$900,116	\$900,116	\$900,116	\$900,116
Planned Future Activities	\$330,000	\$1,025,000	\$787,500	\$628,750	\$1,162,500	\$302,500
<i>Catch Basin Spoils Facility</i>	\$30,000	\$150,000				
<i>Street Reconstruction Renewal / Replacement Items</i>	\$50,000	\$625,000	\$687,500	\$628,750	\$825,000	\$302,500
<i>System Expansion &amp; Improvements</i>	\$250,000	\$250,000	\$100,000	\$0	\$337,500	\$0
Additional Future Activities	\$1,182,087	\$1,078,737	\$1,078,737	\$392,337	\$890,737	\$392,337
<i>Increased Cost of NPDES Permit Compliance</i>	\$136,000	\$192,000	\$191,000	\$231,000	\$281,000	\$281,000
<i>Ongoing Spoils Management &amp; Disposal Costs</i>		\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
<i>Stormwater Utility Implementation &amp; Administration</i>	\$80,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
<i>Stormwater Needs Assessment Identification and Implementation</i>	\$100,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
<i>Pipe rehabilitation / replacement (target renewal of 1% of closed drainage per year)</i>	\$686,400	\$686,400	\$686,400	\$0	\$498,400	\$0
<i>Berry Brook Watershed Improvements</i>	\$259,711	\$259,711	\$259,711	\$259,711	\$259,711	\$259,711
<i>Willand Pond Improvements</i>	\$55,977	\$67,627	\$67,627	\$67,627	\$67,627	\$67,627
<b>TOTAL COST</b>	<b>\$2,548,204</b>	<b>\$3,195,854</b>	<b>\$2,957,354</b>	<b>\$2,152,204</b>	<b>\$3,234,354</b>	<b>\$1,875,954</b>
<i>Average Annual Cost</i>	\$2,660,654	\$2,660,654	\$2,660,654	\$2,660,654	\$2,660,654	\$2,660,654

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- Stormwater Needs Assessment Identification and Implementation: The City has not completed a stormwater management needs assessment, and does not maintain a prioritized list of stormwater action items. It is recommended that such a study be completed and adopted as the basis for future stormwater program implementation. This line item includes \$100,000 in FY 2011 for completion of the needs assessment. The line item also includes a \$50,000 per year budget placeholder for implementation of plan recommendations.
- Pipe Rehabilitation / Replacement: It is recommended that the City adopt an annual infrastructure replacement program. A general guideline for annual infrastructure replacement programs is to replace one percent of the system per year. This schedule provides for system replacement on a 100-year schedule. For the City's 65 miles of closed drainage, this translates to replacement of 0.65 miles of pipe and associated structures per year. At a cost of \$200 per linear foot, this would be expected to cost \$686,400 per year in system renewal costs. Several of the street reconstruction projects included in the FY 2011 – 2016 CIP Budget involve stormwater management and drainage components. Where a project budgeted in the CIP includes renewal or replacement of existing closed drainage, the target of 0.65 miles per year was reduced to reflect renewal / replacement already budgeted in the City's CIP and prevent double-counting. Planned pipe renewal projects budgeted in the Street Reconstruction Renewal / Replacement line item are summarized in Appendix B.
- Berry Brook Watershed Improvements: As described previously, the City has completed a watershed assessment and management plan for the Berry Brook watershed. This line item includes funding to implement watershed management plan recommendations. Implementing the recommendations over a six year period would result in an annual cost of approximately \$260,000 per year.
- Willand Pond Improvements: This line item includes funding to implement recommendations of the Willand Pond Watershed Assessment and Alternatives Analysis. Implementation and operations and maintenance costs are budgeted as approximately \$56,000 in year one and \$68,000 per year for the following five years.

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### **3 Compelling Case**

The City of Dover currently owns and operates an extensive stormwater management system aimed at mitigating the potential impacts associated with unmanaged stormwater. This section reviews these potential impacts as they relate to Dover and identifies priorities for stormwater management.

#### **3.1 Stormwater Runoff Overview**

In an undeveloped watershed, approximately 50 percent of precipitation from rainfall and snowmelt infiltrates into the ground soils, where it accumulates as groundwater. Approximately 40 percent of precipitation in natural watersheds is taken up by vegetation through transpiration processes or evaporated into the atmosphere. The remaining ten percent flows over land to nearby surface water bodies as surface runoff (NHDES, 2008).

When water infiltrates into the ground, it must travel through multiple layers of vegetation and soil, where natural filtration occurs and potential pollutants are removed from the water. Similarly, water that travels as surface runoff in the natural environment is slowed by vegetation, allowing pollutants that may be carried along by the precipitation to settle out. The root structures of vegetation found in the natural environment also assist in maintaining the integrity of soils by providing structural support, reducing erosion. This, in turn, minimizes the amount of sediment transported in surface runoff (University of New Hampshire, 2008).

In a developed watershed, vegetated surfaces are often covered or replaced with man-made impervious materials which water cannot penetrate. Precipitation that falls on an impervious surface cannot infiltrate into the ground as would typically occur in an undeveloped watershed. Instead, precipitation that falls on impervious surfaces flows over land to nearby surface water bodies. As a result, a higher proportion of precipitation in a developed watershed exists as surface runoff as compared to an undeveloped watershed. This surface runoff picks up pollutants such as microbial contaminants, sediment, excess nutrients, and chemical pollutants that may be present on surfaces it encounters and transports these pollutants as it moves. Surface runoff in a developed watershed encounters less vegetation than in an undeveloped watershed, further reducing the amount of natural filtration to remove the pollutants and sediment that accumulate as the runoff travels over land. Because runoff in developed watersheds does not have the benefit of these natural filtration processes, it tends to be of poorer quality than runoff found in natural environments. Poor quality runoff can contaminate nearby surface water bodies and groundwater by introducing pollutants. Water quality impacts associated with stormwater runoff can include algal blooms, reduced dissolved oxygen levels and impacts to aquatic habitats (University of New Hampshire, 2008). The following table summarizes pollutants commonly associated with stormwater runoff, their sources, and potential impacts.



**Table 3-1 Stormwater Pollutants, Sources, and Impacts**

<b>Pollutant</b>	<b>Sources</b>	<b>Impacts</b>
Nutrients (nitrogen, phosphorus)	fertilizer, wastewater effluent (septic systems), agricultural and pet waste and sediments (erosion and scour)	cause algal blooms in lakes, bays and ponds; reduced dissolved oxygen levels
Sediments (sand, silt)	soil erosion, road sand	transport contaminants to receiving waters; reduce water clarity; impact aquatic habitat
Pathogens (viruses, bacteria, etc)	agricultural and pet waste, wastewater effluent (septic systems)	degrades drinking water, fish and shellfish consumption, recreation
Toxics (heavy metals, polycyclic aromatic hydrocarbons, volatile organics)	petroleum products, paints, solvents, herbicides, pesticides, and other household, commercial and industrial products	poisonous to living organisms, persistent in the environment
Chloride (salts)	de-icing salts, water softeners	impacts plants and animals in freshwater aquatic systems
Temperature	heated water from manufacturing process waters or runoff from warm surfaces such as parking lots	reduces dissolved oxygen, affects fish and other aquatic organisms

In addition to contributing to water quality issues, the increased surface runoff observed in developed watersheds can cause significant flooding issues. The quantity of water found as surface runoff is greater in developed watersheds. Further, because runoff in developed watersheds may not encounter as much vegetation as it travels, it tends to flow more quickly. This results in larger volumes of water moving more quickly over land than typically observed in the natural environment, which contributes to the flooding problems frequently observed in developed watersheds. This flooding can cause scouring and erosion, further increasing the quantity of sediment and potential pollutants present in the runoff and degrading water quality.

### **3.2 Local Impacts**

Dover currently experiences a variety of impacts associated with stormwater runoff. These impacts include water quality degradation, flooding, loss of aquatic habitat, and impaired recreation.

The Federal Water Pollution Control Act (PL92-500, also known as the Clean Water Act) requires that States submit a list to the US EPA every two years that identifies waterbodies that are (New Hampshire Department of Environmental Services, 2008):

- impaired or threatened by a pollutant;
- not expected to meet water quality standards within a reasonable time even after application of best available technology standards for point sources or best management practices for nonpoint sources; and / or
- require development and implementation of a Total Maximum Daily Load (TMDL) study to meet water quality standards.



Several waterbodies within and around Dover are currently included on the 303(d) list due to degraded water quality that impacts potential uses. These waterbodies are listed in Table 3-2, along with the pollutants of concern, and the impaired or threatened uses.

**Table 3-2 Waterbodies Listed as Impaired or Threatened in Dover**

Waterbody	Threatened Use			
	Aquatic Life	Fish Consumption	Contact Recreation	Shelfishing
Salmon Falls River	Dissolved oxygen, pH	polychlorinated biphenyls (PCBs)	chlorophyll-a, enterococcus, nitrogen	dioxin, mercury, PCBs
Coheco River	pH, dissolved oxygen, 2-methylnaphthalene, acenaphthene, acenaphthylene, anthracene, benzo(a)pyrene, benzo[a]anthracene, benzo[g,h,i]perylene, biphenyl, chrysene, DDD, DDE, DDT, dibenz[a,h]anthracene, dieldrin, fluoranthene, fluorene, indeno[1,2,3-cd]pyrene, naphthalene, phenanthrene	PCBs	E. coli	dioxin, mercury, PCBs
Bellamy River	pH	PCBs	chlorophyll-a, E. coli	dioxin, mercury, PCBs
Upper Piscataqua River	pH	PCBs	-	dioxin, mercury, PCBs
Fresh Creek Pond	dissolved oxygen, pH	-	E. coli	-
Blackwater Brook – Clark Brook	-	-	E. coli	-
Reyners Brook	-	-	E. coli	-
Indian Brook	-	-	E. coli	-
Berry Brook	benthic macroinvertebrate bioassessments	-	E. coli	-
Jackson Brook	-	-	E. coli	-
Varney Brook	-	-	E. coli	-
Garrison Brook	-	-	E. coli	-

Water quality monitoring would be required to demonstrate the contribution of stormwater to the water quality impairments listed above. As a result, the precise contribution of stormwater sources to the



impairments listed above is unknown. However, 83 percent of the water quality impairments listed in the New Hampshire DES 2008 water quality assessment report were attributed wholly or in part to stormwater (New Hampshire Department of Environmental Services, December 2008). As a result, it is anticipated that stormwater treatment may be required in future years to reduce pollutant contributions from stormwater runoff.

In addition to local water quality impacts, flooding has been observed throughout Dover. In addition to flooding in downtown areas, significant flooding has been observed in the Willand Pond watershed, including basement flooding observed in the Strafford Road/Wellington Avenue, Cranbrook/Maplewood Avenue, and “Indian Village” (Apache Street area) neighborhoods, located west of Willand Pond. In 2009, the City undertook an evaluation of the Willand Pond watershed to identify actions to reduce phosphorus levels and periodic flooding of the pond and the adjacent forest floor. In recent years, a combination of excess precipitation, obstructions blocking the pond’s natural outlet, and stormwater runoff from commercial parking lots constructed in the watershed have led to a chronic full condition in the pond. Under this chronic full condition, relatively minor quantities of stormwater runoff can contribute to flooding events. The report recommended a variety of actions to be taken to manage water levels in the Pond to reduce flooding events. Many of the recommended actions are aimed at more effectively managing stormwater runoff in the area to minimize the volume and improve the quality of runoff reaching the Pond.

### **3.3 Local Priorities**

At the second meeting of the Ad-Hoc Stormwater Committee, stormwater-related impacts were discussed, and the group was asked to prioritize impacts to be addressed. The Committee discussion underscored the need to develop and implement an enhanced stormwater management program. The Committee members had personal knowledge and experience of local stormwater impacts. The main challenge for the City will be to identify a stable, sufficient, and equitable approach to funding needed improvements, either through a stormwater utility or other mechanism.

The Committee discussed the variety of stormwater impacts, and determined that water quality and flooding impacts are of greatest concern and constitute the highest priorities for stormwater management in the City. It is anticipated that mitigation of water quality and flooding impacts in and around the City would mitigate many other stormwater impacts, including loss of aquatic habitat and recreation impacts. For example, a reduction in flooding would reduce the scouring and erosion caused by unmanaged stormwater. This would, in turn, reduce sediment loading and improve the quality of the runoff, while minimizing the physical impact of high surface flow volumes on aquatic habitat. Improvements in water quality would not only protect drinking water supplies in the long-term, but would similarly generate improvements in water quality for aquatic habitat and recreation.

The Committee was concerned what impact these increased stormwater improvements (as mandated by federal authorities) would have on: the downtown core, future expansion, existing commercial and industrial usage, farm use, land conservation, and the overall impact on Dover’s taxpayers.

### **3.4 Funding Alternatives**

Like other municipalities in New Hampshire and throughout the United States, the City is faced with a compelling need to fund stormwater improvements, and budgetary constraints that threaten the City’s ability to adequately maintain the existing system.



The majority of the City's stormwater management functions are currently supported by the General Fund. Because the General Fund is funded primarily through property taxes, the reliability of funding varies from year-to year. Further, multiple City expenses compete for General Fund funding, including schools and public safety. Stormwater-related expenses have traditionally been viewed as being of lower priority than competing expenses, and often do not receive the attention they require. As a result, portions of the City's stormwater system have fallen into disrepair.

There are a variety of potential mechanisms for funding stormwater improvements. Many available funding mechanisms can be used to fund either one-time capital expenses or ongoing operations and maintenance costs. The following table presents many of the funding alternatives available for stormwater-related capital and operating expenses, and the type of costs they can typically be used to cover.

**Table 3-3 Potential Funding Sources For Capital and Operations Costs**

Funding Source	Type of Costs Funded	
	Capital	Operations and Maintenance
Grants	✓	
State Loan Programs	✓	
Developer Contributions	✓	
Collaboration with other Agencies	✓	
Selling Bonds	✓	✓
General Fund	✓	✓
Streets / Road Fund	✓	
Local Improvement District	✓	
System Development Charges	✓	
Utility Rates	✓	✓
Permit Review Fees		✓
Inspection Fees		✓

As shown in this table, the funding mechanisms that can be used to fund ongoing operations and maintenance costs include selling bonds, general fund, utility rates, permit review fees, and inspection fees. Of these potential funding mechanisms, bonds are not typically advisable for ongoing operations and maintenance costs.

In order to provide sustainable funding to maintain regulatory compliance and quality of life for residents, a financing mechanism for the stormwater program should be:

- Sufficient to cover costs
- Stable/dependable from year to year
- Legal and defensible



- Easy to understand and implement
- Fair and Equitable for Dover's residents

General fund revenues vary from year to year. Further, multiple City expenses compete for General Fund funding, including schools and public safety, and stormwater-related expenses are often viewed as a lower priority than competing expenses. As a result, the general fund does not meet the objective of providing sufficient and stable revenue. Revenues collected through permit review fees and inspection fees vary from year to year, depending on the number of permits reviewed and inspections completed. As a result, these mechanisms do not provide a stable source of revenue. In addition, the revenues collected from these sources is minimal, and frequently does not cover the true cost of the service being provided, let alone generate sufficient revenue to fund the entire stormwater program. As a result, these mechanisms are not sufficient to cover costs.

Of the funding mechanisms available to fund ongoing costs, only utility rates meet all of the criteria listed above. Utility rates, if structured correctly, provide a stable, reliable revenue source that is sufficient to cover costs. There are currently over 1,200 stormwater utilities nationwide. In 2008, municipalities in New Hampshire were given legal authority to form stormwater utilities under RSA 149-I, establishing the legal defensibility of the concept. Because stormwater utility rates are based primarily on use of the stormwater system, they represent an equitable and logical means of assessing user fees for a public service.

During the second stakeholder meeting, potential alternatives for funding the stormwater program were brainstormed, along with advantages and disadvantages of each. The results of this exercise are summarized below.



**Table 3-4 Program Funding Alternatives, Advantages and Disadvantages**

	<b>Stormwater Utility</b>	<b>General Fund (with Funding Recommendation)</b>
Advantages	<ul style="list-style-type: none"> <li>▪ Stable source of funding</li> <li>▪ Reliable source of funding enables more credible long-term planning</li> <li>▪ Independent of political whim</li> <li>▪ More equitable: increased system use results in an increased fee</li> <li>▪ High visibility for stormwater as an issue that needs to be addressed</li> <li>▪ Eliminates competition with other programs, such as education and safety</li> <li>▪ Not tied to property assessment</li> </ul>	<ul style="list-style-type: none"> <li>▪ Establishes the program a community issue instead of an individual issue</li> </ul>
Disadvantages	<ul style="list-style-type: none"> <li>▪ Potentially high administration costs</li> <li>▪ Credit scheme could be complicated</li> <li>▪ Perceived inequity in user rates (could be overcome by forming a board to address potential inequities)</li> <li>▪ Disparities in individual costs</li> </ul>	<ul style="list-style-type: none"> <li>▪ Subject to a variable political environment</li> <li>▪ Funding is not reliable (can be moved out of the Streets &amp; Drains budget to fund other projects)</li> <li>▪ Perceived inequity</li> <li>▪ Tax exempt properties, which often have a large area of impervious area, cannot be charged</li> <li>▪ Maintains the status quo funding level</li> <li>▪ Goes on property assessment</li> </ul>

Based on the discussions during the second Committee meeting, it was determined that a stormwater utility may be a potential approach to funding stormwater improvements, provided that a rate structure can be developed which would maximize the equitable distribution of costs while minimizing set-up and administration costs. Potential rate alternatives and billing approaches are discussed in Sections 4 through 7 of this report.



## 4 Data Gap Analysis & Compilation Approach

Establishing a stormwater utility involves compiling a variety of information related to the potential rate base and billing approach. This section provides an overview of the information and data that would be needed to develop a stormwater utility in Dover, as well as recommended approaches to collecting data as appropriate to support utility development.

### 4.1 Stormwater Utility Structure and Data Needs

There are a variety of alternative organizational structure, rate methodologies, and billing approaches for a new stormwater utility. In many cases, the specific data needed to establish the utility depends upon the selected approach. Common organizational, rate, and billing approaches are described below.

#### 4.1.1 Program Organization

The proposed organizational structure and utility governing approach will determine necessary staffing needs and revenue requirements. The simplest approach to organizing a new program is to begin by using existing staff. With this approach, staff continues to perform their existing stormwater-related duties and functions, with funding for these activities originating from the stormwater utility, rather than the General Fund, water, or sewer funds. This is the simplest approach to establishing a utility, as it avoids reorganization, eliminates the immediate need for new staff, and minimizes impacts to existing staff. Provided that existing staffing and governance / oversight are sufficient to accommodate a new stormwater utility, the utility may be organized in the same manner as the existing program. However, this approach may not be sufficient in some situations. For example, in a situation where current staffing is non-existent or insufficient to support projected stormwater labor needs; when utility governance and / or oversight is non-existent or insufficient to support stormwater utility governance needs; or when a proposed stormwater utility will cover multiple jurisdictions and require dedicated staff, a new utility structure may be required to support the stormwater utility.

Data needed to establish a new stormwater program are presented in the following table.

**Table 4-1 Data Needs for Alternative Program Structures**

Approach	Data Needs	Outstanding Data Needs
Model After Existing Program	<ul style="list-style-type: none"> <li>Existing program organizational structure</li> <li>Existing utility oversight approach</li> <li>Current revenue requirements</li> <li>Planned future program activities</li> <li>Future revenue requirements</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>
Establish New Program	<ul style="list-style-type: none"> <li>Planned future program activities</li> <li>Future revenue requirements</li> <li>Future program organizational structure</li> <li>Future governing / oversight approach</li> </ul>	<ul style="list-style-type: none"> <li>Future program organizational structure</li> <li>Future governing / oversight approach</li> </ul>



In the City’s case, while a significant increase in stormwater-related needs is projected, current staffing and governance procedures are expected to be sufficient to support a utility. As a result, it is anticipated that the City would model a new stormwater program after its existing program, maintaining the existing program organizational structure and oversight approach.

#### 4.1.2 Rate Structures

Stormwater user fees are assessed based on a predetermined rate structure. Different information may be necessary depending upon the specific rate structure. Common approaches to assessing user fees include the following. Additional detailed information on rate structures is provided in Chapter 5.

- **Impervious Area Only:** The most common approach currently in use by stormwater utilities, an impervious area-only rate structure assesses user fees to customers based on the amount of impervious area they maintain. Typically, the average quantity of impervious area for a single family residence (SFR) is calculated to define an equivalent residential unit (ERU). The ERU is then used as a unit of measure for assessing fees to non-SFRs. All SFRs would be charged a flat rate, and non-SFRs would be charged based on the number of ERUs of impervious surface maintained. Data needed for this approach includes impervious area for a representative sample of SFR properties and impervious area for all non-SFR properties.
- **Impervious Area + Gross Area:** The impervious area + gross area approach to establishing stormwater rates incorporates both the impervious and gross area of a parcel in establishing the user fee. Data needed for this approach includes impervious and gross area for all properties. Because significantly more information is necessary for this approach, it is more difficult and costly to implement than the impervious area only approach.
- **Intensity of Development:** The Intensity of Development approach to setting user fees involves developing a range of charges for varying percentages of impervious area. Parcels with a relatively low ratio of impervious area to gross area are typically charged at a lower rate than parcels with higher percentages of impervious area. Data needed for this approach includes impervious and gross area for all properties. Like the impervious area and gross area approach, this approach is more difficult and costly to implement than the impervious area only approach.

The data requirements of each rate methodology are summarized in the following table.

**Table 4-2 Data Needs for Alternative Rate Methodologies**

Approach	Data Needs	Outstanding Data Needs
Impervious Area Only	Impervious area mapping <ul style="list-style-type: none"> <li>• Representative sample of SFR parcels</li> <li>• All other parcels</li> </ul>	<ul style="list-style-type: none"> <li>• 1,431 non-SFR parcels</li> </ul>
Impervious Area + Gross Area	Impervious area mapping <ul style="list-style-type: none"> <li>• All parcels</li> </ul>	<ul style="list-style-type: none"> <li>• 7,107 parcels</li> </ul>
	Gross area mapping <ul style="list-style-type: none"> <li>• All parcels</li> </ul>	<ul style="list-style-type: none"> <li>• 7,107 parcels</li> </ul>
Intensity of Development	Impervious area mapping <ul style="list-style-type: none"> <li>• All parcels</li> </ul>	<ul style="list-style-type: none"> <li>• 7,107 parcels</li> </ul>
	Gross area mapping <ul style="list-style-type: none"> <li>• All parcels</li> </ul>	<ul style="list-style-type: none"> <li>• 7,107 parcels</li> </ul>



In order to determine the total rate base and projected fees associated with a new utility, it is necessary to estimate the number and extent of impervious area of City parcels. As discussed previously, much of the specific information needed varies depending on the selected approach. However, all approaches require measurement of impervious area. At a minimum, impervious area is needed for a sampling of SFRs

In conjunction with development of this Feasibility Study, the City has mapped the impervious area of a selection of residential and nonresidential parcels. The City maintains property assessment information in a Geographic Information System (GIS) database. This database was utilized in conjunction with recent aerial photography to develop estimates of gross area and impervious area by parcel. Relevant information on the extent of parcel mapping completed to-date, as well as a summary of the characteristics of sampled parcels, are provided in Table 4-2 on the following page. Depending upon the rate methodology selected, additional mapping will be required.

#### **4.1.3 Rate Modifiers**

Stormwater utilities, like other utilities, commonly employ rate modifiers. Rate modifiers are charges or credits applied to rates to account for special circumstances. For example, a flat fee may be applied to each bill to assist in covering fixed costs associated with billing. Conversely, credits may be given to recognize implementation of onsite stormwater retention, which reduces the load on the stormwater system. Common rate modifiers include the following.

- **Base Fee:** A base fee may be added to bills to assist in covering fixed costs associated with utility operations, billing, etc. A base fee is fairly straightforward to implement, and requires minimal data.
- **Senior / Disabled Discount:** Discounts may be provided to individuals determined to be disproportionately impacted by a new user fee, such as elderly or disabled individuals on fixed incomes. To assess this credit, the utility would need information on potentially eligible user accounts.



