Portsmouth NH
Stormwater Utility Feasibility Study
Final Report

A Final Report to
The New Hampshire Department of Environmental Services

Submitted by

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680 Peverly Hill Road
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For New Hampshire Department of Environmental Services’
2009 Stormwater Utility Feasibility Study Grant

December, 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.
Portsmouth 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: Portsmouth staff participants include:
   David Allen- Public Works Deputy Director
   Judie Belanger – Finance Director
   Peter Britz- Environmental Planner
   Gail Cunningham – Controller
   James McCarty – GIS Coordinator
   Peter Rice – Water & Sewer Engineer
   Silke Psula – Solid Waste Coordinator
   Jared Sheehan – Engineer Technician
   Robert Sullivan – City Attorney
   Rick Taintor – Planning Director

The contractor for this project was AMEC Earth & Environmental and the Project Director was Andy Reese, AMEC with support from: Marlou Church Gregory – Project Manager and Technical Peer Review, Kristie Rabasca – Stormwater Program Analysis and Planning, Rich Niles – Stormwater Programs, Keith Reading – Data Manager, John Styron – Data Compilation, Jason Wise – Data Compilation. Barbara McMillan, NHDES provided outreach assistance and DES grant management.

1-b) Final study budget breakdown and match sources:

The final price of the contract was $62,531. Of that $27,500 will be covered by the grant. The balance of the project cost, $35,031 was covered by the City Funding.

1-c) Final project outcome:

The City received a report that was developed with significant staff input. A public presentation regarding stormwater was made on December 14, 2011 that included an overview of the information that made up the study. The presentation was made by both staff members of the project team as well as the consultant. The study provided valuable work and information that could be used if and when the City were to decide to move forward with a stormwater utility.

There were several factors that have prevented the City staff from moving forward with a formal proposal to enact a utility at this time. First was the experience in Dover. The Dover proposal was met with loud opposition. Having seen what occurred when a utility was proposed in Dover, it was thought that the opportunity for success would be better in the future. There were several reasons that a formal proposal to go forward with a stormwater utility has not occurred yet. From the Dover experience, it was felt that it would be best to wait for the next MS4 permit to be issued. Secondly, based on the current economic climate and the fact that the City had to raise its sewer rate 50% this year with additional increases in the near future, it was felt that educating the City Council and the public would be a key element in a successful program.

2. Lessons Learned

2-a) Analysis of the Scope of Work:

   Task 1. Request for Qualifications:
There was some extra effort to insure that the scope of work that was in the original RFP met the grant requirements. To that end, the final project contract was increased over the original proposal amount to meet the grant requirements. The RFP process was in line with the City’s standard procurement procedures and therefore fairly routine. The City received proposals from 6 firms and shortlisted to three for interviews. The three shortlisted firms were AMEC Earth and Environmental, Black & Veatch, and Municipal & Financial Services with the contract ultimately awarded to AMEC.

- **Task 2. Stormwater Utility Development Workshops:** The first workshop, May 19, 2010 facilitated by Andy Reece, AMEC was held with Portsmouth DPW staff listed under 1-a).

  **Workshop #1** There were two conference calls and meetings with individuals before this workshop to set up the workshop, go over the scope of services, and to determine the existing data, and billing system. The attached Technical Memorandum is a summary of the information discussed and the meeting outcome.

  **Stormwater 101 Public Meeting:** Following discussions with DES about the second workshop, Portsmouth requested to host one public informational workshop rather than a separate council presentation and a public presentation as outlined in the grant agreement. The intent was to provide a more general introduction to the need for stormwater funding as an overview of stormwater, the City’s stormwater program, and funding needs and possible funding methods. The city also followed Dover’s recommendation not to present any forgone conclusions about a utility as a solution to funding the City’s stormwater program and to continue to solicit input and buy-in from stakeholders on the need to identify a funding mechanism. All of the stakeholders and City councilors etc. were invited to the public meeting. Dave Allen, Portsmouth DPW Deputy Director and Peter Britz, City Environmental Planner, presented to over 30 attendees Portsmouth stormwater program information and current costs at $290,000. They also outlined the current MS4 permit requirements, what is being done now, and possible future needs. The draft 2008 MS4 permit requirements were referenced as “new permit costs totaling $500,000 with specifics to be determined. Andy Reese, AMEC presented an overview of possible stormwater program funding scenarios including pros and cons. Options included taxes, exactions, assessments, or a service charge. Some questions/comments included:

  - “Liked the idea but had concerns about paying twice for services that a condo association may already be addressing with stormwater control maintenance.”
  - “Has there been calculations of how much stormwater is impacted by raingardens that could help connect the cost savings?”
  - “Do we know the origin of Nitrogen in the Great Bay impairment? If you reduce the amount of Nitrogen do you reduce the amount of O & M costs?”
  - “Will there be allowance for incentives to not put more chemicals into the system?”
  - “Is there any cost analysis for property owners? How would you educate people on stormwater?”
  - “There are LI D demonstration projects on Coakley Road and in the city.”
  - “Could demonstrations be done in a more public place like Prescott Park?”
  - “Are there some economies of scale to go regional with stormwater treatment.

Follow-up press in the Portsmouth Herald and NH Public Radio were informative and not controversial. See appendices.
- **Task 3. Stormwater Program Analysis and Planning:** A necessary task. In addition to providing an assessment of the program for planning and outreach to address funding, it could provide value for when the permit comes out to have a foundation and to look at costs closer. The city learned that it was feasible to do an enterprise fund. It was eye opening to see how much they are currently spending and it helps with the budgeting process. The line item currently in the budget and the analysis drilled down on staff time and how much is spent specifically on stormwater is helpful. The information could be used to change some time allocations especially if the city has to have someone full time on the permit implementation. The city may use it to dedicate staff time differently and more efficiently and the data could be put in a spreadsheet to be used to do some prioritization.

- **Task 4. Compelling Case:** This step was completed in workshop #1 with staff. This process was not done externally with city residents and businesses. It helped a bit with the presentation at the public meeting to lay the framework with what is stormwater and the additional work that needs to be done.

- **Task 5. Education and Outreach Strategies:** The city added some efforts during this process. High School, ecolab, little Harbor 5th grade water stewards, storm drain stenciling, High School Biology class presentation. In the middle of the process, public support was identified as a concern so the city met with their communications staff and DES outreach staff to identify a few methods and messages to get some support from residents, city councilors, and businesses. The city provided several press releases to make stormwater pertinent to the resident and get the public up to speed and supportive of the effort.

- **Task 6. Data Compilation for Rate Methodology, Task 7. Rate Structure Analysis, and Task 8. Billing methodology:** These were necessary tasks to include in the feasibility study. The work came up with a template that will still be pertinent 5 to 10 years from now. The methodology made a lot of sense. The implementers (a large group) were involved in working on the methodology. Everyone had a different perspective on the rate. Until they really know what it is (new permit) they couldn’t agree on the rate.

- **Task 9. Recommendations:** The final study report produced by AMEC for this project provides excellent accounting of the City’s stormwater system and identified some real and unresolved stormwater related infrastructure issues. It highlights potential problems and future costs if measures are not taken to more directly provide accounting and funds for the City’s stormwater system. The AMEC study recommends staff present information from the study to the City Council with a request to continue the study with additional citizen input including soliciting feedback on various options with follow-up. Staff believes the AMEC information provides a very useful framework and excellent guidelines for proceeding including a process for calculating the cost of a program. The City is not prepared to decide whether it is prudent to proceed with a stormwater utility without the new Phase II permit requirements in hand.

- **Task 10. Final Feasibility Study Report:** The City is very satisfied with the work product provided by AMEC. While the City is not currently prepared to move ahead with a stormwater utility staff believes that all of the issues have been sufficiently covered and explored to the extent necessary for a complete understanding of what it would mean for City staff if a stormwater utility were put in place. The consultant provided an excellent framework for how a stormwater utility would operate in the City and what issues to focus on if the City were to move ahead with a stormwater utility. In fact, City staff believes that
the report put together by AMEC provides a coherent and logical starting point which the City would utilize if it were decided to put a stormwater utility in place.

- **Task 11. Presentation and Final Recommendations:** See Task 2 for details.

- **Task 12. Final Grant Report:** Final Grant Report: As stated above City staff is very satisfied with the work product provided by AMEC. In addition, the City had hoped the timing of the new Phase Two permit would allow this study to take some of the cost accounting a bit further in terms of what requirements the City will need to comply with to meet the permit requirements. However, we believe that the City is well positioned to make a decision in the future when new information is available on what additional measures the City will be required to perform. In the meantime, the City plans to continue to work to reduce non-point source pollutants and study the efficacy of new technologies. Hopefully, by leading by example private developments will also understand the importance of more efficient stormwater pollutant removal technology in site design.

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

Portsmouth Herald was in on the waste water issues and the reporter was on board with the stormwater and educated on stormwater issues. The Stormwater 101 presentation was a good way to get information out there for the first time to get people up to speed. Presenting the stormwater needs as being somewhat up in the air until the new permit comes out seemed to help avoid any concerns about requests for money without knowing what the exact needs are until the MS4 permit is issued. Presenting the funding mechanism as still an unknown created more of an inclusive atmosphere during the public meeting. Residents spoke mostly in favor of the fee mechanism with some concerns.

2-c) **Description of Setbacks Experienced.**

Dover’s negative publicity around their work towards a stormwater utility was a big setback. The delay in the permit release created uncertainty in stormwater program needs and costs and made it difficult to define what needs to be done. The political climate is not supportive at this time – national, state, and local – anti-government, anti-spending. The local economy and city budget were an issue. The recent publicity around large increases in fees for the waste water treatment plant increased concerns about additional fees. The public confuse the three stormwater waste water and drinking water. The public doesn’t think stormwater is an issue unless it is in there backyard or they can see dirty water.

2-d) **What Would You Do Differently?**

Try not get so far in front of public understanding of the topic. The public still doesn’t understand stormwater. The consultant was trying to have the public come to the same conclusion and the city needed to have staff come up with the recommendations to give to the public. We are meeting the permit now and they are not going to say here is more money. Waiting until there are enough explicit mandates to tell the public. Couldn’t say let’s move forward without the permit.

3. **Next Steps:**

The Stormwater 101 presentation is going to be re-broadcasted on Portsmouth channel 22 and put on the website. Stormwater is on the agenda for the Council’s goal setting meeting. When
revisiting the water and sewer rate they will consider adding stormwater into the mix. Look at properties to install stormwater controls and storage on (Leary Field) etc. Install interpretive signs on the tree box filters on State Street and at the high school raingardens. Install very visible raingarden and interpretive signage at the temple. Provide some sort of outreach on what can residents do to help with stormwater. The City plans to do more sampling to see if LID that they have now is working. The City would consider support for a voluntary fertilizer ban or provide information to increase awareness for those interested in a fertilizer ban. The City would also consider incorporating CSO costs into a fee rate structure but again only if user fee agreed upon and after a new permit issuance. The City will consider applying for an Urban Waters Grant to do social science research and implementation for an effective outreach campaign towards restoring waters.

4. Appendices: Material required in grant agreement deliverables

Appendix A: Grant Application
Appendix B: Consultant RFP
Appendix C: Consultant BID Results
Appendix D: Professional Services Agreement: AMEC
Appendix E: Pre-Workshop meetings minutes/materials
Appendix F: Workshop #1 Materials
Appendix G: Workshop #1 DES Summary
Appendix H: Stormwater 101 Public Meeting materials
Appendix I: Stormwater Webpage

http://www.cityofportsmouth.com/publicworks/stormwater.htm
Stormwater Utility Workshop Webpage
http://www.cityofportsmouth.com/publicworks/stormwater.htm

Appendix J: Final Feasibility Study – Includes:

- Research and Recommendations

Appendix K: Related outreach documents, presentations, and press

- Dec, 2010 *What’s in a Name?* Portsmouth Herald
- Jan, 2011 *Rain Tax Editorial*, Portsmouth Herald
- Jan, 2011 Major City Work Projects Closed Down for Winter, City press release
Appendix A:

Grant Application
Subject: Municipal Stormwater Utility Feasibility Studies.