**Table 4-3 Parcel Mapping Summary**

Category	Total # of Parcels	# of Parcels Sampled	% of Parcels Sampled	Total Category Area (Sq Ft)	Total Area Sampled (Sq Ft)	Impervious Area of Sample (Sq Ft)	Average Percent Impervious	Estimated Total ERUs	Average ERUs / parcel
Single Family Residential	5,732	56	1%	316,564,996	2,806,097	219,442	8%	5,732	1.0
Multifamily Residential	1,067	271	25%	34,295,092	5,946,838	1,670,980	28%	2,489	2.3
Condo	199	199	100%	45,001,509	45,001,509	5,361,258	12%	1,368	6.9
Commercial	375	325	87%	29,148,080	24,253,032	9,212,703	38%	2,613	7.0
Governmental	215	115	53%	88,498,821	62,471,470	4,035,172	6%	2,252	10.5
Industrial	123	109	89%	34,465,662	31,610,440	7,528,341	24%	1,960	15.9
Institutional	90	89	99%	19,737,893	19,721,710	3,435,953	17%	881	9.8
Undeveloped	471	1	0%	87,056,524	21,706	0	0%	0	0.0
Miscellaneous	46	46	100%	9,762,844	9,762,844	249,902	3%	64	1.4
<b>TOTAL</b>	<b>8,318</b>	<b>1,211</b>	<b>15%</b>	<b>674,266,685</b>	<b>211,330,909</b>	<b>31,713,750</b>	<b>15%</b>	<b>17,359</b>	<b>2.1</b>

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- **Water Volume Reduction Credit:** A credit may be granted to system users with onsite stormwater management controls that reduce the volume and / or velocity of stormwater leaving the parcel. A water volume reduction credit would reduce the charges assessed to the parcel in recognition of the impact of the onsite control on the quantity of stormwater leaving the parcel. To assess this credit, the utility would need information on eligible user accounts.
- **Water Quality Improvement Credit:** In areas with stormwater treatment requirements, credits may be granted to system users with onsite stormwater treatment controls that reduce the concentration and / or load of specific pollutants of concern in stormwater leaving the parcel. A water quality improvement credit would reduce the charges assessed to the parcel in recognition of the benefit of the onsite treatment on the quality of stormwater leaving the parcel.

Rate modifiers either increase or decrease the revenues collected by utilities. In order to generate sufficient revenue to cover projected expenses, a utility should develop an estimate of the impact of rate modifiers on the revenue stream as part of rate structure development. Information and data needed to assess the potential impacts of rate modifiers on the revenue stream are summarized in the following table.

**Table 4-4 Data Needs for Alternative Rate Modifiers**

<b>Modifier</b>	<b>Data Needs</b>	<b>Outstanding Data Needs</b>
Base Fee	<ul style="list-style-type: none"> <li>• Estimated fixed costs</li> <li>• Projected revenue requirements</li> <li>• Approximate rate base</li> </ul>	<ul style="list-style-type: none"> <li>• None</li> </ul>
Senior / Disabled Discount	<ul style="list-style-type: none"> <li>• Approximate number of qualifying parcels</li> <li>• Projected revenue requirements</li> <li>• Approximate rate base</li> </ul>	<ul style="list-style-type: none"> <li>• Approximate number of qualifying parcels</li> </ul>
Water Volume Reduction Credit	<ul style="list-style-type: none"> <li>• Process for measuring water volume reductions</li> <li>• Approximate number of qualifying parcels</li> <li>• Projected revenue requirements</li> <li>• Approximate rate base</li> </ul>	<ul style="list-style-type: none"> <li>• Process for measuring water volume reductions</li> <li>• Approximate number of qualifying parcels</li> </ul>
Water Quality Improvement Credit	<ul style="list-style-type: none"> <li>• Process for measuring water quality improvements</li> <li>• Approximate number of qualifying parcels</li> <li>• Projected revenue requirements</li> <li>• Approximate rate base</li> </ul>	<ul style="list-style-type: none"> <li>• Process for measuring water quality improvements</li> <li>• Approximate number of qualifying parcels</li> </ul>



#### 4.1.4 Billing Approaches

Once a preferred rate methodology and modifiers have been identified, a preferred billing approach must be selected. Typically, stormwater user fees are either billed independently or are added to an existing bill, as follows.

- **Water / Sewer Billing:** Most commonly, the stormwater user fee is added to the existing water and / or sewer bill as an additional line item. Because many parcels may have impervious area without having water or sewer, water / sewer / stormwater bills would need to be sent to parcel owners with impervious area but no water or sewer service. Data needed for this approach would include the capacity of the billing system to accommodate an additional line item, and the number of stormwater customers not on public water or sewer.
- **Property Tax Billing:** Some stormwater utilities add the stormwater user fee as a line item to the existing property tax bill. Tax-exempt properties with impervious area would also require stand-alone stormwater bills. Data needed for this approach would include the capacity of the billing system to accommodate an additional line item, and the number of tax-exempt stormwater customers.
- **Standalone Billing:** Some utilities elect to send a standalone stormwater bill. This approach has the benefit of reaching all parcels with impervious area. Data needed for this approach would include a preferred billing system and billing information for all customer accounts.

The data requirements of each billing approach are summarized in the following table.

**Table 4-5 Data Needs for Alternative Billing Approaches**

Billing Approach	Data Needs	Outstanding Data Needs
Property Tax Bill	<ul style="list-style-type: none"> <li>• Capacity of billing system to accommodate additional line items</li> <li>• Number and parcel ID of tax-exempt parcels</li> </ul>	<ul style="list-style-type: none"> <li>• Number and parcel ID of tax-exempt parcels</li> </ul>
Water and/or Sewer Bill	<ul style="list-style-type: none"> <li>• Capacity of billing system to accommodate additional line items</li> <li>• Number and parcel ID of parcels not connected to City water and/or sewer</li> </ul>	<ul style="list-style-type: none"> <li>• Number and parcel ID of parcels on private water / sewer</li> </ul>
Standalone Billing	<ul style="list-style-type: none"> <li>• Identification of preferred billing system</li> <li>• Information for all parcels</li> </ul>	<ul style="list-style-type: none"> <li>• Identification of preferred billing system</li> </ul>

#### 4.2 Approach to Addressing Data Needs

As described previously, the specific data required depends upon the utility approach selected. To maximize efficiency and minimize costs, data collection should be tailored to the selected program. This can be accomplished by determining a preferred approach prior to initiating data collection, as shown in the following figure. While Steps 1 through 4 may be initiated at the feasibility stage to provide sufficient data to support decision-making, additional data collection efforts will be required following a decision to move forward with a utility.



**Figure 4-1 Process for Initiating Data Collection**

Step 1	Step 2	Step 3	Step 4	Step 5
Identify Preferred Program Structure	Review and Select Preferred Rate Methodology	Define Appropriate Rate Modifiers and Credits	Select Preferred Billing Approach	Collect Missing Data

The following table presents a data collection approach for the data needs identified in previous sections, should the City decide to move forward with utility implementation.

**Table 4-6 Approach to Filling Data Gaps**

Alternative	Outstanding Data Needs	Data Collection Approach
<i>CATEGORY: PROGRAM ORGANIZATION</i>		
Model After Existing Program	<ul style="list-style-type: none"> <li>None</li> </ul>	N/A
Establish New Program	<ul style="list-style-type: none"> <li>Future program organizational structure</li> <li>Future governing / oversight approach</li> </ul>	<ol style="list-style-type: none"> <li>Identify potential organizational and governance structures with City staff and stakeholders</li> <li>Select preferred structure</li> <li>Prepare memorandum detailing new structure</li> </ol>
<i>CATEGORY: RATE STRUCTURE METHODOLOGIES</i>		
Impervious Area Only	<ul style="list-style-type: none"> <li>1,431 non-SFR parcels</li> </ul>	<ol style="list-style-type: none"> <li>Utilize existing GIS database and orthophotography to digitize impervious area</li> </ol>
Impervious Area + Gross Area	<ul style="list-style-type: none"> <li>7,107 parcels</li> <li>7,107 parcels</li> </ul>	<ol style="list-style-type: none"> <li>Utilize existing GIS database and orthophotography to digitize impervious area</li> </ol>
Intensity of Development	<ul style="list-style-type: none"> <li>7,107 parcels</li> <li>7,107 parcels</li> </ul>	<ol style="list-style-type: none"> <li>Utilize existing GIS database and orthophotography to digitize impervious area</li> </ol>
<i>CATEGORY: RATE MODIFIERS</i>		
Base Fee	<ul style="list-style-type: none"> <li>None</li> </ul>	N/A
Senior / Disabled Discount	<ul style="list-style-type: none"> <li>Approximate number of qualifying parcels</li> </ul>	<ol style="list-style-type: none"> <li>Review current affordability programs to determine accounts likely to qualify</li> </ol>



Water Volume Reduction Credit	<ul style="list-style-type: none"> <li>• Process for measuring water volume reductions</li> <li>• Approximate number of qualifying parcels</li> </ul>	<ol style="list-style-type: none"> <li>1. Develop approach to measuring reductions in water volume from BMPs (refer to NH Stormwater Manual)</li> <li>2. Determine recommended level of fee reduction</li> <li>3. Identify parcels currently implementing stormwater management practices</li> <li>4. Estimate impact on revenues</li> </ol>
Water Quality Improvement Credit	<ul style="list-style-type: none"> <li>• Not applicable</li> </ul>	N/A
Water Education Curriculum Credit	<ul style="list-style-type: none"> <li>• Approved water education curriculum</li> <li>• Approximate number of qualifying parcels</li> </ul>	<ol style="list-style-type: none"> <li>1. Develop or identify approved water education curriculum</li> <li>2. Determine recommended level of fee reduction</li> <li>3. Identify schools likely to adopt approved curriculum</li> <li>4. Estimate impact on revenues</li> </ol>
<i>CATEGORY: RATE MODIFIERS</i>		
Property Tax Bill	<ul style="list-style-type: none"> <li>• Number and parcel ID of tax-exempt parcels</li> </ul>	<ol style="list-style-type: none"> <li>1. Identify number and parcel IDs of tax exempt properties</li> </ol>
Water and/or Sewer Bill	<ul style="list-style-type: none"> <li>• None</li> </ul>	<ol style="list-style-type: none"> <li>1. Identify number and parcel IDs of properties on private water / sewer</li> </ol>
Standalone Billing	<ul style="list-style-type: none"> <li>• Identification of preferred billing system</li> </ul>	<ol style="list-style-type: none"> <li>1. Develop database of all ratepayers</li> </ol>



## 5 Rate Structure Alternatives

This chapter describes various alternatives for designing a stormwater rate structure and provides a preliminary assessment of rates and revenue requirements.

### 5.1 Overview

The prevalence of a user fee concept for stormwater services has increased significantly over the past decade. Currently, there are many established utilities across the country that have developed equitable and defensible user fee structures that create a reliable source of revenue to sufficiently operate, maintain, and capitalize a stormwater system. The user-based fee for a stormwater utility differs from fees for gas, electric, water, and wastewater utilities in that there is not a defined usage that can be measured and participation is not voluntary. Each property within a watershed contributes to the volume and water quality in that watershed and the impacts on the receiving bodies of water.

There are a number of advantages in utilizing a user charge system rather than the General Fund to support stormwater program needs. Some of the advantages include, for example:

- Eliminating competition from other programs that utilize the general fund;
- Ability to conduct effective long-term strategic planning and forecasting;
- Potential for being less politically sensitive;
- More flexibility to adapt to changes in the regulatory environment; and
- Establishing a direct causal link between the fee a property owner pays and the impact of their property on the stormwater system or their use of that system.

### 5.2 Basic Rate Structure and Modification Factors

The rate structure can be defined as the framework for assessing responsibility for the cost of the stormwater program. Although there are many options related to rate design, rate structures are generally considered to be equitable as long as there is a reasonable nexus between the assignment of cost and the demand placed on the system. In the case of stormwater, the relationship between cost and demand is associated with the quantity of runoff and its impact on water quality.

The two major concepts in stormwater rate design include (1) the basic rate structure and (2) rate modifiers. In simplistic terms, the basic rate structure is the mechanism of assessment (e.g. impervious area, gross area). Modifications to the basic rate structure can then be incorporated to help target specific pricing objectives, such as:

- Revenue sufficiency – rates should generate revenue sufficient to meet revenue requirements;
- Revenue stability – rates should generate stable and predictable revenues from year to year;
- Defensibility – rates should be designed according to standard industry practice and in accordance with applicable law such that rate disputes are avoided;
- Simplicity and ease of administration – rates should be readily understandable by customers and be able to be implemented using existing staff and the existing billing and collection system with only minor modifications; and



- Equity among customer classes – rates should be designed such that costs recovered from each customer class are related directly to the way in which class demand characteristics cause the utility to incur costs.

For example, a utility interested in simplicity might establish a flat rate for all residential customers that is based on an average property, or Equivalent Residential Unit (ERU), rather than assigning costs based on some unit of impervious square footage. Nonresidential properties could then be assessed based on the number of ERUs. Other rate modifiers, such as rate tiers (e.g. small, medium, large) for residential customers, could potentially enhance the equity of the rate structure by providing differentiation based on property size. Regardless of the basic rate structure there are many types of modifiers that can be incorporated into the rate design to address a utility's most important pricing objectives.

### 5.3 Common Rate Structures

Since the conversion of forests and fields to impervious area causes investments in the public drainage system, most legally defensible stormwater utilities use impervious area or some variation of impervious area in their rate structure. However, there are many ways to configure the rate structure or identify rate modifiers to target various property characteristics, such as green space, to achieve certain pricing objectives. Typical rate structures used by stormwater utilities across the country include:

- Impervious area only;
- Impervious area plus gross area; or
- Gross area with an intensity of development factor.

#### Impervious Area Only

The most common mechanism of assessment for stormwater is by impervious area only. Numerous engineering and hydrologic studies, including data from the National Urban Runoff Program, have clearly demonstrated a high correlation between peak runoff before and after development and identified impervious area as the most important factor in the quantity and quality of stormwater runoff. Impervious area only rate structures are highly defensible and have been demonstrated to be a reasonable basis of assessment in numerous legal challenges across the country. In most cases, there is a general understanding and perception by customers that building structures and paving over pervious land generates an increased quantity and decreased quality of stormwater runoff.

Impervious area only rate structures may be assessed on a per-unit basis (per 1,000 square feet, for example) or, more often, in the form of a flat rate for one ERU (or Equivalent Service Unit [ESU]). Nonresidential customers can then be assessed based on the number of ERUs they represent. A flat rate structure assigns responsibility based on the average residential customer, which can be preferable for reasons of simplicity and customer acceptance. Due to a varying degree of inaccuracy in impervious area measurement, utilities will rarely assess properties of less than 100 square feet on a per unit basis.

Impervious area only rate structures are constrained somewhat in their ability to accommodate differences in property characteristics, particularly the recognition of "green space". Also, impervious area only rate structures are assessed only to developed parcels. This creates some challenges related to planning for future development, as stormwater infrastructure is often sized to meet both current and future demand. However, addressing the challenge of planning for future development can be mitigated through modifying



factors, such as stormwater development or impact fees, which shift the burden of future development to new customers.

For illustrative purposes, Figure 5-1 presents a nonresidential parcel assessed with an impervious area only rate structure.

### Figure 5-1 Impervious Area Only Rate Structure (Example Purposes Only)

Assumptions:

1. 10 acre parcel with 33% imperviousness.
2. 1 ERU = 3,919 square feet
3.  $158,158 \text{ square feet} / 3,919 = 40.36$  (round to 41 ERUs)
4. Monthly charge per ERU = \$7.10
5.  $\$7.10 \times 41 = \mathbf{\$291.10}$  per month



In this example, the area highlighted in blue is impervious area and the area highlighted in green is pervious area. The property is 10 acres in total with 33%, or 158,158 square feet, impervious surface area (shown in blue). If one ERU is 3,919 square feet, this parcel represents 41 ERUs and would be assessed a monthly charge of approximately \$291. In this type of rate structure all properties would be assessed at the same cost per impervious square foot.

#### Impervious Area Plus Gross Area

Although impervious area is the primary driver of stormwater runoff, the total property area (impervious area plus gross area) influences the level of runoff from a property. However, even undeveloped land contributes a small amount of runoff, particularly during significant storm events. As a result, it can be acceptable to combine both impervious area and gross area into the rate calculation, provided that the service fee is designed appropriately to reflect the cost of service for each parameter. This can be



achieved by assigning a reasonable amount of cost to each parameter consistent with local hydrologic conditions, program structure (e.g. balance of stormwater quantity and stormwater quality in the program costs), and various other considerations, which requires additional data and more detailed analysis. Ultimately, a separate unit cost or ERU can be established for both impervious area and gross area. The level of cost differentiation between the two parameters is usually significant, with gross area being charged at a much lower rate than impervious area.

The most significant benefit of including gross area in the rate calculation is the ability to charge undeveloped property, accounting for the burden undeveloped property places on the stormwater program. This addresses the issue of not charging anything to undeveloped properties which benefit from existing stormwater infrastructure. In addition, it can significantly increase the rate base and revenue-generating potential of the utility. Conversely, assessing even a small charge to undeveloped land can be confusing to customers, as there may be a perception that “green space” should not be charged.

For illustration, Figure 5-2 presents the same parcel identified in Figure 5-1, but this time it is assessed for both impervious area and gross area. It is important to understand that this rate structure would be designed to generate the same amount of revenue as an impervious area only rate structure. However, in order to demonstrate the additional revenue-generating potential of adding gross area to the rate calculation, we have assumed that the impervious area charge would be the same as in Figure 5-1, and there would be a supplemental charge for gross area.

### **Figure 5-2 Impervious Area Plus Gross Area Rate Structure (Example Purposes Only)**

Assumptions:

1. 10 acre parcel with 33% imperviousness (same as Figure 5-1)
2. Impervious area charge of \$291.10 per month (same as Figure 5-1)
3. 482,364 square feet of gross area / 3,919 = 123.08 (round to 124 ERUs)
4. Assumes the charge for gross area is 1/20 of impervious area charge or \$0.30 per ERU =  $124 \times \$0.30 = \$37.20$
5. Total charge =  $\$291.10 + 37.20 = \mathbf{\$328.30}$  per month





Again, it is possible to design an impervious plus gross area rate structure to generate the same amount of revenue as an impervious area only rate structure. However, the addition of gross area increases the rate base and provides more flexibility to generate revenue by tailoring the cost allocation between multiple parameters. Depending on the balance of costs assigned to each parameter, the impact to specific customer classes could differ substantially.

#### *Intensity of Development*

One of the weaknesses of a stormwater charge based on either impervious area only or both impervious and gross area is limited recognition of “green space” and its potential benefit in reducing the quantity and improving the quality of stormwater runoff. As a result, many utilities have been successful developing a rate structure that considers the extent of impervious coverage of a property. This type of rate structure requires that both impervious area and gross area data be collected; however, gross area is used only to establish the percentage of impervious coverage on a particular property. Similar to an impervious area only rate structure, a charge is typically calculated for an ERU based on an average residential property. The average percentage of impervious area per property will change depending on the service area characteristics. Each property is then charged based on the number of ERUs or square feet of impervious area, with the rate per ERU typically increasing with increasing percentages of impervious coverage.

Rate structures that consider the intensity of development may provide a higher level of perceived equity and additional flexibility in allocating costs based on property characteristics. Potential drawbacks of this approach include additional data needs and more detailed cost allocations to justify rate differentials. Additionally, establishing the level of rate differentials based on impervious coverage requires a certain amount of judgment which may be perceived as a weakness from a defensibility perspective. Also, very small properties with a large percentage of impervious coverage will pay more per impervious square foot than large properties with the same impervious area, because the larger gross area results in a lower percentage of impervious coverage. Although this recognition of green space is the primary objective of the rate structure, paying more for the same amount of impervious area can be difficult for customers to accept.

For example purposes, Figure 5-3 illustrates an intensity of development rate structure applied to the same property used in the previous two exhibits.



**Figure 5-3 Intensity of Development Rate Structure (Example Purposes Only)**

Assumptions:

- 5. 10 acre parcel with 33% imperviousness (same as Figure 5-1 and Figure 5-2)
- 5. 1 ERU = 3,919 square feet = 41 ERUs (same as Figure 5-1 and Figure 5.2)
- 5. Assume that 0-10% is normal for a residential parcel
- 5. Total charge = 41 x \$5.87 = **\$240.67 per month**

Percent Impervious		Rate Per ERU
Low+	High	
1	5	\$2.99
5	10	\$3.44
10	20	\$4.07
20	30	\$4.97
30	40	\$5.87
40	50	\$6.76
50	60	\$7.66
60	70	\$8.56
70	80	\$9.46
80	90	\$10.36
90	100	\$11.25



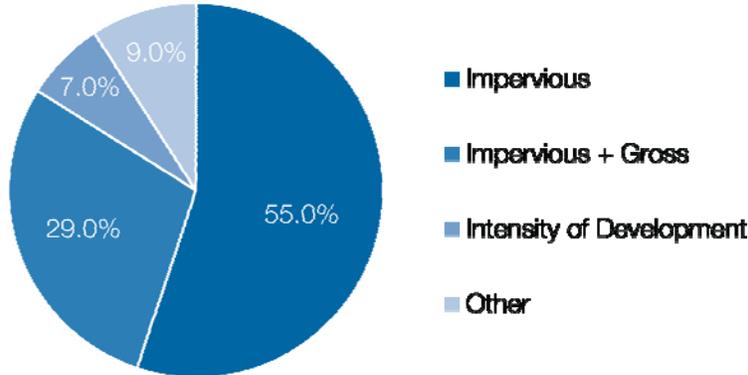
In this example the property has 30-40% imperviousness, which is less than a normal residential parcel, so the rate per ERU is adjusted accordingly. The rate differentials shown in the chart above are for example purposes only. Actual rate differentials should be based on an evaluation and assessment of the particular characteristics of the City’s service area and hydrologic conditions.

The sample calculations presented in Figures 5-1 through Figure 5-3 demonstrate the potential variability in customer impacts based on alternative rate structures. As shown above, the level of variability is contingent on multiple factors, particularly cost allocations and other key assumptions that support individual components of each rate structure. Regardless, alternative methodologies for recovering costs for stormwater services can have a material difference on customer bills.

As shown in Figure 5-4, based on a 2010 national survey, an impervious area only based rate structure is the most common method of assessment (Black and Veatch, 2010).



**Figure 5-4 Common Methods of Assessment**



At the third meeting of the Ad-Hoc Stormwater Committee, the Committee reviewed potential rate structures. The Committee determined that, should a utility be implemented, the impervious area only approach using the ERU approach for single family residences would be preferred. This approach was selected primarily due to its simplicity. In addition, using the ERU would improve equity within the single family residential customer class by establishing a uniform fee for single family residences.

#### **5.4 Rate Modifiers**

Modifications to the rate structure can be incorporated to address pricing objectives, enhance equity, improve transparency, or reduce costs. As noted previously, one of the most common rate modifiers is a flat charge per ERU, which is simple to implement and understand, and promotes customer acceptance through perceived equity. Other options, which are discussed in more detail below, include establishing a basic service charge for all customers, incorporating tiers to the residential charges to address differences in property size, and establishing credits for certain customers that demonstrate best management stormwater practices.

##### Basic Service Charge

Since a portion of a utility's stormwater costs are fixed, it may be appropriate to establish a separate basic service charge (base charge) for all customers to be assessed on a per account basis. Fixed costs typically include components such as customer service, billing and collection, and other administrative costs that do not vary based on the size of the customer. Although less common for stormwater utilities, it may be appropriate to include a small portion of debt service in the base charge, as utilities must maintain capacity in the system. If this capacity is funded through borrowing, it represents a fixed cost that may be recovered through a base charge. From a defensibility perspective, the most important element of developing a base charge is using the charge only to cover those functions that are appropriately assessed on a per account basis as opposed to an impervious area basis.

##### Residential Rate Tiers

Many utilities implement tiered rates (e.g. multiple flat rates) for residential customers to provide for additional rate equity. For example, a utility could establish an impervious area-based rate for an average



residential customer that would apply to one ERU. Tiers would be developed to identify customers that are substantially smaller or larger than the average customer, and the average rate per ERU would be modified within each tier. In most instances in which tiers are used, it has been found that two to three tiers provide sufficient cost differentiation. It is important to note that if multiple tiers are established, the billing database needs to be designed appropriately to accommodate the additional complexity of categorizing residential customers by property size.

### Credits

A properly-structured system of credits can address many of the issues and challenges of implementing a system of stormwater rates and charges. Providing credits toward the stormwater bills can help to maintain equity for customers with onsite stormwater management initiatives. It is important to remember that credits are ongoing reductions in customer charges that are given for activities on the property that reduce the burden on the stormwater system and/or reduce the utility's cost of service. A well-designed credit system tailored to meeting these objectives may include incentives for the following actions:

- Individual communities adopting model stormwater ordinances that include Best Management Practices (BMPs);
- Commercial and industrial property owners reducing or eliminating runoff;
- Individual subdivisions implementing green solutions; and
- Customers advancing other social or environmental objectives.

It should be noted that credits are generally limited to non-single family residential (SFR) properties. SFR parcels are generally smaller and have relatively less impervious area than non-SFR properties, and stormwater management programs implemented on SFR properties typically provide only a minimal reduction in the stormwater flows and/or costs. Additionally, the cost of preparing a credit application and ensuring annual compliance could be significantly higher for an SFR customer than the total cost of stormwater user fees over several years. However, some credits may be offered to entire subdivisions to reward an emphasis on green design or to encourage on-site stormwater management and treatment.

The amount of revenue offset by a credit program can vary significantly by utility; however, in most cases, the reduction in revenue from credits does not exceed 5% of total revenue collected. The extent of the credit offered should be quantified by determining a reasonable relationship with the reduction in program costs. For example, the estimated percent runoff reduction for certain structural BMPs could serve as a basis for a commensurate reduction in the stormwater charge. A similar analysis could be performed for other structural BMPs that target a reduction in pollution. Other types of stormwater credits not associated with infrastructure, or non-structural BMPs, such as stormwater education programs, stormwater system maintenance and cleaning and paved area sweeping, for example, may require more judgment in determining an appropriate level of fee reduction. Since there are fixed costs that cannot be eliminated by a customer's actions, credits are typically capped at a certain level.

It is important to not over-complicate the credit system. If the credit system becomes too administratively cumbersome, the benefits of the program could be reduced significantly. Many utilities simplify the credit system by establishing a systematic process that puts more responsibility on the customer to apply and demonstrate the basis for the credit. A simplified credit system for the City might involve a five-step process where (1) the credit structures are developed by the utility; (2) credits already included in the



billing system, such as affordability programs that target low-income customers, are applied automatically to qualifying customers; (3) customers apply for additional specific credits; (4) the Dover Utilities Commission (DUC) reviews the applications; and (5) approved credits are incorporated into the billing system.

Figure 5-5 presents an example of a simplified credit system.

**Figure 5-5 Example of a Simplified Credit System**

Step 1	Step 2	Step 3	Step 4	Step 5
Credits & Measurement approach are defined and adopted along with utility	Credits already in billing system are applied automatically	Customers apply for additional, specific credits	Dover Utilities Commission Reviews applications on a case-by-case basis	Approved credits are incorporated into billing system

The full evaluation and identification of a credit program structure should be addressed during the implementation phase of the utility.

At the third and fourth meetings of the Ad-Hoc Stormwater Committee, the Committee reviewed potential rate modifiers, including credit alternatives. The Committee determined that the following rate modifiers should be considered, should a stormwater utility be implemented:

- **Basic Service Charge.** A basic service charge should be considered to offset fixed costs associated with program administration. Alternatively, this charge may be structured to cover stormwater management costs associated with common areas, such as roads.
- **Credits.** The Committee felt that a credit system should be implemented to offset program costs. While the Committee initially felt that a credit system should be restricted to non-residential customers, consultation with the City Attorney determined that the credit system should be expanded to make appropriate credits available to all customer classes. A limit should be placed on the percentage of stormwater fees that may be offset by credits. Credits should be available for improvements in water quality and for the implementation of non-structural best management practices.

### 5.5 Preliminary Rate and Revenue Requirements

As discussed in Chapter 2.2, the City is currently funding approximately \$900 thousand per year in stormwater costs, primarily through the General Fund. In the future, the City will incur additional costs related to infrastructure reinvestment and improvements as well as Phase 2 MS4 permit compliance. Depending on the level of service provided, future program costs are anticipated to range from approximately \$1.2 million to \$2.5 million on an annual basis.

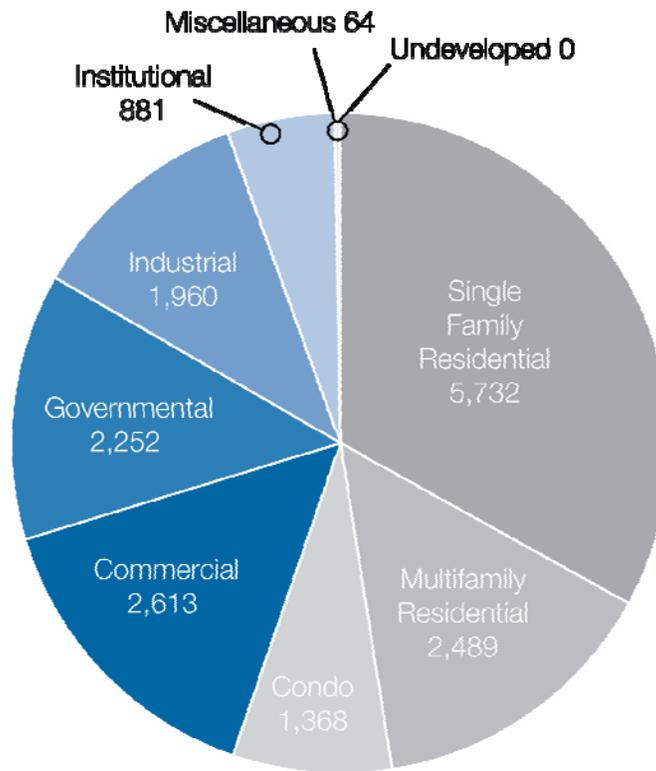
In order to provide a sense of the potential rate and customer impacts associated with a separate charge for stormwater services, the Project Team developed an initial analysis of impervious area within the City's



service area. The preliminary assessment of impervious area was based on geographic information system imagery and aerial photography for a sample of residential and nonresidential parcels. Although the analysis did not include a full mapping of all service area parcels, it serves as a reasonable basis to assess the potential rate and customer impacts of a direct charge for stormwater services.

Based on the initial mapping data, and using the impervious area only rate model, approximately 17,300 ERUs have been identified in the City's service area. Initial indications also suggest that one ERU equals approximately 3,919 impervious square feet. Figure 5-6 presents the initial breakdown of ERUs by service type.

**Figure 5-6 Preliminary Equivalent Residential Units by Service Type**



As presented in Chapter 2, the anticipated range of future program costs varies significantly depending on the level of service. At a minimum, funding will need to be increased to approximately \$1.2 million to continue the current level of service and meet increased permit compliance and spoils management and disposal costs. Additional reinvestments in existing stormwater infrastructure as well as recommended system improvements increase the annual revenue requirements to approximately \$2.0 million. The inclusion of approved stormwater improvements in the City's existing CIP further increases annual revenue requirements to approximately \$2.5 million. It is important to note that these initial cost estimates assume that capital expenditures will be funded by annual revenues from stormwater rates. As with existing water and sewer utilities, it is expected the City would secure general obligation bonds for appropriate stormwater projects, with the repayment of such bonds based on collected stormwater fees. While a well-established utility may ostensibly bond as a non-general obligation, such bonds are still



secured based on the full faith and credit of the City of Dover; in addition, such bonds have slightly higher interest rates than general obligation bonds. Thus, the City of Dover secures better value for ratepayers through general obligation bonds. Use of bonds serves to amortize future capital investments over time, reduce revenue requirements from user charges, and provide more flexibility to initiate a more aggressive capital program. However, at this point, it was determined that in order to be conservative it would be more appropriate to develop initial projections based on an assumption that annual capital investments will be funded on a pay-as-you go basis.

Prior to determining a preliminary range of stormwater charges, several additional assumptions were made relative to the level of expected delinquencies as well as total lost revenue from potential implementation of stormwater credits. As such, the revenue requirements associated with the various levels of service described above were adjusted to reflect an allowance for the following adjustments. A 7.5% allowance for uncollectible revenue was used a reasonable assumption to recognize the probability of non-payment, which was based primarily on industry experience with start-up stormwater utilities. Initially, it is prudent to expect a higher level of uncollectible revenue to recognize potential adverse reactions to the concept of a direct payment for stormwater services. For planning purposes, it may take several years to reach a more normalized pattern of non-payment, at a level consistent with other utility services provided by the City (2.0% - 3.0% expected). In terms of credits, even a robust program of credits does not typically exceed 5.0% of revenue requirements. It is likely that a credit program implemented by the City would start at a very moderate level and then increase over time. Initial credits were assumed to represent only 1.0% of revenue requirements and then increased to 3.0% over the next several years.

Based on estimated ERUs and preliminary revenue requirements, the City’s stormwater charge for one ERU could range from \$4 - \$14 per month. Figure 5-7 summarizes the range of charges and estimated revenue for various levels of service.

**Figure 5-7 Preliminary Rate Calculations**

	Range of Charge (per ERU)	Estimated Revenue
Current Level of Service	\$4.00 - \$6.00	\$900k
Current Level of Service + Required Actions	\$6.00 - \$8.00	\$1.2MM
Current Level of Service + Required Actions + Recommended Actions	\$10.00 - \$12.00	\$2.0MM
Current Level of Service + Required Actions + Recommended Actions + CIP Items	\$12.00 - \$14.00	\$2.5MM

During the third stakeholder meeting, Meeting 3: Rate Structure Alternatives, conducted on October 11, 2010, the Committee recommended that it would be appropriate initially to evaluate an annual revenue



requirement of approximately \$2.0 million. This would allow the City to maintain MS4 permit compliance and the current level of service while also reinvesting in its existing infrastructure. Assuming that annual capital investments are funded on a pay-as-you go basis, this funding level would not immediately support all planned CIP activities; these activities would need to be re-evaluated and budgeted if necessary. The Committee also recommended for further consideration a rate structure based on impervious area only with the inclusion of a basic service charge to recover fixed costs that do not vary based on the size of the property. This recommendation, which is discussed in more detail in Chapter 8, was based heavily on the simplicity, prevalence, and proven defensibility of impervious area only rate structures. The rate modification of a basic service charge provides additional equity by segregating specific fixed costs, such as customer service, billing and collection, and other administrative costs, for recovery on a per account basis. The basis for the base charge was further discussed in Committee meetings 4 and 5. It was determined that additional equity could be achieved by covering the impervious area represented by City streets into the base fee. All residents utilize and benefit from public roads. However, public roads comprise approximately 25 percent of all impervious area in the City and therefore contribute a significant portion of the City's stormwater runoff. The Committee was sensitive to the impact that including roads would have on the magnitude of the base fee; as a result, it is recommended that the base fee be structured to cover approximately one half of the total cost of roads, based on their impervious area, or approximately \$250,000.

Regardless of the decision to move forward with a separate utility, the City will be required to fund, at a minimum, approximately \$1.2M in stormwater costs. If these costs are funded through a separate user charge, there must be an offsetting benefit to the General Fund. However, in order to mitigate the potential impacts on customers, it is recommended that the City consider implementing the stormwater charge in a phased approach over multiple years to generate the revenue necessary to meet its target level of service. For example, the City may wish to design a fee structure that generates revenue initially at a level consistent with its minimum required costs. The City could then increase the fees over a five-year period to provide an opportunity to spread out the customer impacts over multiple years. Figure 5-8 presents a sample program of rates over a five-year planning period. Again, it should be noted that these projections are preliminary and would be refined during the utility implementation phase. Note that these were preliminary estimates for the purpose of Committee consideration.



**Figure 5-8 Preliminary Rate Forecast (2011 – 2016)**

<b>Fiscal Year Ending June 30th</b>						
	2011	2012	2013	2014	2015	2016
<b>Projected Net Revenues (1)</b>						
Basic Service Charge	\$231,800	\$240,135	\$255,943	\$256,145	\$261,714	\$270,931
Impervious Area Charge	\$854,582	\$1,028,025	\$1,192,124	\$1,381,023	\$1,555,269	\$1,724,466
<b>Total Net Revenues</b>	<b>\$1,086,382</b>	<b>\$1,268,160</b>	<b>\$1,448,068</b>	<b>\$1,637,168</b>	<b>\$1,816,983</b>	<b>\$1,995,397</b>
Offset to General Fund	\$1,086,382	\$1,268,160	\$1,448,068	\$1,637,168	\$1,816,983	\$1,995,397
<b>Rate Structure (Monthly Charge) (2)</b>						
Basic Service Charge (Per Account)	\$2.65	\$2.65	\$2.65	\$2.75	\$2.85	\$2.95
Impervious Area Charge (Per ERU)	\$4.45	\$5.25	\$6.05	\$7.25	\$8.25	\$9.15
(1) Net revenues exclude uncollectible revenue and credits. (2) For illustration purposes, calculated charges have been rounded to the nearest nickel.						

For illustrative purposes, Figure 5-9 presents a nonresidential parcel assessed with an impervious only rate structure that incorporates a base fee to cover fixed administrative costs and approximately half of public roads. This rate structure has been applied to the same property used Figures 5-1 through 5-3.



### Figure 5-9 Impervious Area Only Rate Structure with Base Fee (Example Purposes Only)

Assumptions:

1. 10 acre parcel with 33% imperviousness (same as Figures 5-1 through 5-3)
2. 1 ERU = 3,919 square feet (same as Figures 5-1 through 5-3)
3.  $158,158 \text{ square feet} / 3,919 = 40.36$  (round to 41 ERUs, same as Figures 5-1 through 5-3)
4. Monthly base fee per parcel = \$2.65
5. Monthly charge per ERU = \$4.45
6.  $\$2.65 + \$4.45 \times 41 = \mathbf{\$185.10 \text{ per month}}$





## 6 Billing Summary Methodology

This section describes alternative approaches for stormwater billing and collection.

### 6.1 Billing System Alternatives

There are several mechanisms available to the City to support the process of billing for stormwater services. Three of most common methodologies include: (1) the water and/or sewer bill; (2) a separate stormwater bill; or (3) the property tax bill. Each of these methodologies is a viable option for consideration by the City; however, it is important to evaluate the potential implications of the alternatives prior to determining the most advantageous approach.

**Water and Sewer Bill** - The City provides water and sewer services within its service area and is in the process of migrating to a new billing system. This process is expected to be complete by the end of the calendar year. Based on discussion with City staff, the new water and sewer billing system is equipped to bill for stormwater with minimal adjustments.

**Stormwater Only Bill** - The City could consider purchasing a separate stormwater billing system. The system can be designed with a turn-key approach and configured exactly to the City's specifications.

**Property Tax Bill** - The property tax system is also a viable option for consideration. Based on discussions with City staff, the property tax system is also equipped to bill for stormwater with minimal adjustments.

### 6.2 Evaluation Criteria

There are a number of evaluation criteria that should be considered prior to selecting a preferred billing methodology. For the purpose of this analysis, the specific criteria included:

- Cost - The overall monetary cost of the system;
- System compatibility – The compatibility of the system with various rate structure alternatives and stormwater database requirements;
- Implementation - The complexity of the process for integrating the stormwater database into the billing system;
- Administration – The level of required ongoing administration and support;
- Delinquency - Impact on the expected level of uncollectible revenue; and
- Customer acceptance – The level of customer acceptance of a charge for stormwater services.

Figure 6-1 summarizes the relative ranking of each billing alternatives based on these evaluation criteria.



**Figure 6-1: Evaluation Criteria Matrix**

Criteria	Water/Sewer	Stormwater Only	Property Tax
Cost	Low	Medium/High	Low
System compatibility	High	High	High
Implementation	Medium	High	Medium
Administration	Low	Medium	Low
Delinquency	Medium	High	Medium/High
Customer acceptance	Medium	Low	Low

Cost

Since the City maintains both a water and sewer billing system and a property tax billing system, the cost of utilizing these alternatives is relatively low. Conversely, the cost of purchasing a new stormwater only billing system could potentially be high depending on the type of system and configuration requirements. For all of the billing system alternatives, the ultimate cost is contingent on various factors including rate structure design, number of properties to be measured, and the measurement techniques used. Increased data requirements for more complex rate structure alternatives can affect both initial implementation costs and ongoing system maintenance.

System Compatibility

Based on discussions with City staff, both the water and sewer billing system and property tax billing system are equipped to bill for stormwater services with a minimal level of adjustment. In each case, it is likely that the system could extract information directly from the stormwater database, or if necessary, from an external database or spreadsheet application, such as Microsoft Excel®, to serve as a bridge. A stormwater-only billing system would be highly compatible as it could be designed specifically for the utility.

Implementation

Both the water and sewer billing system and the property tax billing system would require some level of effort in the implementation process. The required effort would be contingent on a number of factors, particularly the type of rate structure being employed and related database requirements. A separate



stormwater-only system may require a higher level of effort, as City staff would need to be trained on a new system.

#### Administration

General administration requirements for both the water and sewer billing system and the property tax system would be relatively low. Because the City is familiar with these platforms, administration requirements would be limited to managing the system adjustments to incorporate stormwater. A stormwater-only system would require a higher level of administration and support initially, which would decline over time. Additionally, a stormwater-only system typically requires more customer service and support, since the property owner receives a completely separate bill for services.

#### Delinquencies

As discussed in Chapter 6 – Rate Structure Alternatives, the level of delinquency for a new stormwater utility is typically much higher initially than the delinquency rate of ongoing utilities such as water and sewer. This higher delinquency rate can be attributed predominantly to general customer objection to the concept of paying for stormwater services. The actual level of delinquency is contingent on a variety of factors, particularly the amount of the charge and the amount of public outreach conducted during the implementation process. However, it is not uncommon to see a delinquency rate as high as 10% during the first year of operation.

The billing system also impacts the level of delinquency. In most cases, the use of the water and sewer bill provides an opportunity to minimize delinquencies, as the charge for stormwater services appears only as a line item on the utility bill. Since stormwater charges are often substantially lower than water and sewer charges, the additional cost for providing these services may not be readily apparent to customers, at least when compared to a separate utility bill. The use of the property tax bill has a similar benefit of avoiding a separate bill; however, the possibility of the public perceiving a stormwater charge as a tax is increased significantly when the charge is shown on a tax bill. Most stormwater utility legal challenges focus on this “tax” concept. The other major factor that affects ongoing delinquencies is the level of payment recourse associated with a specific billing methodology. Many utilities that utilize the water and sewer bill for stormwater will leverage the ability to shut off water services for non-payment. A lien can be an available recourse under a property tax system; however, this process can be lengthy depending on local laws and jurisdictional requirements, and it is likely that the outstanding balance for stormwater would be subordinated to other obligations. A stormwater-only billing methodology has the least recourse for delinquencies, due to additional challenges assigning property liens and an inability to shut off services for non-payment.

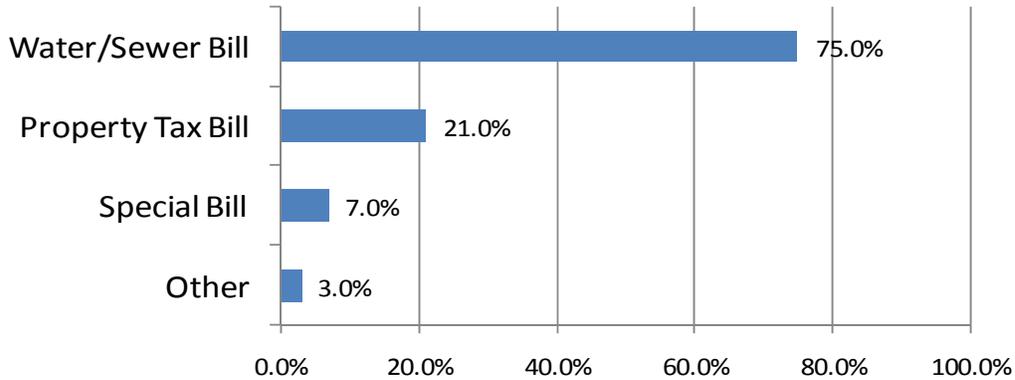
#### Customer Acceptance

In addition to reduced delinquencies, customer acceptance tends to be higher when the water and sewer bill is used. This is likely due, in part, to the relatively low charges associated with stormwater services; stormwater charges typically represent only a fraction of the total bill for water, sewer, and stormwater services. The use of the property tax bill highlights the potential argument that stormwater charges are a tax, which has been a fatal flaw of many utilities across the country. Although a separate stormwater-only bill would be expected to be for a relatively small charge, separate bills are typically scrutinized more heavily by customers, increasing the level of complaints and decreasing customer acceptance.



As shown in Figure 6-2, based on a 2010 national survey, the use of the water and sewer bill is by far the most common method of billing for stormwater services. It should be noted that the total percentage adds up to more than 100% because customers could respond to more than one category (Black and Veatch, 2010).

**Figure 6-2 Common Methods of Billing for Stormwater**



During the third and fourth meetings of the Ad-Hoc Stormwater Committee, the Committee indicated that, should a utility be implemented, the overall benefits of lower overall costs, system compatibility, increased customer acceptance, and reduced level of delinquencies support the use of the City's existing water and sewer billing system for the assessment of stormwater services.



## 7 Recommendations

Through a series of five targeted meetings, the Ad-Hoc Stakeholder Committee has reviewed the current stormwater program and future program needs. The Committee was charged with identifying a funding source for the stormwater program that would achieve the following objectives:

- Revenue sufficiency – the funding mechanism should generate revenue sufficient to meet revenue requirements;
- Revenue stability – the funding mechanism should generate stable and predictable revenues from year to year;
- Defensibility – the funding mechanism should be designed according to standard industry practice and in accordance with applicable law such that rate disputes are avoided;
- Simplicity and ease of administration – the funding mechanism should be readily understandable by customers and be able to be implemented using existing staff and the existing billing and collection system with only minor modifications; and
- Equity among customer classes – the funding mechanism should be designed such that costs recovered from each customer class are related directly to the way in which class demand characteristics cause the utility to incur costs.
- Maintain financial interests of residents and property owners – the punitive costs associated with non-compliance with EPA mandates rapidly outstrip the costs of a cooperative and responsible position and commensurate action with the appropriate agencies. Fines can reach into the tens of thousands of dollars per day.

Based on the information provided in previous sections of this report, and in consultation with the Ad-Hoc Stormwater Committee, the following series of recommendations for funding the City’s stormwater program has been developed.

Rec. 1	Rec. 2	Rec. 3	Rec. 4	Rec. 5
Establish Stormwater Utility as Funding Mechanism, Capture Offset to General Fund	Structure Stormwater Utility Rates to Generate Approx. \$2.0 M / Year in Revenue	Structure Fee on Impervious Surface Area, With a Base Charge for Fixed Costs and Credit Scheme	Bill Stormwater Charge with Water and Sewer	Phase in New Charge Over a Six-Year Period to Minimize Impact and Allow for Outreach

These recommendations are described in detail below.



### **Recommendation #1: Establish a Stormwater Utility**

The Committee has determined that the preferred approach to funding future stormwater program activities is to implement a stormwater utility. It is anticipated that the existing stormwater program staffing, organization, and governance structure is adequate to support the program during the planning horizon. Should the current organization prove insufficient to cover future program needs, an alternative program structure, organization, and / or governance approach may be developed in the future. However, the current recommendation is to maintain the existing structure.

The new stormwater utility will collect revenue to fund the stormwater program, which would otherwise be funded through the General Fund. As a result, stormwater program costs must be removed from the General Fund budget to prevent double-counting and prevent financial impacts to customers.

The Committee was concerned what impact these increased stormwater improvements (as mandated by federal authorities) would have on: the downtown core, future expansion, existing commercial and industrial usage, farm use, land conservation, and the overall impact on Dover's taxpayers. If the City Council elects not to establish a stormwater utility, the Committee recommends the Council discretely identify stormwater-related expenses within the budget so as to provide improved clarity to the public.

### **Recommendation #2: Structure Utility Rates to Generate \$2.0 M in Annual Revenue**

The Committee reviewed the current and projected future funding needs identified in Chapter 2 to determine an appropriate funding amount. The Committee determined that the program should generate revenue sufficient to continue to provide the current level of service, fund required future activities that extend beyond the current level of service, and complete recommended system rehabilitation and replacement actions. As a result, the Committee recommends that the City structure the utility rates to generate approximately \$2.0 M per year in annual revenue.

If the City Council elects not to establish a stormwater utility, the Committee recommends the City Council phase in appropriations to the anticipated \$2.0 million needed for ongoing maintenance and regulatory compliance.

### **Recommendation #3: Structure Fee Based on Impervious Area**

At the third meeting of the Ad-Hoc Stormwater Committee, the Committee reviewed potential rate structures. The Committee determined that, should a utility be implemented, the impervious area only approach using the ERU approach for single family residences would be preferred. This approach was selected primarily due to its simplicity. In addition, using the ERU would improve equity within the single family residential customer class by establishing a uniform fee for single family residences. The Committee recommends that undeveloped and vacant parcels not be charged at this time. It is recommended that the DUC revisit this decision during implementation.

The Committee recommends that the City develop a rate structure based on the impervious area only model, with the ERU used as the unit of measure and basis for charges for single family residences. It is further recommended that a base fee be assessed to all parcels to offset costs associated with program administration and / or shared impervious areas such as roads. Finally, the Committee recommends that a credit scheme be developed to offset costs to users. The following guidelines should be incorporated into the credit program:



- Multiple credits may be granted to a single property
- Total credits for a single property shall not exceed 50% of non-base fees
- The minimum fee (with credits) should equal the base fee plus 50% of the rate based on impervious surface for a single family residence
- It should be the responsibility of the customer to apply for credits and provide necessary information
- Credit applications received within one year of the initial bill should be applied retroactively (otherwise they should be applied prospectively)
- Credits should be available for water quality improvements and implementation of enforceable nonstructural best management practices
- The Dover Utilities Commission should be responsible for making credit determinations.

#### **Recommendation #4: Bill Stormwater with Water and Sewer**

During the third and fourth meetings of the Ad-Hoc Stormwater Committee, the Committee indicated that, should a utility be implemented, the overall benefits of lower overall costs, system compatibility, increased customer acceptance, and reduced level of delinquencies support the use of the City's existing water and sewer billing system for the assessment of stormwater services. Further, the Committee recommended that the stormwater fee be presented as a line item under the existing sewer charge.

The Committee recommends that the stormwater charge be included on the water and sewer bill as a line item under the sewer charge.