Dear Mr. Marcoux,

The City of Portsmouth is pleased to present the Department of Environmental Services (DES) with this Grant Application to conduct a feasibility study to determine whether a stormwater utility is an appropriate funding approach for the City of Portsmouth.

The timing of this grant is ideal. The City has built an extensive data base, mapping existing infrastructure and properties; we recently completed a Stormwater Master Plan. We are now in a position for the next step - to implement a comprehensive stormwater program. The missing component is a proper and sufficient funding mechanism. This feasibility study will assist in finding the most appropriate solution.

The City is faced with several compelling factors magnifying the need for funding to increase stormwater management activities. These factors include having some of the oldest stormwater infrastructure in the state; having numerous surrounding water bodies that are listed as impaired due to both local and regional upstream pollution sources; and having some of the highest development density in the state.

The feasibility study will cover governance, public outreach, and identify program priorities - problems and needs, funding development, and database management issues. The study would evaluate the different types of stormwater funding mechanisms, ranging from annual taxes to user fees, types of user fees as well as assess the implementation costs associated with a stormwater utility.

Since a stormwater utility is still a fairly new concept and not always fully understood, the study would also look to educate community decision makers, municipal employees and its residents on the benefits and limitations of using a stormwater utility to fund stormwater management needs. Ultimately, the feasibility study will 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.

Should you have any questions, please do not hesitate to contact Dave Allen, Public Works Deputy Director at (603) 766-1421 or me at (603) 766-1454. Thank you for considering this grant.

Sincerely,

Silke Psula
Solid Waste Coordinator
2009 Municipal Stormwater Utility Feasibility Study

Submitted to:
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New Hampshire Dept of Environmental Services
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Concord, New Hampshire 03301

Submitted by:
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Portsmouth, NH 03801

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Fax: (603) 766-1447
Email: spsula@cityofportsmouth.com

Contact Person: Silke Psula

Date: March 10, 2009
1. **Background information** – The following section provides a description of the City of Portsmouth and the current stormwater management program.

The City of Portsmouth, located on the Piscataqua River, has a population of approximately 21,000 and consists of approximately 17 square miles. Portsmouth 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 Council, by charter, must adopt a budget by June 30 of each year. The Portsmouth Mayor and City Council are aided in governing the City by various volunteer advisory boards and commissions, for example the Fee Schedule Study Committee was established to create a more efficient system for the City to adopt and adjust municipal fees annually.

Under the City Manager’s direction, are the Finance Department and the Public Works 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 Public Works Department consists of ten Divisions. Of the ten Divisions the Highway and the Sewer Divisions implement the stormwater management program. The Highway Division’s primary responsibility is maintaining all City streets, including cleaning and plowing 136 miles of streets - and 49 miles of sidewalks. It also maintains the City’s Recycling Center, vehicle and equipment fleet, performs snow removal, and provides daily sweeping and litter control and disposal in the central business district.

The Sewer Division maintains and installs sewer mains and performs catch-basin cleaning in Portsmouth and at the Pease Tradeport. The Sewer Division also operates two Wastewater Treatment Plants: 1) the Pease Treatment Plant; and 2) the Pierce Island Treatment Plant and maintains over 100 miles of combined and sanitary sewers. Additionally, the Sewer Division operates 21 pump stations.

Portsmouth’s stormwater infrastructure consists of approximately 323,000 lineal feet of pipe, 4,700 catch basins or manhole structures and 450 outfalls. In FY ’07 the City prepared a Stormwater Master Plan to facilitate compliance with the USEPA NPDES Stormwater Phase II regulations. This Master Plan helped prioritize the City’s efforts, identified areas for improvement and projected necessary funds for operating and maintaining the stormwater infrastructure.