#### **Recommendation #5: Phase in Stormwater Charge Over a Six-Year Period**

In order to mitigate the potential impacts on customers, the Committee recommends that the City implement the stormwater charge in a phased approach over multiple years to generate the revenue necessary to meet its target level of service. This involves designing a fee structure that generates revenue initially at a level sufficient to cover the current level of service plus required future costs. The fee is then increased over a six-year period to provide an opportunity to spread out the customer impacts over multiple years. During this time, the Committee recommends that the City implement a full-scale public outreach effort to educate the general public on the importance of stormwater management, the purpose and benefits of the utility approach, and the mechanism for assessing fees.



## 8 Implementation Plan

Implementation of the recommendations identified above will require completion of the following implementation steps, described in further detail below.

1. Prepare and Adopt Utility Formation Ordinance
2. Assemble Committee to Advise on Program Implementation
3. Implement Public Outreach Campaign
4. Complete Impervious Mapping
5. Develop Formal Financial and Rate Policies and Procedures
6. Refine Financial Plan
7. Develop a Credit Manual
8. Develop Billing Policies and Procedures
9. Prepare and Adopt Rules of the Stormwater Utility

### **Step #1: Prepare and Adopt Utility Formation Ordinances**

Utility formation should be formalized through a stormwater utility ordinance adopted by the City Council.

### **Step #2: Assemble Implementation Advisory Committee**

The City of Dover recognizes the importance of support from key City stakeholders in identifying a preferred approach to funding the stormwater program. Further, City staff recognizes that, by engaging stakeholders in developing a funding program, stakeholder concerns and issues may be better addressed and a more tailored solution may be developed to meet the needs of the stormwater program while minimizing impacts to affected parties. To this end, the City has convened the Ad-Hoc Stormwater Committee, a multi-disciplinary stakeholder group focused on finding the best available solution to addressing the City's stormwater funding needs. The Committee has met five times throughout the course of the Feasibility Study, and has provided direction on key program decisions. All meetings have been publicly noticed, and a Citizens Forum has been held at the beginning of each meeting. All meetings have been recorded and re-played on the local cable channel. It should be noted that, while several other cities in New Hampshire are currently conducting similar studies to evaluate the feasibility of a stormwater utility, only Dover is conducting an open and transparent public process to integrate its citizenry into the decision-making process at the earliest stages.

The Committee was formed to analyze the impacts and implementation considerations associated with approaches to funding the stormwater program including establishing a stormwater utility; and to determine the most appropriate funding option for Dover. Five Committee meetings were held to review and discuss topics related to establishing a stable funding mechanism for stormwater improvements. The five meetings covered the following topics:

- Meeting 1: Goals and Objectives
- Meeting 2: Program Plan and Compelling Case
- Meeting 3: Rate Structure Alternatives



- Meeting 4: Recommendations and Draft Report
- Meeting 5: Final Report

The Committee has discussed program alternatives and funding needs, and different mechanisms for assessing and collecting stormwater-related fees. The Committee has been highly effective in reviewing and discussing information to provide direction to City staff and the consulting team. The result of this process is a series of feasibility-level recommendations that reflect the input of key stakeholder groups.

Should the City proceed with implementation of a utility, it is recommended that a stakeholder committee be convened to provide direction and input during utility implementation. The implementation-phase committee will be tasked with making decisions and providing direction on the details of utility implementation. For example, the current Ad-Hoc Stormwater Committee has recommended that a credit manual be developed, and has provided guidance on what credits should be considered. The implementation phase Committee will be tasked with reviewing and providing input on the credit manual itself. Similarly, as the impervious area mapping is completed for nonresidential properties, the rate structure and financial plan will be further refined. Committee input will be sought in finalizing the rate structure and billing methodology prior to rollout. Perhaps the most important function of the implementation-phase Committee will be to assist in implementation of a public outreach program and communication with the public.

It is recommended that the Committee membership include the members of the current Ad-Hoc Stormwater Committee, with additional representation from the Planning Department and the Dover Utilities Commission.

### **Step #3: Implement Public Outreach Campaign**

As described above, meetings of the Ad-Hoc Stormwater Committee have been publically noticed and broadcasted on the local television channel. However, a full-scale public outreach effort should be implemented to educate the general public on the importance of stormwater management, the purpose and benefits of the utility approach, and the mechanism for assessing fees.

A Public Outreach Plan has been developed as part of the Feasibility Study, and is provided in Appendix C. The Public Outreach Plan focuses on two phases – campaign development and implementation: (1) the theme, messages and designs for a logo and collateral materials are completed in the development phase; and (2) specific strategies for implementing an outreach program are identified in the implementation phase. Property owners and managers are the focus of the outreach campaign, but other decision makers and opinion leaders should be included.

The goals of the public outreach plan are to:

- Build public support for a stormwater utility by educating stakeholders, and
- Prepare property owners and managers for implementation by providing easy-to-understand information about fees and administration to demonstrate accountability.

The objectives of the public outreach plan are to:

1. Identify audiences;
2. Develop a campaign theme and messages, tailored to each audience; and



3. Provide a menu of outreach activities that includes direct and indirect communication methods, traditional and new media.

The Public Outreach Plan included in Appendix C may be used as a starting point for the parties responsible for implementation.

#### **Step #4: Complete Impervious Mapping**

In conjunction with development of this Feasibility Study, the City has mapped the impervious area of a selection of residential and nonresidential parcels. The City maintains property assessment information in a Geographic Information System (GIS) database. This database was utilized in conjunction with recent aerial photography to develop estimates of gross area and impervious area by parcel. Relevant information on the extent of parcel mapping completed to-date, as well as a summary of the characteristics of sampled parcels, are provided in Table 4-3.

The Ad-Hoc Stakeholder Committee has determined that the impervious area only rate structure is preferred because it balances simplicity and equity. In order to implement the impervious area only structure, it will be necessary to complete impervious area mapping for the remaining 1,431 unmapped nonresidential properties.

It is recommended that the remaining impervious area mapping be completed immediately following City Council approval to proceed with utility implementation, as data collected in this effort is necessary to complete the financial planning.

#### **Step #5: Develop Formal Financial / Rate Policies and Procedures**

Utility implementation will involve formalization of the rate policies and procedures. This will include:

- Detailed description of the rate structure and basis for calculating fees
- Methods for assessing user fees
- Enforcement actions, including policies and procedures for late payment and penalties for nonpayment
- Formal policy statements for the utility enterprise fund

It is recommended that the City develop formal rate policies and procedures as part of utility implementation.

#### **Step #6: Refine Financial Plan**

Chapter 2 of this document lays out a preliminary financial plan for the City's future stormwater program. The financial plan serves as the basis for determining necessary revenue and associated user fees. This plan will require refinement and finalization as part of utility implementation.

#### **Step #7: Develop a Credit Manual**

As described previously, it is recommended that the City incorporate credits into the utility fee structure. This involves developing a credit manual that clearly defines:

- Definition of qualifying property owners and improvements
- Methods for measuring qualifying improvements



- Identification of parties responsible for applying for and maintaining qualifying improvements
- Application processes and procedures, as well as data requirements to support credit applications
- Process for appealing credit decisions, if any
- Limits on combining credits and maximum credits allowable as a percentage of total fee and as a minimum fee
- Approach to applying credits
- Implementation and maintenance requirements and reporting
- Process for ensuring appropriate operation and maintenance

As the governing body responsible for administering the credit program, the Dover Utilities Commission should play a significant role in developing the Credit Manual in consultation with the stakeholder committee.

### **Step #8: Develop Billing Policies and Procedures**

Billing policies and procedures should be developed. These policies and procedures will be similar to the policies and procedures for water and sewer billing.

### **Step #9: Prepare and Adopt Rules of the Stormwater Utility**

Formal rules and procedures associated with the stormwater utility should be prepared and adopted by City Council.



## References

Black and Veatch (2010). *2010 Stormwater Utility Survey*. Sponsored and Administered by Black and Veatch Management Consulting.

City of Dover (1999). *Stormwater Management Plan*.

City of Dover (2008). *Berry Brook Watershed Assessment and Management Plan*. Prepared by The Louis Berger Group.

City of Dover (2009). *Willand Pond Engineering Review: Summary of Watershed Assessment and Alternatives Analysis*. Prepared by S.W. Cole Engineering Inc. and Horsley Witten Group.

University of New Hampshire (2008). *Protecting Water Resources and Managing Stormwater: A Bird's Eye View for New Hampshire Communities*. Prepared by Julia Peterson, Amanda Stone, and James Houle, University of New Hampshire.

New Hampshire Department of Environmental Services (2008). *New Hampshire 2008 Section 305(b) and 303(d) surface water quality report and RSA 485-A:4.XIV report to the Governor and General Court (R-WD-08-5)*. Prepared by G. Comstock and K. Edwardson, NHDES Watershed Management Bureau.

New Hampshire Department of Environmental Services (December 2008). *New Hampshire Water Resources Primer*.

Appendix A

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Ad-Hoc Stormwater Committee  
Meeting Notes and Presentations

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TOWN OF DOVER, NH  
STORMWATER UTILITY FEASIBILITY STUDY

Stakeholder Meeting 1  
Dover Department of Public Works  
August 9, 2010 at 6:30 PM

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**Attendees:**

Dean Peschel  
Bill Boulanger  
Alan Krans  
Jan Nedelka, Committee Chair  
Dot Hooper, Committee Vice Chair  
Gary Green  
Jay Stephens  
Chris Nash  
Ray Bardwell  
Dennis Ciotti  
Dana Lynch  
Chad Kageleiry  
Rick Schaefer  
Alyson Watson  
Anastasia Rudenko

**Copies to:**

All Attendees  
File

1. Introductions were made by committee members.
2. Dean Peschel provided a brief history of stormwater management in Dover, NH.
3. Alan Krans briefed the committee on its legal obligations through four points:
  - a. The legal division is available to assist the committee through its undertaking.
  - b. Suggested operating guidelines were handed out. It was stressed that all meetings have to be held in open session and that minutes must be kept of the meetings.
  - c. Ethics rules were discussed, including conflict of interest and potential for bribery.
  - d. Appropriate uses of email were discussed. It was noted that voting over email is prohibited.
4. Rick Schaefer gave an overview presentation explaining the need for stormwater funding. It was clarified that the purpose of the stakeholder committee was to determine a funding source that

would allow the City of Dover to comply with its NPDES permit and meet its ongoing and future needs.

5. The next stakeholder meeting was scheduled for September 13<sup>th</sup> at 6:30 pm. Subsequent meetings will be scheduled tentatively for the second Monday of every month.
6. Governing Procedures and Ground Rules were discussed. It was noted that there are no committee alternates and members are to notify Jan Nedelka/Dot Hooper if they will be unable to attend a meeting. The following changes were also made.
  - a. It was decided to not include a 'neutral' option in committee votes.
  - b. Questions from the public will be scheduled at the beginning of the subsequent meetings.
7. Study Goals and Objectives discussion raised elements of development requirements and master planning relevant to Stormwater system performance.
8. Meeting was adjourned.

*These minutes are an overview of all pertinent discussions that took place at this meeting. Should anyone take exception to any portion herein, notify this office in writing within ten (10) days of receipt or these minutes shall stand as written.*



# City of Dover, NH Municipal Stormwater Feasibility Study

Stakeholder Workshop #1  
August 9, 2010



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## Agenda



- ▶ Welcome and Introductions
- ▶ Address from City Attorney
- ▶ Overview Presentation
- ▶ Governing Procedures and Ground Rules
- ▶ Meeting Scheduling
- ▶ Brainstorming: Study Goals and Objectives
- ▶ Next Steps and Action Items
- ▶ Public Comment



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## Feasibility Study Overview



- ▶ Stormwater Impacts
- ▶ Regulatory Approaches
- ▶ Current Management Approach
- ▶ Future Issues and Needs
- ▶ Funding Options
- ▶ Stormwater Utility Feasibility Study
- ▶ Role of the Stakeholder Committee
- ▶ Planning for our next workshop



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### Stormwater Impacts Our Waters and Our Quality of Life



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### Water Quality and Flooding Impacts in and Around Dover



- ▶ Flooding
  - Basements
  - Willand Pond
- ▶ Water quality impairments
  - Cocheco River
  - Salmon Falls River
  - Bellamy River
  - Upper & Lower Piscataqua River
  - Lower Little Bay
  - Great Bay



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### How Are We Managing Stormwater Today?



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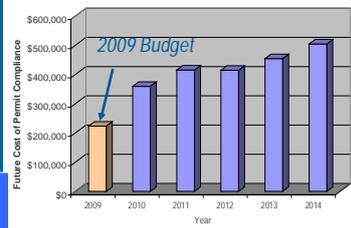
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## Future Program Costs will Escalate Significantly



- Costs to:
  - Maintain infrastructure
  - Address new issues
  - Maintain permit compliance



*Sustainable funding is critical to maintaining regulatory compliance and quality of life for residents.*




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## For Dover's 8,000 Developed Acres....




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## Funding Options



- General Fund
- Sewer Fund
- Stormwater Utility
- Service Fees
- Grants/Loans
- Developer Contributions
- Local Improvement Districts
- Mix of Sources




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## What is a stormwater utility?



- ▶ Similar to a water or wastewater utility
- ▶ Funds collected are dedicated to addressing stormwater issues
- ▶ Rates based on use of the stormwater system

Similar to Pay-As-You-Throw Program



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## What to consider



- ▶ Evaluate alternatives to fund the program
  - Sufficient to cover costs
  - Stable / dependable from year-to-year
  - Legal and defensible
  - Easy to understand and implement
  - Fair to Dover's residents

Grant from NH Department of Environmental Services:

Determine whether a new stormwater utility is the most appropriate option for Dover



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## Questions the Feasibility Study will answer



- ▶ What major stormwater-related issues do we face?
- ▶ What are we doing now, and what will we need to do in the future?
- ▶ What would it cost?
- ▶ How would we pay for it?
- ▶ How would it be implemented?



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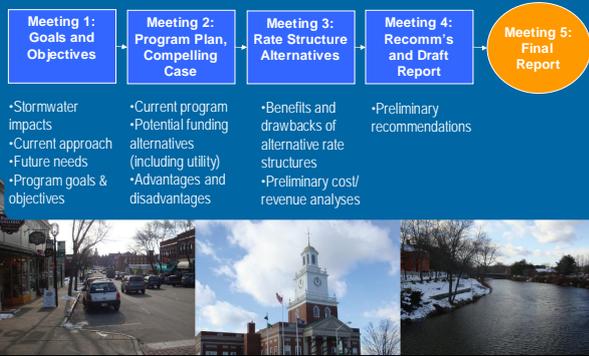
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## Stormwater Utility Feasibility Study Process



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## Mission



Together with City staff and stakeholders, develop a *prioritized stormwater program* with *sufficient and defensible funding* that is *broadly supported*.



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## Our next workshops



- ▶ Agenda
- ▶ Materials for Preparation
- ▶ Communications between Meetings
- ▶ Scheduling
- ▶ Action Items
- ▶ Suggestions?



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TOWN OF DOVER, NH  
STORMWATER UTILITY FEASIBILITY STUDY

Stakeholder Meeting 2  
Dover Department of Public Works  
August 13, 2010 at 6:30 PM

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***Committee Members in Attendance:***

Jan Nedelka, Committee Chair  
Dot Hooper, Committee Vice Chair  
Chad Kageleiry  
Jay Stephens  
Dana Lynch  
Gary Green  
Ray Bardwell  
Chris Nash  
Dennis Ciotti

***Other Participants:***

Bill Boulanger, City of Dover  
Dean Peschel, City of Dover  
Alyson Watson, GHD

1. Welcome and Introductions.
2. Citizens Forum
  - No citizen comments were received.
3. Approval of minutes
  - Mr. Nedelka made a motion to include presentation materials in the minutes. Motion was passed. The minutes were approved as modified.
4. Presentation: Overview of Stormwater Impacts
  - Alyson Watson (GHD) presented information on the potential impacts associated with stormwater (refer to attached presentation).
  - Bill Boulanger discussed the condition of the existing infrastructure, some of which was originally constructed in the 1930s. The Committee discussed current approaches to cleaning and repairing drainage infrastructure.

- Mr. Green asked where the City currently budgets funds to repair the system. Mr. Boulanger explained most of the money is included in the Streets and Drains operating budget or through portions of the capital improvement program (CIP) for road projects. Often stormwater system repairs are conducted when road replacement work is occurring.
- Mr. Bardwell asked what percentage of the existing system has been surveyed with CCTV. Mr. Boulanger explained that none of the system has been televised yet.

#### 5. Priorities for Stormwater Management

- The Committee brainstormed priorities for stormwater management, and the following list was developed:
  - Water Quality
  - Flooding
  - Quality of Life (as a function of previously stated priorities)
  - Controlling the City's destiny (by meeting regulations instead of being mandated to comply)
  - Developing a program based on Dover's needs
  - Source identification is needed to clearly define the origins of the problem
- The Committee consensus was that water quality and flooding are the highest priorities for stormwater management, and that other issues will be addressed through water quality and flooding improvements.
- The Committee recommended that a source identification study be conducted to clearly demonstrate what portion of the problem is related to Dover's stormwater such that the City can focus its efforts on addressing the problems for which it is responsible.

#### 6. Presentation: Current and Future Program

- Ms. Watson presented information on the City's current stormwater program, as well as current and projected future program costs.
- Mr. Nedelka requested that the subset of the CIP that currently funds Stormwater activities be broken out in future versions.
- The Committee discussed potential credits that should be evaluated by GHD prior to the next meeting. Mr. Nedelka asked the committee if there were any GHD shouldn't investigate. No potential credits were removed from the list proposed for evaluation.
- The Committee discussed reasons that streets and highways might be included or exempt from the utility.

#### 7. Stormwater Funding Approaches, Advantages and Disadvantages

- The Committee brainstormed potential ways of funding needed stormwater improvements, as well as the advantages and disadvantages of different approaches. Committee members focused on funding improvements either through the General Fund, or through creation of a stormwater utility, separate from the tax base.

#### 8. Next Steps and Action Items

- GHD will provide presentation materials before each meeting.

- An additional meeting with the City Engineer will be held September 27<sup>th</sup>, 2010 at the Dover Department of Public Works building to discuss current procedures related to stormwater aspects of development reviews
- The next committee meeting will be held at 6:30pm on October 11<sup>th</sup>, 2010 at the Dover Department of Public Works Building

9. Meeting was adjourned.

*These minutes are an overview of all pertinent discussions that took place at this meeting. Should anyone take exception to any portion herein, notify this office in writing within ten (10) days of receipt or these minutes shall stand as written.*

GHD CLIENTS|PEOPLE|PERFORMANCE



## City of Dover, NH Municipal Stormwater Feasibility Study

Stakeholder Workshop #2  
September 13, 2010



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### Agenda



- ▶ Welcome and Introductions
- ▶ Citizens' Forum
- ▶ Approval of Minutes
- ▶ Overview of Stormwater Impacts
- ▶ *Brainstorming: What are Dover's priorities for stormwater management?*
- ▶ Current and Future Program Needs
- ▶ *Brainstorming: Advantages / Disadvantages of a Stormwater Utility and Alternate Funding Mechanisms*
- ▶ Next Steps and Action Items



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### Stormwater Utility Feasibility Study Process



Meeting 1: Goals and Objectives	Meeting 2: Program Plan, Compelling Case	Meeting 3: Rate Structure Alternatives	Meeting 4: Recomm's and Draft Report	Meeting 5: Final Report
<ul style="list-style-type: none"> <li>•Stormwater impacts</li> <li>•Current approach</li> <li>•Future needs</li> <li>•Program goals &amp; objectives</li> </ul>	<ul style="list-style-type: none"> <li>•Current program</li> <li>•Potential funding alternatives (including utility)</li> <li>•Advantages and disadvantages</li> </ul>	<ul style="list-style-type: none"> <li>•Benefits and drawbacks of alternative rate structures</li> <li>•Preliminary cost/revenue analyses</li> </ul>	<ul style="list-style-type: none"> <li>•Preliminary recommendations</li> </ul>	



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## Stormwater Impacts



- ▶ Water Quality Degradation
- ▶ Flooding
- ▶ Habitat and Biodiversity
- ▶ Recreation
- ▶ Quality of Life



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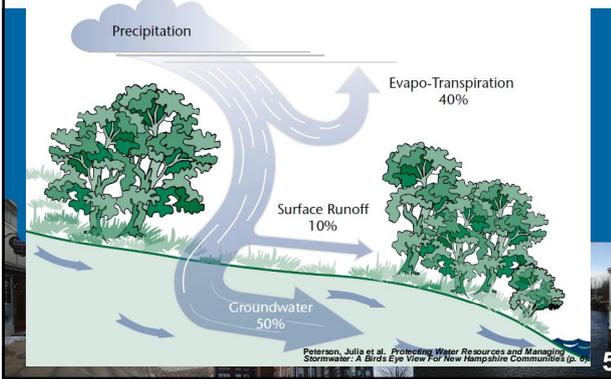
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## Natural Watersheds Have a Small Percentage of Surface Runoff



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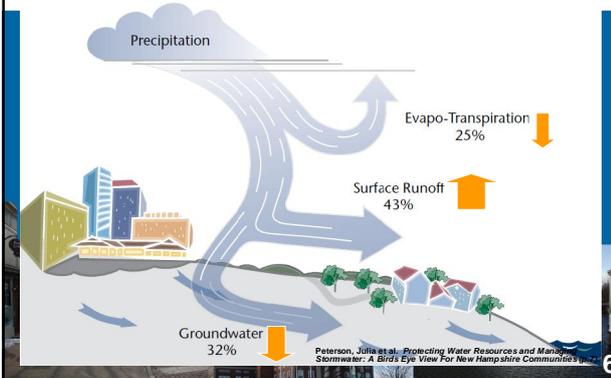
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## Developed Watersheds Have a Greater Percentage of Surface Runoff



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## Stormwater Pollutants, Sources, and Impacts



Pollutant	Sources	Impacts
Nutrients (nitrogen, phosphorus)	fertilizer, wastewater effluent, agricultural and pet waste and sediments (erosion and scour)	algal blooms in lakes, bays and ponds; reduced dissolved oxygen levels
Sediments (sand, silt)	soil erosion, road sand	carry contaminants to receiving waters; reduce water clarity; impact aquatic habitat
Pathogens (viruses, bacteria, etc)	agricultural and pet waste, wastewater effluent, septic systems	impacts drinking water, fish and shellfish consumption, recreation



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## Stormwater Pollutants, Sources, and Impacts, cont'd



Pollutant	Sources	Impacts
Toxics (heavy metals, polycyclic aromatic hydrocarbons, volatile organics)	petroleum products, paints, solvents, herbicides, pesticides, and other household, commercial and industrial products	poisonous to living organisms, persist in the environment
Chloride (salts)	de-icing salts, water softeners	impact plants and animals in freshwater aquatic systems
Temperature	heated water from manufacturing process waters or runoff from warm surfaces such as parking lots	reduced dissolved oxygen affects fish and other aquatic organisms



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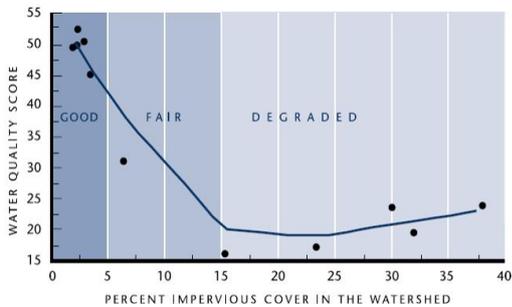
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## Water Quality Typically Suffers in Watersheds with Extensive Impervious Surfaces



Peterson, Julia et al. *Protecting Water Resources and Managing Stormwater: A Bird's Eye View For New Hampshire Communities* (p. 19).

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The Stormwater Infrastructure is Aging and in Need of Rehabilitation and Replacement



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The Stormwater Infrastructure is Aging and in Need of Rehabilitation and Replacement, cont'd



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The Stormwater Infrastructure is Aging and in Need of Rehabilitation and Replacement, cont'd



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The Stormwater Infrastructure is Aging and in Need of Rehabilitation and Replacement, cont'd



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The Stormwater Infrastructure is Aging and in Need of Rehabilitation and Replacement



Stormwater Inspection Footage



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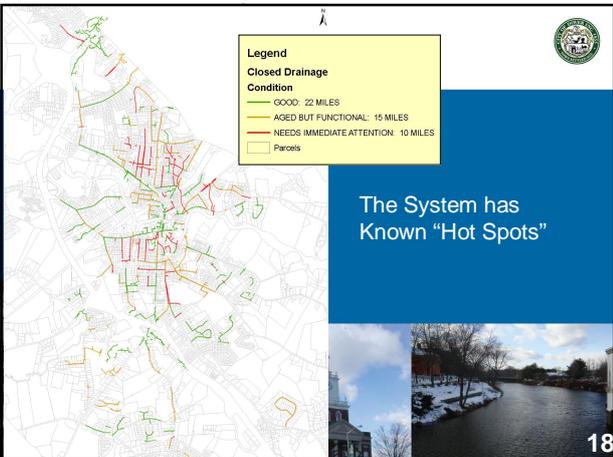
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Legend	
Closed Drainage	
Condition	
GOOD: 22 MILES	
AGED BUT FUNCTIONAL: 15 MILES	
NEEDS IMMEDIATE ATTENTION: 10 MILES	
Parcels	

The System has Known "Hot Spots"



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## Agenda



- ▶ Welcome and Introductions
- ▶ Citizens' Forum
- ▶ Approval of Minutes
- ▶ Overview of Stormwater Impacts
- ▶ *Brainstorming: What are Dover's priorities for stormwater management?*
- ▶ Current and Future Program Needs
- ▶ *Brainstorming: Advantages / Disadvantages of a Stormwater Utility and Alternate Funding Mechanisms*
- ▶ Next Steps and Action Items



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## Current Program Elements



- ▶ Infrastructure Maintenance
- ▶ Planning Board Activities
- ▶ Regulatory Compliance
- ▶ Pollutant Diversion
- ▶ Regional Programs
- ▶ Watershed Management



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## Current Stormwater Program Elements – Infrastructure Maintenance



- ▶ Catch Basin Cleaning
  - Cleaning approx. 50% of catch basins annually (1373 cleaned in 2009)
- ▶ Illicit Discharge Detection and Elimination
  - Stormwater system mapping
  - Catch basin stenciling
  - Illicit discharge detection and elimination (one in 2009)



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Current Stormwater Program Elements –  
Planning Board Activities



- ▶ City Engineers review all subdivision and site plan applications
- ▶ Projects required to submit stormwater O&M plans
- ▶ Inspections of temporary and permanent erosion control and stabilization measures
- ▶ Implemented an electronic tracking system



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Current Stormwater Program Elements –  
Planning Board Activities, cont'd



- ▶ 2009 amendments to subdivision and site review regulations strengthen stormwater requirements
  - Encourage use of low impact development techniques
  - Require that all projects >1 acre submit plans to Planning Board for review and approval
  - Provide authority to regulate projects <1 acre when in proximity to sensitive ecological areas
  - Subcommittee formed to evaluate porous pavement



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Current Stormwater Program Elements –  
Planning Board Activities, cont'd



- ▶ Zoning Ordinance 170-28.3: Groundwater Protection
  - Limits land uses within Primary and Secondary Groundwater Protection Zones surrounding supply wells
  - Limits impervious surface in poorly drained areas
  - Requires Conservation Commission review for developments requiring Planning Board approval
  - Establishes nitrogen and infiltration limits



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### Current Stormwater Program Elements – Planning Board Activities, cont'd



- ▶ Zoning Ordinance 170-27: Conservation District
  - Encompasses:
    - Areas within 100 feet of mean high water of any water body subject to tidal action
    - Areas within 50 feet of a stream, brook or other freshwater body
    - Certain parcels owned by the City of Dover
    - All areas with slopes in excess of 20%
  - A Conditional Use Permit granted by the Planning Board is required for development within the Conservation District
  - Planning Board requires Conservation Commission review



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### Current Stormwater Program Elements – Regulatory Compliance



- ▶ MS4 NPDES Permit Compliance
  - Public Education and Outreach
  - Public Involvement and Participation
  - Illicit Discharge Detection and Elimination
  - Pre- and Post-Construction Site Stormwater Runoff Control
  - Pollution Prevention and Good Housekeeping in Municipal Operations
    - Staff education



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### Current Stormwater Program Elements – Pollutant Diversion



- ▶ Household Hazardous Waste Pickup
  - One collection day per year
- ▶ Curbside Recycling
  - 52% of waste stream recycled
  - Accepts waste oil, tires, metal, yard waste, electronics, used antifreeze- and mercury-containing items, etc
- ▶ Onsite Recycling Facility
- ▶ Pet Waste Program
  - Scoop the Poop pledge



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Current Stormwater Program Elements – Regional Programs



- ▶ Participation in NH Seacoast Stormwater Coalition
  - Public awareness, training of staff, bulk pricing, etc
- ▶ Participation in the Southeast Watershed Alliance
- ▶ Natural Resources Outreach Coalition (NROC) Consultation
  - Stakeholder meetings identified two key target areas:
    - Encourage low impact development techniques in development and redevelopment
    - Explore feasibility of a stormwater utility



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Current Stormwater Program Elements – Watershed Management



- ▶ Berry Brook Watershed Assessment and Management Plan Implementation
  - Two grants sought for implementation funding
    - Encourage LID techniques
    - Stream restoration
    - Water quality BMPS at Horne Street School



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Current Stormwater Program Elements – Watershed Management, cont'd



- ▶ Willand Pond Cyanobacteria Evaluation
  - Rise in phosphorus levels attributed to periodic flooding of pond and adjacent forest floor
    - Excess precipitation
    - Obstructions blocking pond's natural outlet
    - Stormwater runoff from commercial parking lots constructed in the watershed within the past few years



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Current Stormwater Program Elements –  
Watershed Management, cont'd



- ▶ Willand Pond Cyanobacteria Evaluation, cont'd
  - Joint study completed by Dover, Somersworth, and NHDES
    - Preferred alternative to address water level issue
    - Stormwater quality treatment improvements for existing and future development sites identified
  - NHDES grant negotiated to design and implement stormwater retrofits
  - Reactivation of abandoned water supply well



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Current Program Funding Needs –  
Major Stormwater Line Items



Major Stormwater Budget Component	2011 Budget
Groundwater Sampling	\$2,500
Catch Basin Cleaning	\$60,000
General Drainage Improvements	\$150,000
<b>TOTAL</b>	<b>\$212,500</b>



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Current Program Funding Needs  
(Includes Shared Costs)



Budget Component	FY 2011 Budget
Personal Services	\$501,792
Purchased Services	\$83,815
Supplies	\$163,610
Capital Outlay	\$150,000
Other Expenses	\$900
<b>TOTAL</b>	<b>\$900,116</b>



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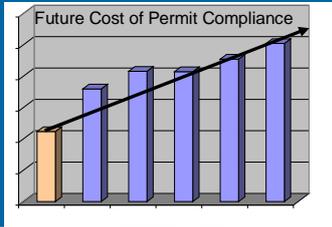
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## Future Program Costs will Escalate Significantly



- ▶ Costs to:
  - Maintain infrastructure
  - Address new issues
  - Maintain permit compliance



*Sustainable funding is critical to maintaining regulatory compliance and quality of life for residents.*



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## Future Funding Needs



Budget Component	2011	2012	2013	2014	2015	2016
Current Service	\$900,116	\$900,116	\$900,116	\$900,116	\$900,116	\$900,116
Catch Basin Spoils Facil.	\$150,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Phase 2 NPDES Permit	\$136,000	\$192,000	\$191,000	\$231,000	\$281,000	\$281,000
Utility Impl. & Admin	\$80,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
Needs Assess & Impl	\$100,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
CIP Items	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Rehab/replace 1% / yr	\$686,400	\$686,400	\$686,400	\$686,400	\$686,400	\$686,400
System Improvements	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
Watershed Plan Impl.	\$315,687	\$327,337	\$327,337	\$327,337	\$327,337	\$327,337
<b>TOTAL</b>	<b>\$2,448,204</b>	<b>\$2,245,854</b>	<b>\$2,244,854</b>	<b>\$2,284,854</b>	<b>\$2,245,854</b>	<b>\$2,245,854</b>

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## Funding Mechanism Should Be:



- ▶ Sufficient to cover costs
- ▶ Stable / dependable from year-to-year
- ▶ Legal and defensible
- ▶ Easy to understand and implement
- ▶ Fair and Equitable for Dover's residents



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Next Steps



- ▶ Action Items
- ▶ Suggestions
- ▶ Schedule Meeting with City Planning
- ▶ October Meeting Date (Columbus Day)
- ▶ Other?



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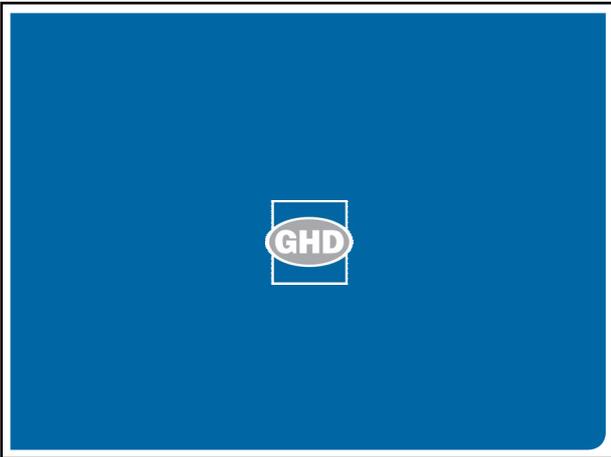
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**CITY OF DOVER, NH  
STORMWATER UTILITY FEASIBILITY STUDY**

**Stakeholder Meeting 3  
Dover Department of Public Works  
October 11, 2010 at 6:30 PM**

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***Committee Members in Attendance:***

Jan Nedelka, Committee Chair  
Dot Hooper, Committee Vice Chair  
Chad Kageleiry  
Jay Stephens  
Dana Lynch  
Gary Green  
Ray Bardwell  
Chris Nash  
Dennis Ciotti

***Other Participants:***

Dean Peschel, City of Dover  
Harold Smith, Raftelis Financial Consultants  
Alyson Watson, GHD  
Rick Schaefer, GHD (by teleconference)  
Bart Kreps, GHD (by teleconference)

1. Welcome and Introductions.
2. Citizens Forum
  - No citizen comments were received.
3. Approval of Minutes
  - Minutes from the September 13 meeting were approved.
4. Comments on Draft Report Sections 1-3
  - Mr. Bardwell provided comments on Chapters 1-3 of the Stormwater Feasibility Report,. Comments pertained to the stated age of the system infrastructure, language regarding the implications of the tax cap, and the type of drainage improvements included in planned projects included in the streets and drains CIP.
  - Mr. Green asked for confirmation of the cited percentage of water quality impairments attributed to stormwater. Ms. Watson confirmed that, according to the NH Department of Environmental Services, approximately 83% of impairments are wholly or in part attributable to stormwater.
5. Presentation: Overview of Rate Structure Alternatives (attached).



- Ms. Watson reminded the group of decisions and discussion points from the previous meeting. She noted potential inequity and administrative burden as two of the stakeholder committee's primary concerns regarding a stormwater utility.
- Mr. Smith presented information on several possible rate structure alternatives for a stormwater utility. Three rate structures were discussed: impervious area, impervious area plus gross area, and intensity of development.
- Mr. Smith highlighted that the ideal rate structure would balance simplicity and equity.
- A pie chart, showing the relative frequency of the three different methods of setting stormwater rates nationwide, was presented. Mr. Greene pointed out that Dover likely had a different character (significant impervious area downtown with very rural areas) than many of the cities included in the survey, and that could affect the preferred rate structure.
- Mr. Bardwell asked how much effort would be required to determine the impervious area of individual properties, and how current information would be maintained. Mr. Nedelka answered that the planning department already has records of many of the homes in the City. Ms. Watson indicated that much of the impervious area in the City has been mapped as part of the project to enable reasonably accurate projections of potential revenue. Mr. Peschel explained that when properties apply for foundation permits, this information is recorded in the City's Geographical Information System (GIS).
- Mr. Nedelka asked what percentage of stormwater utilities implement a credit system. Mr. Smith answered that most do.
- Mr. Ciotti asked about the cost of impervious area mapping. Mr. Schaefer replied that over 1,000 parcels of the City's approximately 8,300 parcels have already been mapped, and an average residential unit footprint had already been determined. That effort cost approximately \$30,000. If the impervious area only approach was selected, then only the small number of remaining nonresidential parcels would need to be mapped. If another approach was selected, the remaining residential parcels would need to be mapped, which would significantly increase the mapping cost.
- Mr. Kageleiry asked if multi-residential properties were treated as non-residential properties for the study. Mr. Schaefer replied that they are treated as non-residential properties. Mr. Kreps explained that the landlord or property owner could then apportion the costs to tenants consistent with water and sewer costs.
- Mr. Kageleiry asked if any cities use a gross area rate structure. Mr. Kreps replied that such a structure would be hard to defend, because total parcel area does not correlate with stormwater impacts.
- A discussion was held as to whether conservation areas would be included in the stormwater utility structure. Mr. Lynch noted that the City has developed small lots to preserve green space within a sub-development. These small lots would be heavily burdened with an intensity of development option.
- Mr. Nedelka noted a mistake in Slide 19. The slide should read '60 - 70% range is normal for a residential parcel' for consistency with the previous examples. The error has been corrected on the handouts attached to these meeting minutes.



- Mr. Nedelka asked Mr. Stephens whether the water and sewer utility implemented a credit system for low-income and elderly customers. Mr. Stephens replied that they do not currently provide a discount.
  - Mr. Lynch suggested the financial penalty for noncompliance with the City's stormwater permit be investigated to demonstrate a compelling financial need to comply.
6. The group discussed what the rate would be to implement the revenue for the various levels of funding, focusing on the four funding levels identified on slide 36 of the attached presentation: 1- the current level of service only (approx. \$900 thousand / year), 2- the current level of service plus required actions (approx. \$1.2 million / year), 3- the current level of service plus required actions and recommended actions (approx. \$2.0 million / year), and 4- the current level of service plus required actions, recommended actions, and planned CIP items (approx. \$2.5 million / year).

Following this discussion, Mr. Nedelka asked each member of the stakeholder committee what level of service they would recommend that a potential utility should cover. The majority of the group felt that the program should be funded at a level of approximately \$2M per year, as follows:

- Mr. Kagaleiry: \$2 M
- Mr. Ciotti: \$2 M
- Mr. Stephens: \$2.5 M
- Mr. Lynch: \$2 M
- Mr. Green: \$2.5 M
- Mr. Bardwell: \$2 M
- Mr. Nash: \$2.5 M
- Ms. Hooper: \$2 M
- Mr. Nedelka: \$2 M

Based on the opinions expressed above it was decided to perform stormwater utility rate calculations using a revenue requirement of \$2.0 M per year, which represents approximately an increase in funding of approximately \$1.1 million per year above the current funding level. The increased funding will be used to complete required actions such as maintaining regulatory compliance (approximately \$300 thousand per year); as well as implementing recommended actions such as a system needs assessment, ongoing system renewal and replacement, and targeted stormwater management projects recommended by City watershed management plans (approximately \$800 thousand per year). In the absence of a stormwater utility, the Committee would recommend that the stormwater program be funded through the General Fund. As a result, if the City moves forward with a stormwater utility, stormwater program costs should be backed out of the General Fund.



7. Each committee member was asked whether they prefer the concept of continuing to fund stormwater improvements through the General Fund, or whether a utility should be considered. The majority of the group prefer the concept of a utility, as follows:

- Mr. Nedelka: Utility
- Ms. Hooper: Utility
- Mr. Kageleiry: General Fund
- Mr. Stephens: Utility
- Mr. Lynch: Utility
- Mr. Green: Utility
- Mr. Bardwell: Utility
- Mr. Nash: Utility
- Mr. Ciotti: Utility

The primary reason for supporting a utility was that it presents an opportunity to collect revenues dedicated to the stormwater program that cannot be redirected for other uses.

8. Meeting was adjourned.

The next meeting will be held at the Dover Department of Public Works on Monday November 8, at 6:30 pm.

*These minutes are an overview of all pertinent discussions that took place at this meeting. Should anyone take exception to any portion herein, notify this office in writing within ten (10) days of receipt or these minutes shall stand as written.*

GHD CLIENTS/PEOPLE/PERFORMANCE



## City of Dover, NH Municipal Stormwater Feasibility Study

*Stakeholder Workshop #3  
October 11, 2010*



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### Agenda



- ▶ Welcome and Introductions
- ▶ Citizens' Forum
- ▶ Approval of Minutes
- ▶ Comments on Draft Report
- ▶ Rate Structure Alternatives
- ▶ Discussion: Rate Structure Alternatives and Willingness to Pay
- ▶ Next Steps & Action Items



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### Stormwater Utility Feasibility Study Process



Meeting 1:  
Goals and Objectives

Meeting 2:  
Program Plan,  
Compelling Case

Meeting 3:  
Rate Structure Alternatives

Meeting 4:  
Recomm's and Draft Report

Meeting 5:  
Final Report

- Stormwater impacts
- Current program alternatives
- Benefits and drawbacks of alternative rate structures
- Preliminary cost/revenue analysis
- Current approach
- Potential funding alternatives (including utility)
- Preliminary recommendations
- Future needs
- Advantages and disadvantages
- Program goals & objectives



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## Stormwater Impacts and Priorities



- ▶ **Water Quality Degradation**
- ▶ **Flooding**
- ▶ Habitat and Biodiversity
- ▶ Recreation
- ▶ Quality of Life



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## Current Program Funding Needs



Budget Component	FY 2011 Budget
Personnel Services	\$501,800
Purchased Services	\$83,800
Supplies	\$163,610
Capital Outlay	\$150,000
Other Expenses	\$900
<b>TOTAL</b>	<b>\$900,100</b>



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## Future Funding Needs



Cost Category	2011	2012	2013	2014	2015	2016
Current Level of Service	\$900,116	\$900,116	\$900,116	\$900,116	\$900,116	\$900,116
Planned / Budgeted Future Activities	\$330,000	\$1,025,000	\$787,500	\$628,750	\$1,162,500	\$302,500
<i>Catch Basin Spoils Facility</i>						
<i>Street Reconstruction Renewal</i>				\$628,750	\$825,000	\$302,500
<i>System Expansion &amp; Improvements</i>	\$250,000	\$250,000	\$100,000	\$0	\$337,500	\$0
Additional Future Activities	\$1,182,087	\$1,078,737	\$1,078,737	\$392,337	\$890,737	\$392,337
<i>NPDES Permit Compliance</i>	\$0	\$0	\$191,000	\$231,000	\$281,000	\$281,000
<i>Spoils Management &amp; Disposal</i>	\$0	\$0	\$10,000	\$10,000	\$10,000	\$10,000
<i>Utility Implementation &amp; Administration</i>	\$80,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000
<i>Needs Assessment</i>	\$0	\$0	\$0	\$50,000	\$50,000	\$50,000
<i>Rehabilitation / replacement</i>	\$200,000	\$200,000	\$200,000	\$0	\$498,400	\$0
<i>Watershed Improvements</i>	\$315,687	\$327,337	\$327,337	\$327,337	\$327,337	\$327,337
<b>TOTAL COST</b>	<b>\$2,548,204</b>	<b>\$3,195,854</b>	<b>\$2,957,354</b>	<b>\$2,152,204</b>	<b>\$3,234,354</b>	<b>\$1,875,954</b>



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### Future Funding Needs



Funding Level	2011	2012	2013	2014	2015	2016
Current Level of Service (LOS)	\$900,116	\$900,116	\$900,116	\$900,116	\$900,116	\$900,116
Current LOS + Required Actions	\$1,036,116	\$1,102,116	\$1,101,116	\$1,141,116	\$1,191,116	\$1,191,116
Current LOS + Required Actions + Rec'd Actions	\$2,218,204	\$2,170,854	\$2,169,854	\$1,523,454	\$2,071,854	\$1,573,454
Current LOS + Required Actions + Rec'd Actions + CIP Items	\$2,548,204	\$3,195,854	\$2,957,354	\$2,152,204	\$3,234,354	\$1,875,954

**Average Annual Funding Needs Range from \$1.1M to Nearly \$3M, Depending on LOS**

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### Funding Mechanism Should Be:



- ▶ Sufficient to cover costs
- ▶ Stable / dependable from year-to-year
- ▶ Legal and defensible
- ▶ Easy to understand and implement
- ▶ Fair and Equitable for Dover's residents






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### Advantages and Disadvantages of Potential Funding Approaches



	Stormwater Utility	General Fund (with Funding Recommendation)
Advantages	<ul style="list-style-type: none"> <li>▶ Stable</li> <li>▶ Reliable</li> <li>▶ Politically independent</li> <li>▶ More equitable (fee related to use)</li> <li>▶ Visibility for stormwater</li> <li>▶ Eliminates competition with other programs</li> <li>▶ Not tied to property assessment</li> </ul>	<ul style="list-style-type: none"> <li>▶ Establishes the program a community issue instead of an individual issue</li> </ul>
Disadvantages	<ul style="list-style-type: none"> <li>▶ Potentially high administration costs</li> <li>▶ Credit scheme could be complicated</li> <li>▶ Perceived inequity in user rates</li> <li>▶ Disparities in individual costs</li> </ul>	<ul style="list-style-type: none"> <li>▶ Restricted ability to fund improvements needed for regulatory compliance and infrastructure relief</li> <li>▶ Subject to political environment</li> <li>▶ Not reliable</li> <li>▶ Perceived inequity</li> <li>▶ Tax exempt properties not charged</li> <li>▶ Maintains the status quo funding level</li> <li>▶ Goes on property assessment</li> </ul>

**General Fund is not stable or sufficient (or equitable) 9**

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## Rate Structure Alternatives



### ▶ What is a Rate Structure?

- Framework for assessing responsibility for the stormwater system
- Reasonable nexus between cost and the demand placed on the system (runoff and water quality)
- Two major concepts: (1) basic rate structure and (2) rate modifiers



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## Pricing Objectives



- ▶ Revenue Sufficiency
- ▶ Revenue Stability
- ▶ Defensibility
- ▶ Simplicity
- ▶ Ease of Administration
- ▶ Equity Among Customer Classes



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## Common Methods of Assessment



### Impervious Area

- Charge based on impervious area only

### Impervious Area + Gross Area

- Charge based on impervious area and a lesser charge for gross area

### Intensity of Development

- Charge based on intensity of development (recognize green space)

Most defensible rate structures utilize impervious area



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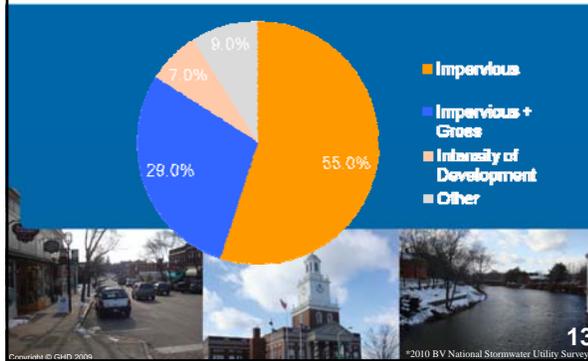
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### Common Methods of Assessment\*




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### Impervious Area – Strengths & Weaknesses




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### Impervious Area - Example

- 10 acres with 33% impervious
- 1 Equivalent Residential Unit = 3,800 sq.ft.
- $158,158 \text{ sq.ft.} / 3,800 = 41.62$  (round 42 ERUs)
- Monthly charge per ERU = \$6.00
- $\$6.00 \times 42 = \text{\$252 per month}$



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## Impervious Area + Gross Area – Strengths & Weaknesses



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## Impervious + Gross Area - Example

- Same parcel
- Impervious area charge of \$252 per month
- 482,364 sq.ft. (gross area) / 3,800 = 126.9 (round 127 ERUs)
- Assume charge for gross area 1/20 of impervious area charge or \$0.30 per ERU = \$38.10
- Total charge = \$252 + \$38.10 = **\$290.10 per month**



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## Intensity of Development – Strengths & Weaknesses



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## Intensity of Development - Example

- Assume that 60 – 70% range is normal for a non-residential parcel
- Example property is 33% impervious
- Charge would be \$3.43 per ERU x 42 = **\$144.06 per month**

Percent Impervious		
Low +	High	Rate per ERU
1	10	\$ 0.86
10	20	\$ 1.71
20	30	\$ 2.57
30	40	\$ 3.43
40	50	\$ 4.29
50	60	\$ 5.14
60	70	\$ 6.00
70	80	\$ 6.86
80	90	\$ 7.72
90	100	\$ 8.57

19

## Rate Modifiers



- What are Rate Modifiers?
  - Adjustments or factors that can be applied to various components of the rate structure to enhance equity, improve transparency, or reduce costs
- Examples: Fixed Costs (e.g. customer service, billing/collections) Assessed Per Account; Tiered Rates for Residential Customers
- Credits



20

## Credits



- Actions that Reduce Demand on the System or Lower Program Costs
- Typical credits
  - Retention or detention
  - Water quality best management practices
  - Maintenance of on-site infrastructure
  - Non-structural best management practices (e.g. education)
  - Other rate discount programs for qualifying customers



21

## Credits



- ▶ How do you calculate a credit?
  - Determine a reasonable relationship to program costs
  - Estimate percent reduction in runoff
  - Usually establish a cap since some program costs are fixed (possible exceptions)
- ▶ Who gets a credit?
  - Typically non-residential
  - Including residential more of a policy decision



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## Simplifying the Credit System



Step 1	Step 2	Step 3	Step 4	Step 5
Credits & measurement approach are defined and adopted along with utility	Credits already in billing system are applied automatically	Customers apply for additional, specific credits	Dover Utilities Commission Reviews applications on a case-by-case basis	Approved credits are incorporated into billing system



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## Example: Burlington, VT Credit Program



- ▶ Only non-residential properties eligible for credits
  - Multiple credits can be granted to a single property
  - Total credit shall not exceed 50% of the fee
  - Minimum fee equal to the flat fee for a residential property
- ▶ Responsibility of the customer to apply for credits and provide necessary information
- ▶ Applications received within one year of the initial bill are applied retroactively (otherwise applies prospectively)



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Example: Burlington, VT Credit Program, cont'd



Available Credits:

- Water Quantity Reduction: credit for controlling the rate of runoff release with respect to the predevelopment peak flow
- Water Quality Treatment: up to 25% credit for 80% TSS removal
- Non-Structural Treatment: credit granted for non-structural water quantity reductions & water quality improvements
- MS4 Permitted Facilities: 10% reduction for MS4 entities
- Water Education Curricula: 10% credit for schools where approved stormwater-related curriculum is taught



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Example: Newton, MA Credit Program



- ▶ Credits granted to residential and non-residential customers
- ▶ Credits cannot exceed 75% of the stormwater fee
- ▶ Responsibility of the customer to apply for credits

Category	Res. Credit	Non-Res. Credit
Roof runoff captured and infiltrated:	25 to 50%	25 to 50%
Driveway / parking lot captured and infiltrated	15 to 25%	25 to 50%
Stormwater Quality (pre-treatment prior to entering public drainage system)	10 to 20%	10 to 20%

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Billing for Stormwater



Water and Sewer Bill



Stormwater Only Bill

Property Tax Bill



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## Billing for Stormwater



Criteria	Water/Sewer	Stormwater Only	Property Tax
Cost	Low	Medium/High	Low
System compatibility	High	High	High
Implementation	Medium	High	Medium
Administration	Low	Medium	Low
Delinquency	Medium	High	Medium/High
Customer acceptance	Medium	Low	Low

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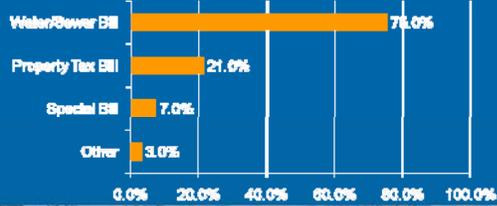
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## Billing for Stormwater\*



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2010 BY National Stormwater Utility Survey  
(Respondents could choose more than one category)

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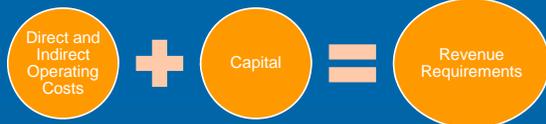
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## Revenue Requirements



Remember Costs are Preliminary!