The City is regulated under two distinct components of the Stormwater Phase II regulations:

1) The City operates three facilities that are subject to the NPDES Stormwater Multi-Sector General Permit (MSCP) for Industrial Facilities (Peirce Island Wastewater
Treatment Plant, Pease Tradport Wastewater Treatment Plant and the City’s Recycling Center).

2) The City’s storm drain system discharges are subject to the NDPDES Stormwater Phase II Municipal Separate Storm Sewer System (MS4) General Permit.

Compliance with these two components requires the City of Portsmouth conduct additional operation and maintenance activities and make additional capital expenditures. Currently the stormwater program is funded through the General Fund and managed the Highway and Sewer Divisions.

2. Compelling Case – The following section provides an explanation of why Portsmouth would greatly benefit from a stormwater utility feasibility study.

Environmental Concerns: The New Hampshire Estuaries, Impervious Surfaces and Water Resources map of Portsmouth, produced in 2004, graphically details that a total of 27% of Portsmouth is considered impervious. Previous research suggests that land areas with over 10% impervious surfaces will result in water quality impairment.

In addition, Little Harbor has an established TMDL and all other water bodies surrounding Portsmouth are listed as impaired. TMDLs for the 303(d) listed water bodies are scheduled to be established within the next 5 – 10 years. The States 303(d) list shows all the water body assessment units that receive stormwater from Portsmouth are impaired for bacterial contaminants and other pollutants.

The City’s infrastructure is some of the oldest in the state. Over the past years the City has been struggling with and working aggressively to repair and upgrade old, failing infrastructure. Since 1997 the City has invested $20 million to improve its sanitary and stormwater system. The City has separated 24,000 lineal feet of combined sewer and successfully eliminated one Combined Sewer Overflow (CSO).

In FY ‘07 the Sewer Division, in response to the 2006 TMDL study for Little Harbor, completed an extension of the Municipal Sewer System to the Pleasant Point area.

Despite the investments and due to both local and regional upstream pollution sources, the local waterbodies do not meet water quality standards and the City continues to have flooding and sewer back-ups. Portsmouth has some of the highest development density in the state and is a low lying coastal community with high tides. Attached, as part of this application, is a GIS map of the recurring flooded areas. These continued flooding and sewer back-ups contribute to water quality impairment and in general environmental concerns; they have resulted in costly property damage and risk to human health.

Lawsuits: In 2004, the Conservation Law Foundation (CLF), an environmental activist group dissatisfied with the EPA’s implementation of the stormwater program under the Clean Water Act, challenged the EPA and the City of Portsmouth. CLF’s letter
specifically cited the City of Portsmouth as an example of their perceived inadequacies to satisfy statutory and regulatory General Permit requirements. Much effort was focused on remedying the issues brought up by the CLF.

**Regulatory Drive:** EPA is pushing more stringent requirements and programs. The draft MS4 2008 permit as proposed would impose an extra $2.1 million [6-7% budget increase] on the City through increased operational requirements, water quality evaluations, and administrative record keeping and reporting that could require forming entirely new municipal programs and departmental divisions.

Regardless of how the 2008 MS4 Permit is issued, the fact remains, regulatory requirements, demands and services have increased significantly; however, not at an equal proportion with proper funding and adequate resources. As previously noted, the City has been struggling with and is working aggressively to repair and upgrade old, failing infrastructure. The regulatory challenges will only increase.

**Operations:** In the last 10 years (+/-), the City has focused it efforts on inventorying and assessing the status of its stormwater and sewer system. In FY07, the City completed a Stormwater Master Plan. The Stormwater Master Plan process found that operation and maintenance of the storm drain system is not achieving the level of service the City requires. The Stormwater Master Plan describes additional components that are needed in the long term Operation and Maintenance program. The Plan listed over $3 million in Capital needs; and $2.9 million in Operational and Maintenance costs over the next 15 years. If the draft MS4 2008 Permit is adopted as currently written an additional $2.1 million will be required.

A subsection of the Stormwater Master Plan describes various approaches to fund the Stormwater Management Program. The subsection details how the City traditionally paid for its stormwater infrastructure, proposes and assesses a suite of funding opportunities to assist the City in securing financial support for the expenditures identified in the Stormwater Master Plan.