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## Program Funding Needs



- ▶ Existing Level of Service (approx. \$900k annually)
  - Currently, funding provided through streets and drains budget center (general fund)
- ▶ Required Future Activities (\$200-300k annually)
  - Increased NPDES compliance and on-going spoils management



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## Program Funding Needs



- ▶ Recommended Future Activities (approx. \$1.1MM in 2011)
  - Stormwater needs assessment, increased infrastructure reinvestment, watershed capital improvements
- ▶ CIP Items (average \$850k / year)
  - Catch basin spoils facility, street reconstruction, system expansion & improvements



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## Other Considerations



- ▶ Initial level of accounts receivable delinquency tends to be higher than other utility services
  - Depends on billing methodology, available recourse, etc.
  - Up to 10% not uncommon initially
- ▶ Credits, while beneficial, need to be considered when forecasting revenue
  - Moderate program might equate to 2.0-3.0% of total revenue



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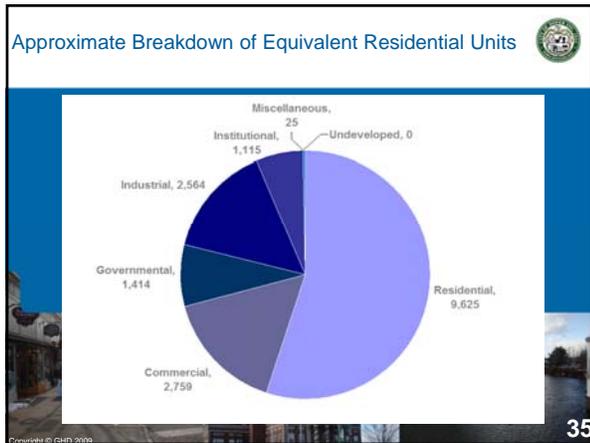
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Preliminary Calculations

	Range of Charge (per ERU)	Estimated Revenue
Current Level of Service	\$3.00 - \$5.00	\$900k
Current Level of Service + Required Actions	\$5.00 - \$7.00	\$1.2MM
Current Level of Service + Required Actions + Recommended Actions	\$9.00 - \$11.00	\$2.0MM
Current Level of Service + Required Actions + Recommended Actions + CIP Items	\$11.00 - \$13.00	\$2.5MM

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## Agenda



- ▶ Welcome and Introductions
- ▶ Citizens' Forum
- ▶ Approval of Minutes
- ▶ Comments on Draft Report
- ▶ Rate Structure Alternatives
- ▶ Discussion: Rate Structure Alternatives and Willingness to Pay
- ▶ Next Steps & Action Items



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**CITY OF DOVER, NH  
STORMWATER UTILITY FEASIBILITY STUDY**

**Stakeholder Meeting 4  
Dover Department of Public Works  
November 8, 2010 at 6:30 PM**

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***Committee Members in Attendance:***

Jan Nedelka, Committee Chair  
Dot Hooper, Committee Vice Chair  
Chad Kageleiry  
Dana Lynch  
Gary Green  
Ray Bardwell  
Chris Nash

***Other Participants:***

Dean Peschel, City of Dover  
Bill Boulanger, City of Dover  
Dan Barufaldi, City of Dover  
Alyson Watson, GHD

1. Welcome and Introductions.
2. Citizens Forum
  - No citizen comments were received.
3. Approval of Minutes
  - Minutes from the October meeting were approved as revised.
4. Comments on Draft Report Sections 4-6 were discussed.
  - Mr. Bardwell recommended that the committee suggest that much of the stormwater program be implemented by contract so as to not overburden the current staff. Mr. Nedelka replied that staffing organization does not fall under the scope of the current project. Ms. Watson agreed to clarify the section to state that the current organization and staffing is anticipated to be sufficient.
  - Mr. Bardwell asked whether Churches will pay stormwater fees. Mr. Nedelka replied that all non-profits and tax-exempt properties would pay a stormwater utility bill.
  - Mr. Green asked which category condominiums fit into in Table 4.3. Typically, each owner is responsible for his own water and sewer bill. Ms. Watson replied that they are currently treated as multi-family structures in the study. Discussion ensued on whether it would make



more sense to bill each resident separately or issue one bill to the condominium association. Ms. Hooper suggested that the bill could be issued to the condominium association.

- Mr. Nash asked which category condominiums fit into in Table 4.3. Ms. Watson replied that they are currently being treated as multi-family structures. If condominiums were treated as single family residences, each property owner would receive a full bill. Condominiums are typically more densely developed than single family residential properties, with less impervious area per unit. As a result, treating each condominium as an individual single family residence would not be as equitable as treating them as multifamily residences, where the cost of the impervious area is divided among the owners.
- Mr. Nedelka commented that in the previous meeting the discussion indicated that each single residence would be charged one ERU to simplify the rate structure. The draft report contains a rate structure where different charges are assigned to each residence. Ms. Watson explained that three different rate structures are presented in the draft report, only one of which is based on a flat fee for residential properties. Mr. Nedelka asked if any committee members would like the other options to be explored. As Mr. Nedelka and Mr. Green were the only members to express interest, the other two rate structures were dropped from discussion.
- Mr. Kageleiry handed out a copy of the New Hampshire State Statute that outlines the legal criteria for setting up a system of fee units (149-I:6-d.) He emphasized that the system must be fair and equitable. Mr. Nedelka indicated that he would ask the City Attorney to sit in on the next meeting to provide a legal perspective.
- Mr. Bardwell asked if it would be helpful to sit through a quick presentation about the current Stormwater Utility in Burlington, Vermont. It was decided that since the population density, makeup, and authorizing legislation of the two cities were radically different it would probably be difficult to compare the two.

5. Presentation: Recommendations and Draft Report.

- Ms. Watson gave a presentation based on GHD's understanding of what the committee had indicated at the October meeting.
- Mr. Kageleiry asked about whether structures, such as porous pavement, would be considered for stormwater credits. Ms. Watson replied that the credit manual, detailing such information, would be developed during the implementation phase of the project.
- Mr. Green asked why reducing runoff rate was being considered for a credit when the actual amount of water leaving the site might not be affected. Mr. Kegeleiry indicated that a property was not allowed any more runoff post-development that they had pre-development.



Mr. Lynch clarified that the rate cannot increase, but the actual volume of stormwater will increase due to additional impervious area (and reduced infiltration) on site.

- Mr. Nash asked if water quality should be considered in this study in addition to water quantity. Mr. Peschel indicated that the utility will be a dynamic program that will evolve as new regulations and permits are issued.
- A slide with GHD's recommendations based on their compiled data was presented. Mr. Lynch asked if the recommendation for a phased implementation approach would meet EPA compliance requirements. Mr. Peschel indicated that the budget recommendation was based on a need to meet compliance regulations.
- Mr. Boulanger suggested that a minimum revenue amount should be established that accounts for potential credits to prevent having to supplement the utility with the General Fund. Mr. Nedelka pointed out that credit programs in other communities only took out approximately five percent of the revenue stream. Ms. Watson indicated that projected revenue needs have been increased to reflect projected delinquencies and credits such that sufficient revenue would be left over to fund the program. In addition, a cap on the fee reduction available through credits could be established to limit the impact of credits on revenue predictability.
- Mr. Green asked if every property in the City would be billed. Ms. Watson replied that each property with impervious area would be billed. Mr. Kageleiry pointed out that farmland has a meaningful impact on stormwater quality even though it has a small percentage of impervious area.
- Ms. Watson indicated that the proposed base fee only covers a portion of the current stormwater budget. The remainder of the budget is covered by impervious area fees.
- Mr. Kagaleiry asked if it would be possible to develop a figure detailing the extent of the City's current stormwater system. Mr. Boulanger indicated that this could be done.
- Mr. Nedelka suggested that since stormwater is a community issue, the base fee could be structured to reflect the contribution from public roads. Ms. Watson indicated that GHD could run calculations to determine what this figure would be.
- Mr. Bardwell asked that condominiums be broken out from multi-residential structures in the pie chart showing ERUs by customer class.
- Mr. Nedelka asked why the phased approach was spread out over six years. Ms. Watson responded that this was done to be consistent with the capital planning timeframe.



- Mr. Lynch indicated the importance of emphasizing the cost of doing nothing (permit non-compliance charges). The group requested that information on penalties be included in the presentation.
- Mr. Green asked Mr. Barufaldi what impact a stormwater utility charge would have on businesses looking to establish themselves in the area. Mr. Barufaldi replied that the answer depends on what surrounding communities are doing but would most likely be minimal. He emphasized a preference to include the utility on the water / sewer bill instead of as a standalone stormwater bill, preferably as a line item on the sewer charge.
- Mr. Lynch asked what the charge equates to in terms of cents per thousand of assessed value, and what that means for a single family residence. Ms. Watson responded that the full program cost equates to approximately \$0.75/thousand, and for the average single family residence, that amounts to approximately \$15.75 per month. The utility will cost the average single family residence approximately \$11.20 per month. As a result, the utility would be expected to generate a minor reduction in costs for the average single family residence.
- Mr. Green suggested multi-family residential structures be eligible for credits if they implement stormwater controls. Mr. Nash added that properties should have to demonstrate stormwater control effectiveness and proper maintenance in order to receive credits. The group determined that credits should be limited to non-residential properties which are expected to have the greatest stormwater charges and therefore stand to gain the greatest benefit from credits. A process should be put in place which disallows credits for onsite management systems that are not maintained.
- It was agreed that the credit cap should be left at fifty percent, as reflected in the calculations. This number can be changed in the implementation phase of the project.
- Ms. Watson asked if the committee wanted to consider a credit for seniors and low income citizens. Mr. Kageleiry stated that the City does not currently provide such credits on water / sewer bills and the stormwater bill should have a similar structure. There was general consensus on the point.
- Mr. Lynch asked why reducing the quantity of water leaving the site was considered a credit opportunity, considering that this is required for new development anyway. He suggested that improving water quality through implementation of best management practices should be rewarded. It was decided to include improving water quality in place of reducing water quantity as a potential credit
- Ms. Watson asked if the committee wanted to consider offering a curriculum credit to schools. It was decided that placing additional curriculum requirements on schools would be excessively burdensome, and the option should not be pursued.



- The group discussed whether the Dover Utilities Commission (DUC) would be able to determine the details of what the credits should be. It was determined that it is appropriate to provide a structure and guidelines, but that the DUC will be capable of determining the details of the system.
  - Ms. Watson reviewed implementation steps for establishing a utility. Mr. Nedelka clarified that the rates would be approved in the annual budgeting process, not through a separate ordinance.
  - Mr. Nedelka discussed his thoughts on the composition of the implementation phase committee. He suggested that it would make sense to include the current committee members, along with additional representation from the Planning Department as well as members of the DUC. The group agreed.
  - Mr. Peschel asked whether the future meetings would be facilitated. The group felt that while staff may be technically capable of completing the meetings without outside assistance, they have limited time to dedicate to the project and outside facilitation would help to keep the process on track. The group agreed that future meetings should be facilitated if possible.
  - Mr. Nedelka reiterated his request that all comments on the draft report to be submitted to him by December 4 to allow time for categorization. This will help to keep the group on schedule to complete the project with one additional meeting.
  - Mr. Bardwell asked if it was possible to teleconference into the next meeting. It was decided that this would be allowed.
6. Meeting was adjourned.

The next meeting will be held at the Dover Department of Public Works on Monday December 13th, at 6:30 pm.

*These minutes are an overview of all pertinent discussions that took place at this meeting. Should anyone take exception to any portion herein, notify this office in writing within ten (10) days of receipt or these minutes shall stand as written.*

GHD CLIENTS/PEOPLE/PERFORMANCE



## City of Dover, NH Municipal Stormwater Feasibility Study

Stakeholder Workshop #4  
November 8, 2010



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### Agenda



- ▶ Welcome and Introductions
- ▶ Citizens' Forum
- ▶ Approval of Minutes
- ▶ Comments on Draft Report
- ▶ Recommendations and Implementation Plan
- ▶ Discussion: Recommendations and Implementation Plan
- ▶ Next Steps & Action Items



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### Stormwater Utility Feasibility Study Process



Meeting 1: Goals and Objectives	Meeting 2: Program Plan, Compelling Case	Meeting 3: Rate Structure Alternatives	Meeting 4: Recomm's and Draft Report	Meeting 5: Final Report
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- Stormwater impacts
- Current approach
- Future needs
- Program goals & objectives
- Current program
- Potential funding alternatives (including utility)
- Advantages and disadvantages
- Benefits and drawbacks of alternative rate structures
- Preliminary cost/revenue analyses
- Preliminary recommendations



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### Common Methods of Assessment

<b>Impervious Area</b> <ul style="list-style-type: none"> <li>Charge based on impervious area only</li> </ul>	<b>Impervious Area + Gross Area</b> <ul style="list-style-type: none"> <li>Charge based on impervious area and a lesser charge for gross area</li> </ul>	<b>Intensity of Development</b> <ul style="list-style-type: none"> <li>Charge based on intensity of development (recognize green space)</li> </ul>
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Most defensible rate structures utilize impervious area

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### Rate Modifiers

- Base Charge for Fixed Costs
- Senior / disabled discount
- Credits
  - Non-residential only
  - Total credit cannot exceed 50% of the fee, minimum fee equal to the flat fee for a residential property
  - Responsibility of the customer to apply for credits and provide necessary information
- Potential Credits: water quantity reduction, water education

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### Billing for Stormwater

Water and Sewer Bill

Stormwater Only Bill      Property Tax Bill

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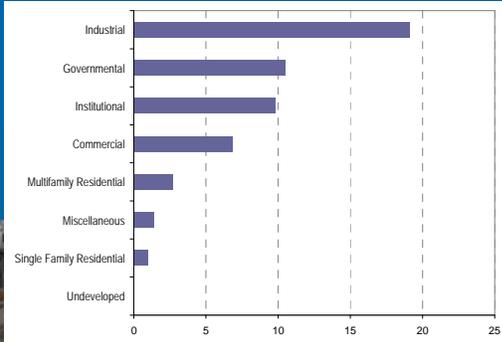
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## Average Number of ERUs Per Parcel



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## Estimated Charges - Assumptions



- ▶ Uncollectible revenue allowance of 7.5% initially, decreasing to 3% with some lost revenue collected
- ▶ Credit revenue reductions of 1.0% initially, increasing to 3.0% over time
- ▶ Phased implementation over a six-year period
  - Year 1 covers current and required expenditures, ramping up to full program costs in Year 6



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## Phased Implementation Approach



Year	2011	2012	2013	2014	2015	2016
Revenue - Basic Service Charge	\$127,163	\$141,569	\$139,926	\$135,054	\$142,437	\$142,331
Revenue - Impervious Area Charge	\$1,027,323	\$1,205,532	\$1,376,873	\$1,547,137	\$1,727,820	\$1,905,672
<b>Total Net Revenue</b>	<b>\$1,154,486</b>	<b>\$1,337,101</b>	<b>\$1,516,799</b>	<b>\$1,682,799</b>	<b>\$1,870,257</b>	<b>\$2,048,004</b>
<i>Offset to General Fund</i>	<i>\$1,154,486</i>	<i>\$1,337,101</i>	<i>\$1,516,799</i>	<i>\$1,682,799</i>	<i>\$1,870,257</i>	<i>\$2,048,004</i>
Basic Charge (Per Acct)	\$1.45	\$1.45	\$1.45	\$1.45	\$1.55	\$1.55
Impervious Area Charge (Per ERU)	\$5.35	\$6.15	\$6.65	\$7.75	\$8.75	\$9.65
<b>Total Monthly Charge / ERU</b>	<b>\$6.80</b>	<b>\$7.60</b>	<b>\$8.10</b>	<b>\$9.20</b>	<b>\$10.30</b>	<b>\$11.20</b>

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## Potential Modifiers and Credits



- ▶ Senior / disabled discount
- ▶ Water Quantity Reduction: credit for controlling the rate of runoff release with respect to the predevelopment peak flow
- ▶ Non-Structural Treatment: credit granted for non-structural volume and velocity reductions
- ▶ Water Education Curricula: credit for schools where approved stormwater-related curriculum is taught



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## Implementation Steps



1. Request City Council Approval to Move Forward with Implementation
2. Assemble Committee to Advise on Program Implementation
3. Implement Public Outreach Campaign
4. Complete Impervious Mapping
  - Remaining non-single family residential properties



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## Implementation Steps, cont'd



5. Develop Formal Financial and Rate Policies and Procedures
  - Methods for assessment
  - Formal policy statements around the program
6. Refine Financial Plan
  - Program budget
  - Revenue needs and forecasting



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## Implementation Steps, cont'd



7. Develop a Credit Manual
  - Approved credits, program structure, policies and procedures, application, etc
8. Develop Billing Policies and Procedures
9. Prepare and Adopt Utility Formation Ordinances
  - Utility establishment
  - Rate structure and billing
10. Integrate Water, Sewer, and Stormwater Billing



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## Agenda



- ▶ Welcome and Introductions
- ▶ Citizens' Forum
- ▶ Approval of Minutes
- ▶ Comments on Draft Report
- ▶ Recommendations and Implementation Plan
- ▶ Discussion: Recommendations and Implementation Plan
- ▶ Next Steps & Action Items



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## Next Steps



- ▶ Meeting 5
  - Monday, December 13, 2010 @6:30 PM
  - Approval of Feasibility Study Report
  - Public Outreach Plan comments and feedback
- ▶ Other?



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## Penalties for Noncompliance - 40 CFR 122.41



### ▶ Negligent Violations

- Any person who violates any permit condition or limitation or requirement faces:
  - Civil penalties up to \$25,000 per day for each violation
  - Criminal penalties of \$2,500 to \$25,000 per day, or imprisonment of not more than 1 year, or both
  - Subsequent convictions: criminal penalties of up to \$50,000 per day of violation, imprisonment of up to 2 years, or both

### ▶ Known Violations

- Criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than 3 years, or both
- Subsequent conviction: criminal penalties of up to \$100,000 per day of violation, or imprisonment of up to 6 years, or both

### ▶ Known violation with risk of imminent danger, death, or serious injury:

- Fine of up to \$250,000 or imprisonment of up to 15 years, or both
- Subsequent conviction: fine of up to \$500,000, imprisonment of up to 30 years, or both

### ▶ Organization violating the imminent danger provision

- Fine of up to \$1,000,000, \$2,000,000 for subsequent convictions

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**CITY OF DOVER, NH  
STORMWATER UTILITY FEASIBILITY STUDY**

**Stakeholder Meeting 5  
Dover Department of Public Works  
December 13, 2010 at 6:30 PM**

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***Committee Members in Attendance:***

Jan Nedelka, Committee Chair  
Dot Hooper, Committee Vice Chair  
Chad Kageleiry  
Dana Lynch  
Gary Green  
Ray Bardwell  
Chris Nash  
Jay Stephens  
Chris Nash

***Other Participants:***

Dean Peschel, City of Dover  
Bill Boulanger, City of Dover  
Dan Barufaldi, City of Dover  
Alan Krans, City of Dover  
Alyson Watson, GHD

1. Welcome and Introductions.
2. Citizens Forum
  - No citizen comments were received.
3. Approval of Minutes
  - Mr. Nedelka asked that the slide presented at Meeting 4 showing the penalties for noncompliance with new stormwater permit requirements be incorporated into the minutes.
  - Minutes were approved as amended.
4. Proposed changes to the draft report were discussed. Mr. Nedelka distributed a summary of proposed report amendments (attached).
  - a) Proposed technical changes were discussed.
    - Mr. Green and Mr. Stevens pointed out typographical errors in the draft report.
    - The proposed technical changes were approved as amended.
  - b) Proposed minor changes were discussed.
    - Ms. Hooper asked that her full name be used in the draft report.



- The proposed minor changes were approved as amended.
- c) Proposed major changes were discussed.
- Mr. Nedelka asked the committee whether the examples on pages 30, 31 and 33 should be updated with more recent rate examples. The committee agreed the examples should be updated.
  - Mr. Nedelka asked the committee whether it wanted to recommend the Public Outreach Plan outlined in the report. It was agreed that the plan should be used as a starting point for the parties responsible for implementation.
  - Major proposed changes were approved, as amended.
- d) Other proposed changes were discussed.
- The second bullet on page 24 states that ‘Because Dover is not currently required to treat stormwater, this [water quality improvement] credit does not currently apply.’ The committee decided this sentence should be modified to ‘Dover is not currently required to treat stormwater’ to leave the possibility of future water quality credits open.
  - Mr. Green stated that he had recently attended a Southeast Watershed Alliance where expected future water quality monitoring was discussed.
  - Ms. Hooper asked that discussion of water education curriculum credits be removed completely from the report.
  - Other proposed changes were approved as amended.
5. Ms. Watson presented the powerpoint slides attached.
6. The Committee discussed whether vacant and undeveloped lots should be charged a base stormwater utility fee. Mr. Green presented information obtained from the Assessor’s office about the quantity/makeup of the vacant/undeveloped lots in Dover. He suggested that a tiered structure might be adopted, with undeveloped lots being charged on a square footage basis. Mr. Kageleiry questioned how large undeveloped lots would be treated and cautioned that the tier structure should be sensitive to how each property contributes to stormwater issues versus how much benefit they derive from the stormwater system. There was concern that a gross area structure could disproportionately impact owners of large undeveloped lots. Mr. Bardwell pointed out that agricultural land could have a large impact on water quality, even though it had relatively little impervious area. Mr. Lynch and Mr. Kageleiry indicated that there has been a significant effort to encourage developers to offset development impacts by purchasing and conserving land, and charging them for that conserved land would send an inconsistent message.



7. Mr. Bardwell asked if the question of whether undeveloped lots should be charged a user fee could be reviewed by the Dover Utilities Commission (DUC). Mr. Nedelka suggested that the present committee should attempt to make a recommendation on the matter.
8. Mr. Nedelka pointed out that land can be undeveloped and still have a water quality impact. However, according to his calculations, the revenue collected from undeveloped properties would represent less than \$10,000 out of the \$1.2 million collected through the stormwater utility and might not be worth the overhead cost to administer a program for these parcels. Ms. Hooper also pointed out that the committee had elected to keep the utility structure as simple as possible.
9. Mr. Kageleiry indicated a need to state the definition of what an undeveloped parcel is. Mr. Nedelka suggested that this definition may be determined in the future by the DUC.
10. Ms. Hooper moved to not include undeveloped and vacant land in the current base fee structure. Mr. Green asked that the motion be amended so that the issue of undeveloped and vacant parcels would fall in the scope of the utility committee. Mr. Nedelka requested that Mr. Green participate in the implementation-phase Committee, and Mr. Green agreed. The motion, as amended was passed.
11. The Committee discussed what should be covered by the base fee charge. Three options were presented: a small base fee covering only a portion of the fixed program costs, a large base fee which would reflect the shared cost of City roads, and a medium base fee which would reflect a portion of Dover's roads.
12. Ms. Hooper asked if the small base fee would cover all expenses. Ms. Watson explained that all of the alternatives cover all expenses. In each case, a portion of the needed revenue is collected through the base fee, with the remainder collected through the impervious are fee. When the base fee is smaller, the impervious fee is larger to compensate. The question is what should the base fee incorporate, and what magnitude of "flat fee" is appropriate. In all cases, the revenue collected will be sufficient to cover program expenses, and the amount collected will be backed out of the general fund.
13. Mr. Nedelka mentioned that it might make sense to incorporate at least a portion of the roads in the base fee to emphasize that stormwater is a community issue that affects everyone.
14. Mr. Nash asked if other communities were incorporating road infrastructure into their base fees. Ms. Watson explained that base fees are commonly used, and the magnitude of the fee varies.
15. A motion was made to approve a medium base fee, reflecting the Committee's desire to cover a portion of the City's shared road infrastructure with the base fee. The motion was passed.
16. To achieve consistency with the State Statute, Mr. Krans (Dover City Attorney) recommended that residential properties be allowed to apply for credits. Mr. Green asked why residential



customers would need to be allowed to apply for credits. Mr. Krans indicated that allowing a credit is different from setting the standard for receiving a credit, and the standard for receiving a credit could be difficult to achieve. However, it is likely that in the future there may be a scenario in which a property owner implements a system substantially different from the average resident that truly reduces stormwater impacts from a residential property, and in this case, there should be a mechanism in place to allow a credit to be extended. Mr. Nedelka added that small improvements such as rain-barrels that are difficult to monitor and enforce should not qualify for a credit. Mr. Krans suggested that a system that returns a residential property to the impact level of an undeveloped property may be considered for a credit in the future.

17. The proposed Public Outreach Plan was discussed. Mr. Nedelka stated that the proposed plan seemed largely academic and not practical for Dover. He emphasized that there were some good ideas but that the plan should not be adopted as a whole. He pointed out that since Dover is not a very large community, focus groups may not be necessary.
18. Ms. Hooper discussed some ideas on how to disseminate information to the community including broadcasting on Local Channel 22, a city council broadcast, flyers and a writeup in *Fosters*.
19. Mr. Barufaldi suggested that this type of outreach requires dialogue, not just informational presentations. He suggested 'Dover Discussions' as a model for the type of forum that should be utilized; however, he suggested that dedicated meetings should be held on this topic. Ms. Hooper also suggested a special city wide meeting dedicated to the topic.
20. Mr. Boulanger indicated the importance of educating the City staff so they could handle residents' questions when they are out in the field.
21. Ms. Hooper suggested emphasizing that enhanced stormwater management is mandated and stressing the penalties for non-compliance.
22. Mr. Lynch asked that the Public Outreach Plan avoid being too 'cutesy' as it is dealing with a serious topic and should be perceived as such.
23. The Committee took a voice vote to approve the report as amended. The report was approved unanimously.
24. The meeting was adjourned.

*These minutes are an overview of all pertinent discussions that took place at this meeting. Should anyone take exception to any portion herein, notify this office in writing within ten (10) days of receipt or these minutes shall stand as written.*

**GHD** CLIENTS/PEOPLE/PERFORMANCE



## City of Dover, NH Municipal Stormwater Feasibility Study

*Stakeholder Workshop #5  
December 13, 2010*



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### Agenda



- ▶ Welcome
- ▶ Citizens' Forum
- ▶ Approval of Minutes
- ▶ Comments on Draft Report
- ▶ Base Fee and Undeveloped / Vacant Properties
- ▶ Public Outreach Recommendations
- ▶ Next Steps & Action Items



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### Stormwater Utility Feasibility Study Process



Meeting 1: Goals and Objectives	Meeting 2: Program Plan, Compelling Case	Meeting 3: Rate Structure Alternatives	Meeting 4: Recomm's and Draft Report	Meeting 5: Final Report
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- Stormwater impacts
- Current approach
- Future needs
- Program goals & objectives

- Current program
- Potential funding alternatives (including utility)
- Advantages and disadvantages

- Benefits and drawbacks of alternative rate structures
- Preliminary cost/ revenue analyses

- Preliminary recommendations



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## Goals and Objectives



- ▶ Goals
  - Build public support for a stormwater utility by educating stakeholders
  - Prepare property owners and managers for implementation by providing easy-to-understand information about fees and administration
- ▶ Objectives
  - Identify audiences
  - Develop a campaign theme and messages, tailored to each audience
  - Provide a menu of outreach activities that includes direct and indirect communication methods, traditional and new media



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## Audiences



- ▶ Property owners and managers
  - tax-exempt entities
  - buildings with large paved areas
  - fixed-income property owners
  - developers
  - residential and commercial property managers
  - municipal property managers
- ▶ Local elected officials
- ▶ Community opinion leaders
- ▶ Environmental, civic, homeowner and business organizations
- ▶ Realtors and property management companies
- ▶ News outlets (print, broadcast and internet)
- ▶ General public



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## Themes and Messages



- ▶ Themes
  - Stormwater Stopper
  - Water Wise
- ▶ Messages
  - Save our streets from flooding
  - Save our lakes, streams and bays



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## Potential Strategies



- ▶ *Partners in Education*: develop relationships with environmental and community organizations for widespread education and support
- ▶ *Stormwater Day*: collaborate with science teachers in the middle and high schools for educational opportunities
- ▶ *Speaker Bureau*: could be developed so individuals learn about the issues and solutions from their peers
- ▶ *Depave Dover Day*: involve the community in removing unnecessary and excessive amounts of asphalt to reduce impervious surfaces
- ▶ *Stormwater Stopper or Water Wise Club*: open to property owners who have reduced their property's impacts on the City's stormwater system



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## Tools



1. *Messaging Group*: Group of 12 property owners from the community who are not knowledgeable about stormwater issues – opportunity to test the effectiveness of messages
2. *Print Materials*: Frequently asked questions, flyer, bumper stickers, pins, refrigerator magnets, stickers, rain barrels
3. *Internet-Based Communications*: webpage with information and related links, social media such as a blog or Facebook



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## Tools, cont'd



4. *Press Relations*: editorial board meetings, news releases, opinion pieces, letters to the editor, video and radio Public Service Announcements, appearances on local television and radio shows
5. *Customer Service*: train staff to respond appropriately to questions and concerns from property owners, especially during the initial implementation phase
6. *Public Meetings and Presentations*: public information meetings, neighborhood meetings, and a Speakers Bureau



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## Tools, cont'd



7. *Collaborations*: collaborating with other organizations to maximize the reach of the program while keeping costs down (Partners in Education program, Stormwater Day, Water Wise Club)
8. *Distribution List*: email and mailing addresses for distribution of educational materials
9. *Community Events*: provide program information at Coast Sweep and Apple Harvest, or hold a new event such as Depave Dover Day



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## Next Steps



- ▶ Finalize Recommendations
- ▶ Present Recommendations to City Council



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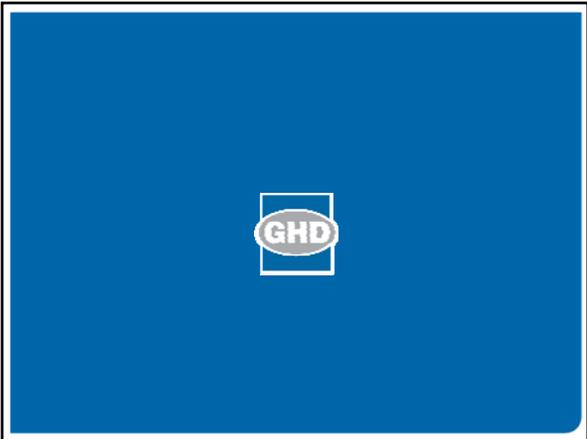
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Appendix B

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Supplemental Information – Current and Future  
Program Costs

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# Appendix B: Supplemental Information – Current and Future Program Costs

This Appendix provides additional information on current and future program costs presented in Chapter 2.

## 1.1 Current Program Costs

Table B-1 presents current stormwater program costs for the following categories:

- Personnel Services
- Purchased Services
- Supplies
- Capital Outlay
- Other Expenses

These costs are described in further detail below.

**Table B-1 Stormwater Program Costs**

Cost Category	Stormwater Program Costs (FY 2011)
Personnel Services	\$501,800
Purchased Services	\$83,800
Supplies	\$163,610
Capital Outlay	\$150,000
Other Expenses	\$900
<b>Total Stormwater Personnel Costs</b>	<b>\$900,100</b>

### Personnel Services

The stormwater program is implemented by a variety of staff. The following table identifies specific City staff that complete stormwater functions as a portion of their responsibilities, and the portion of their associated cost attributable to stormwater-related functions.

**Table B-2 Stormwater Program Staff and Personnel Costs**

<b>Staff Category</b>	<b>Budget Location</b>	<b>Percentage of Cost Associated with Stormwater Program</b>
Public Works and Utility Superintendent	Streets and Drains	50%
Public Works Supervisor	Streets and Drains	50%
Working Foreman	Streets and Drains	50%
Truck Drivers (5)	Streets and Drains	50%
Heavy Equipment Operators (2)	Streets and Drains	50%
Maintenance Mechanic	Streets and Drains	50%
Director of Community Services	Administration	8.3%
Environmental Projects Manager	Engineering	5%
City Engineer	Engineering	15%
Assistant City Engineer	Engineering	15%
Engineering Technician	Engineering	50%
GIS Technician	Water	30%
Office Manager	Administration	12.5%
Secretary I	Administration	15%
<b>Total Stormwater Personnel Costs<sup>1</sup></b>		<b>\$501,800</b>

1. Personnel Costs include pay, insurance, FICA, medicare, retirement, staff development, worker's compensation, and FSA fees.

Purchased Services

The Purchased Services portion of the existing stormwater program is captured within the Streets and Drains budget. The following table presents the percentage of each Purchased Services cost dedicated to the stormwater program.

**Table B-3 Stormwater Program Purchased Services Costs**

<b>Purchased Services Category</b>	<b>Percentage of Cost Associated with Stormwater Program</b>
Medical Services	0%
Consulting Services	
<i>Groundwater Sampling</i>	50%
Water and Sewage Usage	50%
Maintenance Charges – Improvements other than Buildings	
<i>Guardrail Repair</i>	0%
<i>Roadway markings</i>	0%
<i>Center line roadway markings</i>	0%
<i>Roadside and curb herbicide spraying</i>	0%
Maintenance Charges – Equipment	50%
Maintenance Charges - Office Equipment	
<i>Simplex recorder maintenance</i>	50%
<i>Division share PC</i>	50%
Rental of Equipment	
<i>Burns Security</i>	50%
<i>Equipment rental from private companies</i>	50%
<i>Catch basin cleaning</i>	100%
<i>Division share of Konica copier</i>	50%
Property Insurance	50%
Vehicle and Equip Insurance	50%
Public Liability Insurance	50%
Telecommunications	50%
<b><i>Total Stormwater Purchased Services Costs</i></b>	<b>\$83,800</b>

Supplies

The Supplies portion of the existing stormwater program is captured wholly within the Streets and Drains budget. The following table presents the percentage of each supply cost dedicated to the stormwater program.

**Table B-4 Stormwater Program Supply Costs**

<b>Supply Category</b>	<b>Percentage of Cost Associated with Stormwater Program</b>
Office Supplies	50%
Operating Supplies	50%
Clothing & Uniforms	50%
Vehicle Fuels	50%
Food	50%
Maintenance Supplies – Buildings	50%
Maintenance Supplies – Improvements Other Than Buildings	
<i>Pothole repairs, pavement for drainage ditches &amp; catch basins</i>	50%
<i>Pipes, grates, manholes, bricks, cement, mortar, repair couplings</i>	100%
Maintenance Supplies – Vehicles	50%
Fleet Maintenance Charge	50%
Minor Equipment, Furniture and Fixtures	50%
<b>Total Stormwater Supply Costs</b>	<b>\$163,600</b>

Capital Outlay

The Capital Outlay portion of the existing stormwater program is captured within the Streets and Drains budget. The following table presents the percentage of the Capital Outlay budget dedicated to the stormwater program.

**Table B-5 Stormwater Program Capital Outlay Costs**

<b>Capital Outlay Category</b>	<b>Percentage of Cost Associated with Stormwater Program</b>
Land Improvements	
<i>General Street &amp; Sidewalk Improvements</i>	0%
<i>CM Reduction</i>	0%
<i>General Drainage Improvements</i>	100%
Machinery & Equipment	0%
Bridges	0%
<b>Total Stormwater Capital Outlay Costs</b>	<b>\$150,000</b>

### Other Expenses

The Other Expenses portion of the existing stormwater program is captured within the Streets and Drains budget. The following table presents the percentage of the Other Expenses budget dedicated to the stormwater program.

**Table B-6 Stormwater Program Other Expenses**

<b>Other Category</b>	<b>Percentage of Cost Associated with Stormwater Program</b>
Dam Registrations	100%
<b><i>Total Stormwater Supply Costs</i></b>	<b><i>\$900</i></b>

## **1.2 Future Stormwater Program Needs**

The City's anticipated future program costs are presented in Table B-7. Individual budget line items are described in further detail below.

- ▶ **Catch Basin Spoils Facility:** This line item includes \$30,000 in FY 2011 and \$150,000 in FY 2012 for construction of a catch basin spoils facility, which is currently captured in the FY 2011 – 2016 capital budget. In addition, ongoing costs associated with facility maintenance and spoils disposal will be required. A \$10,000 per year budget has been included as a placeholder for these ongoing maintenance and disposal costs for FY 2012 - 2016.
- ▶ **Street Reconstruction Renewal / Replacement Items:** A variety of street reconstruction projects included in the FY 2011 – 2016 CIP Budget include stormwater components. Projects budgeted in this line item are summarized in the following table.

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**Table B-7 Street Reconstruction Renewal / Replacement Items<sup>1,2,3</sup>**

Project	Drainage % of Project	Stormwater-Related Costs					
		2011	2012	2013	2014	2015	2016
Street Reconstruction - Floral Ave / Brick St: design replacement of closed drainage	25%						\$12,500
Street Reconstruction - Silver St / Realignment: design replacement of closed drainage	25%					\$100,000	
Street Reconstruction - Tolend / Watson Road: design replacement of open drainage	25%		\$625,000	\$625,000			
Street Reconstruction – Atlantic Ave: design & construct replacement of 2,200' of closed drainage	25%	\$50,000			\$450,000		
Street Reconstruction – Richardson Drive: design replacement of open drainage	25%					\$118,750	
Street Reconstruction - Roberts: design expansion of closed drainage	25%				\$16,250		
Street Reconstruction - Tanglewood Drive: design & construct replacement of 2,000' of closed drainage	25%						\$83,750
Street Reconstruction - Lisa Beth Dr & Circle: design & construct replacement of 2,600' of closed drainage	25%				\$162,500		
Street Reconstruction – Broadway: design & construct replacement of closed drainage	25%						\$75,000
Street Reconstruction - Oak / Ham / Ela Area: design & construct replacement of closed drainage	25%					\$125,000	
Street Reconstruction – Piscataqua / Rabbit Rd: design & construct replacement of open drainage	25%			\$50,000		\$375,000	
Street Reconstruction - Nelson St: design & construct replacement of 940' of closed drainage	25%			\$12,500		\$106,250	



Project	Drainage % of Project	Stormwater-Related Costs					
		2011	2012	2013	2014	2015	2016
Washington St Extension: design & construct replacement of 400' of closed drainage	25%						\$75,000
Street Reconstruction – Union St: design & construct replacement of 1,550' of closed drainage	25%						\$56,250
<b>TOTAL</b>		<b>\$50,000</b>	<b>\$625,000</b>	<b>\$687,500</b>	<b>\$628,750</b>	<b>\$825,000</b>	<b>\$302,500</b>

1. Design costs are shown in italics.
2. Construction costs associated with system expansions are budgeted under System Expansion and Improvements.
3. Specific drainage approaches have not yet been established. Determination of closed or open drainage was made based on existing area infrastructure for budgeting purposes.



- System Expansion and Improvements: There are some areas of the City which are not currently serviced or are underserved by the stormwater system. The City's CIP Budget includes several street reconstruction projects that will extend or improve stormwater service. The budget for the construction component of these projects is included in this line item. In future years, this line item may be expanded to include required stormwater treatment. Projects budgeted in this line item are summarized below.

**Table B-8 System Expansion and Improvement Items<sup>1,2</sup>**

Project	Drainage % of Project	Stormwater-Related Costs					
		2011	2012	2013	2014	2015	2016
Street Reconstruction - Pineview & Pearson: expansion of existing drainage, conversion from open to closed drainage	25%			\$100,000			
Street Reconstruction – Roberts: expansion of existing drainage system	25%					\$125,000	
Street Reconstruction - Applevale Area: expansion of existing closed drainage system	25%	\$250,000	\$250,000				
Street Reconstruction - Henry Law Final Phase: expansion of existing closed drainage system	25%					\$212,500	
<b>TOTAL</b>		<b>\$250,000</b>	<b>\$250,000</b>	<b>\$100,000</b>	<b>\$0</b>	<b>\$337,000</b>	<b>\$0</b>

In addition to maintaining the current level of service and implementing the planned projects identified above, the following line items have been included to reflect the increased costs associated with operating the system over the coming six-year period.

- Increased Cost of NPDES Permit Compliance: As described previously, the cost of complying with the revised MS4 permit will represent a significant increase over current compliance costs. This line item captures the anticipated incremental increase in permit compliance costs.
- Stormwater Utility Implementation and Administration: Should the City decide to pursue stormwater utility, costs associated with utility implementation and ongoing administration will be incurred. This line item includes \$100,000 for utility implementation and an estimated \$5,000 per year for ongoing program administration.



- Stormwater Needs Assessment Identification and Implementation: The City has not completed a stormwater management needs assessment, and does not maintain a prioritized list of stormwater action items. It is recommended that such a study be completed and adopted as the basis for future stormwater program implementation. This line item includes \$100,000 in FY 2011 for completion of the needs assessment. The line item also includes a \$50,000 per year budget placeholder for implementation of plan recommendations.
- Pipe Rehabilitation / Replacement: It is recommended that the City adopt an annual infrastructure replacement program. A general guideline for annual infrastructure replacement programs is to replace one percent of the system per year. This schedule provides for system replacement on a 100-year schedule. For the City's 65 miles of closed drainage, this translates to replacement of 0.65 miles of pipe and associated structures per year. At a cost of \$200 per linear foot, this would be expected to cost \$686,400 per year in system renewal costs. Several of the street reconstruction projects included in the FY 2011 – 2016 CIP Budget involve stormwater management and drainage components. Where a project budgeted in the CIP includes renewal or replacement of existing closed drainage, the target of 0.65 miles per year was reduced to reflect renewal / replacement already budgeted in the City's CIP and prevent double-counting. The following table summarizes planned pipe renewal projects budgeted in the Street Reconstruction Renewal / Replacement line item.

**Table B-9 Pipe Renewal Included in Expansion and Improvement Items<sup>1,2</sup>**

Project	Feet of Closed Drainage Renewed / Replaced					
	2011	2012	2013	2014	2015	2016
Street Reconstruction - Atlantic Ave				2,200		
Street Reconstruction - Tanglewood Drive						2,000
Street Reconstruction - Lisa Beth Dr & Circle				2,650		
Street Reconstruction - Nelson St					940	
Washington St Extension						400
Street Reconstruction - Union St						1,550
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,850</b>	<b>940</b>	<b>3,950</b>



- ▶ Berry Brook Watershed Improvements: As described previously, the City has completed a watershed assessment and management plan for the Berry Brook watershed. This line item includes funding to implement watershed management plan recommendations. Implementing the recommendations over a six year period would result in an annual cost of approximately \$260,000 per year.
- ▶ Willand Pond Improvements: This line item includes funding to implement recommendations of the Willand Pond Watershed Assessment and Alternatives Analysis. Implementation and operations and maintenance costs are budgeted as approximately \$56,000 in year one and \$68,000 per year for the following five years.

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Appendix C

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Public Outreach Plan





# Dover, NH Stormwater Utility Implementation

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## PUBLIC OUTREACH PLAN

October 2010

*Submitted by GHD  
and Regina Villa Associates, Inc.*

## Table of Contents

I.	Introduction and Purpose of the Plan	page C-3
II.	Public Outreach Program Goals and Objectives	page C-4
III.	Audiences and Campaign Theme and Messages	page C-4
IV.	Phases, Strategies and Tools	page C-6

## Introduction and Purpose of the Public Outreach Plan

### *Introduction*

The City of Dover, New Hampshire's, Community Services Department (CSD) is studying the feasibility of creating a stormwater utility. As the cost of complying with the U.S. Environmental Protection Agency's National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit grows, communities struggle with how to pay for them. In addition, because stormwater management is often viewed as a lower priority public service, many communities have had to defer maintenance to direct scarce financial resources to other services.

The CSD worked with the regional Natural Resources Outreach Coalition (NROC) to identify appropriate strategies for meeting stormwater management priorities. NROC recommended the City target two key areas: encouraging low impact development techniques for new and redevelopment projects and exploring the feasibility of a stormwater utility. Through its Planning Board, the City has implemented a number of zoning changes that encourage low impact development, and it is now evaluating the feasibility of a stormwater utility.

Many communities have created stormwater utilities that charge user fees to collect revenue to maintain the stormwater system. A user system of rates and charges spreads the cost of system maintenance, improvements and regulatory compliance equally among a number of property owner categories (e.g., single family residential, multifamily residential, nonresidential). Fees are generally calculated based on square footage of impervious surfaces on a property. Charging the City's Public Utilities Commission with addressing potential or perceived fee structure inequities could make the concept more acceptable to those who will be affected by it. A utility would provide a funding source that is not tied to the General Fund, establishing a stable, dedicated revenue stream that would allow CSD staff to plan for the long term.

### *Purpose of the Plan*

The Public Outreach Plan focuses on two phases – campaign development and implementation: (1) the theme, messages and designs for a logo and collateral materials are completed in the development phase; and (2) specific strategies for implementing an outreach program are identified in the implementation phase. The plan is flexible as there may not be enough time to implement an education campaign prior to the City Council's vote on creating a utility. It also may not be necessary if opposition is not expected. Once the utility is established, property owners will still need to understand why they are being asked to pay the user fee even after the measure has passed to avoid legal challenges and appeals. Property owners and managers are the focus of the outreach campaign, but other decision makers and opinion leaders should be included. If opposition to City Council action becomes more likely, CSD could reconsider this approach and spend more time on educating the public about the need for action in advance of a vote.

## Public Outreach Program Goals and Objectives

*Assumption: A thorough and comprehensive public outreach program is essential to gaining support for implementing a stormwater utility. Educating the public on the compelling need for a utility and its resulting benefits will result in more widespread acceptance of the concept and more support once the utility begins operating.*

The goals of the public outreach plan are to:

- Build public support for a stormwater utility by educating stakeholders, and
- Prepare property owners and managers for implementation by providing easy-to-understand information about fees and administration to demonstrate CSD accountability and reduce the risk of legal challenges or appeals once the program begins.

The objectives of the public outreach plan are to:

1. Identify audiences;
2. Develop a campaign theme and messages, tailored to each audience; and
3. Provide a menu of outreach activities that includes direct and indirect communication methods, traditional and new media.

The CSD has been consulting with the Ad-Hoc Stormwater Committee, which is comprised of residents, business owners and others who represent the interests that will be affected by forming a stormwater utility. The Committee has identified **protecting water quality** and **reducing flooding** as two priority concerns for the stormwater management program, believing that addressing these issues will enhance residents' quality of life. Complying with more stringent regulatory requirements and improving stewardship of the City's infrastructure system are two additional issues of concern.

This plan provides a menu of recommended outreach tools the CSD can implement. We have included recommendations for prioritizing the tools depending on budget, staffing and timeline.

## Audiences and Campaign Theme and Messages

### *Audiences*

Broad consensus and support for forming a stormwater utility will be more successful by establishing that property owners and managers (1) are educated on the need for action; (2) understand how action will be taken; and (3) have confidence that the CSD will be accountable and the fee structure fair. There are a number of stakeholder groups who need to be involved in the process:

- City staff
- Property owners
- Local elected officials
- Community opinion leaders
- Environmental, civic, homeowner and business organizations
- Realtors and property management companies

- News outlets (e.g., broadcasting on Local Channel 22, a city council broadcast, flyers, writeup in *Fosters*, communication to condominium associations)
- General public

There are important sub-groups of the property owner and manager category who may need to be targeted with specialized messages and assistance. These include:

- tax-exempt entities
- buildings with large paved areas
- fixed-income property owners
- developers
- residential and commercial property managers
- municipal property managers

Targeting these audiences has strategic purposes. Elected officials and staff make the policy and funding decisions that will be necessary to implement and maintain the utility. Opinion leaders and community organizations influence decision-makers and the public. Community organizations also influence their members and help reach a larger audience. Environmental organizations, such as the Cocheco Watershed Association, can be important allies because the program will support their goals of improving water quality and habitat. Civic organizations, such as the Friends of Willand Pond, can also be allies. The Chamber of Commerce’s Government Affairs Committee is another important group to coordinate with.

Property owners are less likely to object to a utility if they fully understand its need, benefits and implications. Property managers are included because their management practices may affect the volume of runoff and nutrients reaching the City’s system. Some members of the public may not be property owners; however, their behavior and habits as tenants, for example, may be part of the problem and solution.

### ***Campaign Theme and Messages***

A successful campaign theme will reinforce the importance of taking action to protect the City’s water resources. Campaign messages address a variety of concerns for specific stakeholders. Many people are most concerned about the economy and personal finances, while others are thinking beyond today to the future. The campaign has a sample message for each.

Message testing is an important element of developing a campaign. It tests the theme and variations before committing to print and other materials. We recommend testing the campaign messages with a *Messaging Group* prior to developing final campaign materials. The Messaging Group is discussed in more detail in the Strategies and Tools section.

The campaign theme and messages will help reinforce a call to action through education, group identify and reinforcement. We have included a suggested theme and messages below. The overall campaign theme is the overarching message. The messages for each phase are targeted to priority concerns (flooding and water quality) and audiences.

## ***Sample Theme – The Water Wise Campaign***

Two examples of overall themes are to be a **Stormwater Stopper** or to be **Water Wise**. The themes permit a number of variations, addressing the need to stop stormwater from entering the City’s system or being wise about property management choices to reduce water resource and other impacts, including cost – *Be a stormwater stopper and save, or Be water wise and save* – as well as sub-messages. Some of these are suggested below.

Each message is a call to action around specific areas of concern. The messages are meant to move the campaign to a personal level of individual responsibility while considering cost consciousness, environmental support and other local concerns.

### *Sample Messages*

- Be a Stormwater Stopper (or Water Wise) Today: Save our streets from flooding
- Be a Stormwater Stopper (or Water Wise): Save our lakes, streams and bays
- Be a Stormwater Stopper (or Water Wise) Today and Save (with the “S” in the form of a dollar sign)

There are many potential variations of the message. Campaign supporters can sign up for materials and get “I’m a Stormwater Stopper” or “I’m Water Wise” buttons. The promotional materials will outline “How to stop stormwater” or “How to be Water Wise.” “Stormwater Tips” or “Wise Water Tips” and other themes will be developed. There can be “Water Wise Tips on Rate Saving,” “How to be Water Wise with Your Lawn,” etc.

These sub-messages can be developed in more detail after the initial logo and materials are designed.

## **Phases, Strategies and Tools**

### **The Campaign**

The campaign builds the theme into a logo, messages and materials for the outreach program. The theme and messages are relevant and easy to remember and translate into visuals. The materials are visually appealing, have a consistent look and feel, and include the CSD utility webpage address and contact information.

### **Implementing the Campaign**

The implementation phase uses the campaign messages and materials to help property owners and other stakeholders understand the need and benefits of a utility, how it is structured and operates and who to contact for questions or concerns. It introduces them to program details, such as what the user fee bill will look like, how the utility will be administered and how to get help with questions or concerns.

## Strategies

In the 1990s, Dover implemented a recycling program – Pay-As-You-Throw. The program has been very successful, due in large part to the fact that the *connection* between individual action and the amount of household trash generated is quite obvious. For most people, it is not clear how their properties and individual actions contribute to stormwater issues such as pollution and flooding. The campaign materials will make this connection, so people understand the solutions are within their individual control (e.g., limiting the amount of impervious surface, picking up pet waste, reducing or eliminating the use of fertilizers).

The program seeks to leverage impact and resources by building on existing programs and developing strategic collaborations with other organizations. For instance, the effectiveness of the stormwater utility outreach program can be maximized by coordinating with and building upon existing NPDES MS4 and stormwater management plan activities, such as the Yellow Fish Road Program, which includes catch basin stenciling, bumper stickers, door hangers and press outreach. Other collateral materials increase campaign visibility, such as pins, refrigerator magnets and stickers for display in windows of homes and businesses and on student backpacks or notebooks.

The CSD could implement a *Partners in Education* campaign where it develops relationships with environmental and community organizations to create widespread support. A *Stormwater Day* could be designated each year to collaborate with science teachers in the middle and high schools. Working with schools educates students and brings the message home to parents. A *Speaker Bureau* could be developed so individuals learn about the issues and solutions from their peers. People like to support establishments that are “green” and respect their community’s quality of life. A *Stormwater Stopper or Water Wise Club* would be open to property owners who have implemented practices to reduce their property’s impacts on the City’s stormwater system. Collateral materials would identify Club members, and an annual award ceremony would recognize those who have made the most progress in implementing best practices – good stewards.

The outreach program will use direct communications including mailings and in-person conversations such as at community events or public meetings. Any utility-related mailings should be separate from City tax bills to avoid the perception that user fees are taxes. Appropriate mailings might include the CSD’s quarterly water bills. Indirect communications include a project website, e-blasts, press releases and opinion pieces. These are the traditional means of reaching stakeholders. Non-traditional methods include internet-based social media such as blogs, Facebook and Twitter, which can be developed further if the CSD decides to pursue them.

## Tools

The following sections describe recommended tools and activities, which are listed in order of priority beginning with #1 – the highest priority task. The outreach tools are designed to reach the broadest audience possible and maximize cost-effectiveness. If time, budget, and/or available staff are limited, we recommend implementing the higher priority activities first or re-evaluating and re-prioritizing the program.

## *#1: Print Materials*

### *Frequently Asked Questions (FAQ)*

An FAQ would include a description of the stormwater issue, the need for a utility, a list of planned projects and programs that would result from a stable, dependable revenue source, and the benefits of the utility. It should answer the most common questions about the utility such as how the fees are calculated, how funds are used and who should be contacted to appeal a fee or for questions. It could be produced and distributed to US Mail and email lists, including local media (Foster's Daily Democrat), posted on the website, and made available at community gathering spots such as City Hall, the Chamber of Commerce, senior centers and the library.

### *Flyer*

An easy to understand, graphically appealing flyer should succinctly summarize the main points about the issues, need and benefits. The flyer could be distributed in a mailing, but we do not recommend including it in tax bills to avoid the perception that the user fee is a tax. The flyer could also be reproduced in the local newspaper.

### *Collateral Materials*

Bumper stickers, pins, refrigerator magnets and stickers for display in windows of homes and businesses, and on student backpacks and notebooks could be produced using the message – "I'm a Stormwater Stopper" or "I'm Water Wise." The CSD could also offer rain barrels at a discounted price for collecting roof runoff to water gardens. The barrels could have the campaign logo and "I'm a Stormwater Stopper" or "I'm Water Wise" printed on them, or a sticker affixed to them.

## *#2: Internet Based Communications*

While an effective outreach program cannot ignore traditional information channels such as print materials and public meetings, the use of internet based outlets is widespread and growing. The CSD's website should have a section dedicated to the feasibility study and stormwater utility. The page should include background information on stormwater impacts, a description of the utility and its benefits, how it is administered, projects and programs implemented, and contact information. Links to other relevant information and materials should be included. If budget and staffing permit, social media such as a blog or Facebook page could be investigated.

## *#3: Press Relations*

The local media (Foster's, channel 22 and the City website) are an important news source for community members and influence public opinion. The CSD must ensure that editors and reporters are educated, just like the rest of the community. Media can be an ally in the process, especially if they understand the issues and need and are kept informed by CSD staff. Editorial board meetings are helpful to brief editorial writers. News releases provide new information as it becomes available. Opinion pieces and letters to the editor campaigns can be effective in getting the word out. In addition, video and radio Public Service Announcements and appearances on local cable television and radio shows can broaden the program's reach.

#### *#4: Customer Service*

The City will need to train staff to respond appropriately to questions and concerns from property owners, especially during the initial implementation phase. It may be most helpful to have one staff person who is the key contact for utility questions. The contact name and phone number should be displayed on all materials. The City should also utilize the Dover Utilities Commission to address potential or perceived fee inequities.

#### *#5: Public Meetings and Presentations*

*Public Information Meetings* should be scheduled at key milestones in the process, for instance, when the Feasibility Study is complete. The meeting should provide background on why the City embarked on the Study and what the results are, including an explanation of how the utility would be implemented, if adopted.

CSD staff should consider scheduling *Neighborhood Meetings similar* and work with local neighborhood groups, homeowner associations, real estate management companies, the Chamber of Commerce, senior centers, condominium associations and others to schedule targeted meetings or present at organizations' meetings. These meetings would be an opportunity for property owners to discuss questions and concerns with CSD staff in a small group setting. In addition, it is recommended that multiple sessions of *Dover Discussions*, or a similar forum, be dedicated to informing the public about the benefits and impacts of a new stormwater utility.

A *Speaker Bureau* should be developed and program spokespeople identified who will make presentations at business and civic group meetings and community events. The speakers should be drawn from groups such as the Chamber of Commerce, Parent Teacher Organization or a senior citizen group. It is important for the speakers to be peers of the audiences they are reaching out to, to increase the likelihood that the message is accepted. A half-day or one-day training would be conducted prior to launching the bureau to ensure the speakers' messages and materials are consistent.

#### *#6: Collaborations*

Collaborating with other organizations is a cost-effective way to maximize the reach of the program while keeping costs down. *UNH's stormwater program* is a valuable resource. A *Partners in Education* program where staff partner with environmental and other community organizations expands the program's reach. Campaign materials include the logos of participating organizations to show widespread support. A *Stormwater Day* reaches into the schools and educates students, while also taking the message home to parents. CSD staff can coordinate with the City School Department and provide middle school and high school science teachers with materials to work into a lesson plan for the day, or students are given a stormwater related assignment that might include a poster contest or video. The City library may also have space to devote to an exhibit.

People like to support establishments that are "green" and respect their community's quality of life. A *Stormwater Stopper Club* or *Water Wise Club* would be open to property owners who have implemented practices to reduce their property's impacts on the City's stormwater system. Criteria would be established for becoming a Club member (perhaps based on the percent square feet of

impervious surface removed, gallons of runoff removed by installing rain barrels or collection systems, pound reduction of fertilizer used, etc.). Collateral materials such as a sticker for a window would identify homes and businesses that have excelled in dealing with the issues. The CSD could collaborate with the Chamber of Commerce and community and environmental organizations to partner with club members to promote their leadership, and each year the CSD could hold an annual *Stormwater Stopper* or *Water Wise Award Ceremony* to recognize those individuals or businesses that have made the most progress to reduce their impacts during the preceding 12 months. Bumper stickers, pins, certificates, refrigerator magnets and stickers for display in home and business windows would use the “I’m a Stormwater Stopper” or “I’m Water Wise” message.

#### *#7: Distribution List*

We do not recommend distributing program information in tax bills due to the perception of some in the community that the stormwater utility fee is a tax. Instead a program specific database should be developed using the CSD water bill or Assessor’s lists to form the basis for a distribution database. The distribution list will include email addresses, so updates and project materials can be distributed more cost-effectively. Recipients would be encouraged to circulate materials further by emailing or posting links on websites. The distribution list can be supplemented by adding people who have expressed an interest in CSD’s NPDES MS4 or other stormwater management programs, meeting attendees, frequent voters identified in City Clerk records, and others who are active in the community or request to be added as a result of the outreach program.

#### *#8: Community Events*

Numerous community events are held each year, such as Coast Sweep and Apple Harvest, among others. An exhibit table or booth at the events would display information about stormwater and Feasibility Study and utility materials. A staff person would be available to discuss specific questions or concerns of participants.

### **Summary**

The goal of public outreach is to educate and involve the communities of interest to support the formation and use of a stormwater utility. This plan outlines two potential campaign themes and tools to test and implement the campaign. We have not focused on phasing the campaign since the steps are very similar in one or two phases. The outreach tools should be ready for roll-out soon after the utility proposal is approved.

## **Appendix K:**

# **Related Press**

- **Foster's Article #1: Dover Residents Blast Stormwater Utility Plan**
- **Foster's Article #2: Dover Councils Rejects Stormwater Utility Plan**
- **Foster's Q & A Announcement**

## **Dover residents blast stormwater utility plan**

By LAURENNE RAMSDEL  
lramsdel@fosters.com  
Wednesday, February 9, 2011

DOVER — City residents and business owners alike expressed extreme concern over the proposal calling for the creation of a stormwater utility at Councilor Jan Nedelka's final question and answer session Tuesday evening.

Most of the evening's heated words revolved around three areas of concern: The legitimacy of the regulations the proposal seeks to meet, the detrimental effect it would have on nonprofit organizations and the lack of information available on the matter.

Those who attended the question and answer session expressed concern the city was taking premature action by seriously considering the creation of a stormwater utility.

"Where's the document that mandates what we need to do?" asked Mary Hebbard. Many members of the audience responded to Hebbard's question before Nedelka had a chance, stating a document simply didn't exist, as there have been no formal mandates requiring the city to bump up its stormwater maintenance efforts.

Nedelka said nothing has been formally mandated regarding stricter stormwater regulations, but the EPA has expressed its intent to mandate such things for the upcoming stormwater permitting cycle. Thus, Nedelka said it is important for the city to be ready to comply with such mandates, as it would be costly not to do so.

More than a month ago, Nedelka presented the findings of the Ad-Hoc Stormwater Utility Feasibility Committee to city councilors. The committee, responsible for weighing the city's options for handling stricter EPA regulations pertaining to stormwater, concluded the most appropriate action to take would be the creation of a stormwater utility.

The utility fee would be included in monthly water and sewer bills and would work toward a goal of accumulating a total of \$1.2 million annually for the repair and maintenance of the city's current stormwater system. According to Nedelka, taxpayers currently foot a \$900,000 bill for stormwater needs. Nedelka said meeting the EPA's regulations, which call for more consistent cleaning of catch basins and the replacement of certain stormwater infrastructure, would require an additional \$250,000 to \$300,000.

"You can't not plan on this happening," said Nedelka of the expected regulations. "The mandate becomes effective the minute the EPA posts it. We have to be prepared."

Councilor William Garrison said he, too, felt the city may be acting prematurely to something that has yet to be officially regulated.

"I think it's important that we don't put the cart before the horse," said Garrison. "I'm not opposed to doing this when it's mandated, but I'm not sure it makes sense at this point in time."

Once those who attended the session moved on from the fact that a formal mandate requiring an increase in the city's stormwater efforts doesn't yet exist, the effect the utility would have on the city's nonprofit organizations was addressed.

As nonprofit organizations are free from the burden of paying taxes by state law, Nedelka stressed they would be subject to paying the proposed stormwater utility if it is approved as it is a fee and not a tax.

"You're trying to run them out of business," one woman shouted from the audience.

After denying the accusation, Nedelka noted that some of the city's nonprofits, such as Wentworth-Douglass Hospital, make up some of the city's largest impervious surface areas. As stormwater cannot be absorbed through impervious surfaces like parking lots and roofs, Nedelka said the nonprofits should not be excused from paying their fair share.

"This is just a method of taxing the nontaxable," said Edward Blier. "The city is just trying to go after their money."

Nedelka explained he didn't know the scope of the impact the utility would have on the nonprofits at this point in time, but there's no reason that they should be excluded from contributing to the \$1.2 million total that has been deemed necessary to fund appropriate stormwater treatment and maintenance.

Though many points were made throughout the two-hour session, held in Room 220 of the McConnell Center, it seemed to be a consistent theme that Nedelka's projected math seemed inconsistent for how residents and businesses would be affected financially if the utility was in fact implemented.

Rick Hebbard repeatedly called Nedelka's rates and fees "fuzzy math," while others noted there appeared to be a lot of gray area as to how this would affect residents and businesses financially. Though the ad-hoc committee worked to develop a flat rate fee based on an average residential property in the city, many said the rates were apt to inflate beyond Nedelka's projections.

One woman said she thought the City Council voting on this matter at its meeting tonight was premature. She said they haven't received enough information, and the information they have received is cluttered and consists of too much gray area.

Though a lengthy read, taking up well over 100 pages, Nedelka said the need for the utility could be demonstrated by viewing the committee's findings and proposed financial projections — online at the city's homepage under current reports.

Nedelka said that just because the public has taken interest in the stormwater utility proposal over the past few weeks doesn't mean the City Council hasn't had this in the back of their minds for quite some time.

"There's been little public interest up until now," said Nedelka. "The committee worked for quite some time, and in that time we didn't hear a lot of public feedback."

Slated for tonight's City Council meeting, beginning at 7 p.m. in City Hall's council chambers, a public hearing will be held regarding the stormwater utility proposal. Nedelka encouraged members of the public to attend tonight's meeting to voice their concerns further as the council works toward making a final decision on the matter.

For questions, contact Nedelka at 285-3873.

## **Dover councils rejects stormwater utility plan**

By LAURENNE RAMSDELL  
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**Thursday, February 10, 2011**

DOVER — One could tell a storm was brewing even before entering City Hall Wednesday evening, as signs were posted on the building's main entrance that read "NO UTILITY."

A strong showing of concerned residents took to the podium at the City Council's regularly scheduled meeting to urge the council not to make a decision on the proposed creation of a stormwater utility at this time.

Many urged the council not to take any action on something that has yet to be formally mandated, as it would ultimately be quite costly to residents, businesses and nonprofits of the Garrison City.

After hearing heated remarks from the public regarding the proposal, the council voted 7-2 to deny the resolution to create a stormwater utility, with the resolution's sponsors, Councilors Jan Nedelka and Dorothea Hooper, being the only members of the council in support of the utility plan.

At a meeting in January, Nedelka presented the findings of the Ad-Hoc Stormwater Utility Feasibility Committee that recommends the creation of a new water-sewer fee that would fund upgrades and maintenance to the city's current stormwater system in order to comply with expected federal Environmental Protection Agency regulations.

The city's taxpayers foot a \$900,000 bill annually to support the city's current stormwater system. In order to meet stricter regulations for stormwater maintenance, the committee proposed an additional \$250,000 to \$300,000 would be necessary. In order to gather those funds, the committee called for the creation of a utility fee that would provide a rate for a property based on its impervious surface.

Resident after resident, some waiting in the hall for their turn to speak as every seat in council chambers was filled prior to the meeting's beginning, took the stand to speak against the creation of the utility.

Doug DeDe, a former city councilor, set the tone for what most of the public's comments revolved around during the public hearing portion of the meeting. As the EPA has yet to formally mandate the city to take stormwater actions, DeDe said the utility should not be proposed for the upcoming fiscal year budget.

He suggested it be budgeted for fiscal year 2013, so that businesses and residents have time to financially prepare for it and the council will be able to make an appropriate decision based on a formal mandate.

Mike Bolduc, chairman of the board of directors for the Greater Dover Chamber of Commerce, spoke on behalf of the Chamber and the businesses it comprises. Bolduc asked the council to delay voting on the matter, saying it is clear there is no need for a conclusive decision now. He said a delay in the vote would allow businesses appropriate time to educate themselves on this impact and contact councilors about their findings.

Councilor Karen Weston said she, too, felt it premature to ask property owners to budget for something like this when so much is unclear.

"We don't know what the rules are going to be," said Weston. "What happens if we go down this path... and they change the rules?"

As budgeting deadlines are right around the corner, Weston said it would be unfair to ask the School Board to revise its budget, as they did not plan for a utility fee of this scale during their budgeting process.

Patti Kemen said the council would be making a drastic mistake if they were to make a decision Wednesday night, as the community as a whole is not educated enough on this matter to make any executive decisions that would ultimately affect the community financially.

"Don't make a business decision when you have only half the facts," said Kemen. "It would be an injustice to the citizens and their district if the council was to vote."

Mary Hebbard touched on Nedelka's earlier claim that the city could be fined up to \$50,000 a day by the EPA for noncompliance with the projected mandates.

"You have scared so many people by saying there would be a fine," said Hebbard. She stressed nothing has yet been mandated and the city can't violate something that doesn't exist.

The only individual who spoke for the stormwater utility was Gary Green, a member of the ad-hoc committee that put together the proposal that has been consistently under fire since it became public.

After he assured those in attendance that the committee kept an eye on making the fees fair and fundable, Green stressed the importance of the council acting sooner than later on the matter.

"The utility is needed now," said Green. "It will be a more efficient way of handling the mandate in the future."

Aside from urging the council to take no action on something that doesn't officially exist, many who spoke said the proposed utility is just a tax in disguise that would financially harm residents, businesses and nonprofits.

"I'm concerned that some members of this body, that we elect to set policy, seem oblivious of the economic environment in which we are living," said David Scott.

Councilor Robert Carrier said he was just as nervous as the public was about the financial effects this proposal would have on the residents and businesses of the city.

"I'm as nervous as all of you," said Carrier. "I'm a resident and a homeowner... I don't want any extra bills either."

Scott used the remainder of his time to speak to urge the council to stand up to the EPA and exercise its right to oppose the creation of a fee that would place an unfair burden on current and future city taxpayers.

Councilor Catherine Cheney addressed Scott's request that councilors oppose the EPA's regulations and use their voice to the best of their ability, saying that everyone she has spoken with about the proposal at a higher governmental level is against the creation of a stormwater utility as well.

David Martin called the proposal a double taxation, as the public already pays a sewer and water tax. Martin said the stormwater utility will punish residents, businesses and nonprofits for having roofs and driveways. Though nonprofit organizations are free from the burden of paying taxes by state law, they would, however, be subject to paying the proposed stormwater utility as it is a fee and not a tax.

At his final question and answer session for the stormwater utility proposal on Tuesday evening, Nedelka noted that some of the city's nonprofits, such as the hospital and churches, make up some of the largest impervious surface areas in the city. As stormwater cannot be absorbed through impervious surfaces like the large parking lots and roofs of such nonprofit buildings, Nedelka said they should not be excused from paying their fair share.

Members of the public were not the only ones to express concern over the possible creation of a stormwater utility, as many councilors noted their concerns with the proposal as well.

Councilor Gina Cruikshank said she would like to see more discussion on this matter happen at a later date, as there is still some time before the EPA formally mandates the projected regulations regarding stormwater.

Councilor William Garrison agreed with Cruikshank, saying the council may be acting prematurely if it were to approve the resolution Wednesday evening as he feels there are many gray areas in the current proposal.

"I think there's a lot of work to be done," said Garrison. "I truly believe this is putting the cart before the horse."

Mayor Scott Myers said he would not support the proposal at this time because he was concerned with the perceived effects this utility would have on the community, both currently and in the future. He did, however, urge the council to make a vote and not table the matter for another discussion.

After both public and council discussion on the stormwater utility proposal took up the majority of the meeting's first three hours in session, the council voted to reject the proposal.

## Dover to hold Q&A sessions on stormwater utility proposal

Department Posting:Community Services

posted on:01/21/2011



Two public question and answer sessions on the proposed creation of a stormwater utility in Dover will be held later this month and in February. Both sessions will be led by City Councilor Jan Nedelka, who chaired the Ad-hoc Stormwater Utility Feasibility Study Committee. The committee recently presented its recommendations to the City Council.

The first session will be held on Saturday, Jan. 29, 2011, at 9 a.m., at the McConnell Center cafeteria. The second session will be held on Tuesday, Feb. 1, at 7 p.m., at the McConnell Center cafeteria.

Both sessions will be taped and rebroadcast on Channel 22 and will be available online for viewing.

The City Council last year formed the Ad-hoc Stormwater Utility Feasibility Study Committee and charged the group with assessing the City's options for meeting new, more stringent Environmental Protection Agency restrictions on the discharge of stormwater and determining whether the creation of a stormwater utility is necessary.

To cover the costs of maintaining the stormwater system, implementing necessary upgrades, complying with additional mandatory permitting requirements and administering the stormwater program, the committee is recommending the City Council create a stormwater utility that will generate \$1.2 million in fiscal year 2012. If the utility is created, the average residential user would pay between \$7 and \$8 per month. Over a period of six years, the fees would be adjusted to generate \$2 million annually, which is the estimated amount needed to fund a 100-year replacement plan for the existing stormwater system, or one percent of the system per year.

If a stormwater utility is created, the operation and maintenance of the stormwater system will no longer be derived from the general fund, which will result in fewer tax dollars needed for stormwater activity. As with water and sewer bills, tax-exempt properties would be affected by the fee.

The committee's additional recommendations include billing single-family residences at a flat rate, allowing for a credit system and not charging for undeveloped or vacant property; including stormwater charges with water and sewer bills; and phasing in the stormwater charge over a six-year period.

The committee is also recommending several steps to implement the plan, including the preparation and adoption of a utility formation ordinance; assembling a committee to advise on implementation of the plan; launching a public outreach campaign; completing additional mapping of impervious land within the City; developing formal rate policies; refining the financial plan; developing a credit manual; drafting billing procedures; and adopting formal rules for the utility.

The committee's final report is available online at [http://www.ci.dover.nh.us/reports/Stormwater Utility FSC Final Report.pdf](http://www.ci.dover.nh.us/reports/Stormwater%20Utility%20FSC%20Final%20Report.pdf).

Councilor Nedelka's presentation to the City Council can be seen on Channel 22 and online at <http://www.vimeo.com/19041915>.

For more information, contact City Councilor Jan Nedelka at [j.nedelka@dover.nh.gov](mailto:j.nedelka@dover.nh.gov) or 603-285-3873.