Traditionally, the City pays for its stormwater infrastructure operation & maintenance and capital improvement projects through bonds and the general tax fund. The City has past successes using single-purpose bonds as a funding mechanism for major infrastructure projects. The method is useful for the initial capital improvement, but unfortunately cannot be applied to the long-term maintenance issues identified in the Stormwater Master Plan. Further, bonding incurs additional costs for interest on the debt, and imposes a long-term commitment of funds to debt service that reduces flexibility in the future.

In 2008, the City entered into an Environmental Appeals Resolution with the EPA and CLF. One of the alternatives that was highly ranked as meeting certain goals and criteria, i.e. effectiveness, overall net increase, projected benefits, and practicable was evaluating the feasibility of a stormwater utility. It has become apparent a stormwater utility could be a real benefit to the City.
3. Program Priorities – The stormwater utility feasibility study will identify how the City can achieve its stormwater program priorities. Those program priorities are outlined as follows:

Correcting/Resolving flooding issues/areas: Continued flooding and sewer back-ups as noted in the attached GIS map, contribute to environmental concerns, water quality impairment, risk to human health and costly property damage. Clearly correcting this needs to be a priority. Proper funding will allow for the adequate operations and maintenance of existing infrastructure to minimize flooding. The City will include this as a priority in the feasibility study.

Regulatory Compliance: The City submitted comments to the EPA noting concerns with regard to some of the requirements as proposed in the draft 2008 MS4 Permit. However, it was done in the spirit of partnership between regulators and the regulated community working toward achieving the common goal of the Clean Water Act and its proper and effective implementation. The City of Portsmouth has a long standing commitment to the environment. In 2007, the City adopted the Eco-Municipality, Designation Resolution, which means we aspire to develop an ecologically and socially healthy community for the long term; designing and building LEED certified buildings; in the City’s Wastewater Treatment Master Plan, we committed to advance treatment for nutrient removal as part of our future upgrades. In short, we understand the importance of the environment and programs that protect and/or improve our vital, natural resources.

Consolidating Personnel/Dept.: A stormwater utility, much like our current water and sewer utility, would generate funding that is adequate, stable, equitable and dedicated solely to the stormwater function; develop programs that are comprehensive, cohesive and consistent year to year; and consolidate and coordinate responsibilities that were previously dispersed among several City departments and divisions.

Educational component: Personnel intimately involved with the daily operations of water, wastewater and stormwater have recognized the City needs to develop a stormwater utility. However policy makers and the general public are not intimately aware of this need. Current studies show that the majority of the public does not understand how stormwater can become polluted and how it can contribute to water quality issues. Most of the public still believes that catchbasins in their roads transport stormwater to a treatment facility prior to discharge.

Educational out-reach would focus on two critical components:

1. Educating the general public about adverse impacts of stormwater pollution and how it might affect local water resources. The out-reach program would be broader than simply advocating a program. It would be informative, giving the people the facts so that they can understand the premise behind a stormwater utility and act and/or choose to control their stormwater utility, i.e. reducing impervious surfaces on their property.
2. Educating City policy makers and administration. Policy makers are becoming increasingly more aware of stormwater infrastructural needs and the challenges to meet new regulatory requirements. However, in today’s political and economic environment any increase in taxes or an additional utility needs to be more than justified but the requirements and environmental benefits need to be fully understood in order for policy makers to embrace passing a utility fee.

Further, there are a myriad of ways a stormwater utility could be implemented. The stormwater utility feasibility study will include an examination of the type of fee system to implement, such as setting a flat fee for every property owner or possibly establishing fees based on a property’s total area of impervious surfaces.

A utility fee would have an impact of City administration too. Presently many of the stormwater management programs are dispersed among several City departments and divisions. There would be a need for consolidation and coordination of responsibilities.

Sustainability: Sustainability is a verb and one definition of the verb is, ‘to endure without giving way or yielding’. The City adopted the Eco-Municipality, Designation Resolution in 2007, which means we aspire to develop an ecologically and socially healthy community for the long term - in other words to be a sustainable community. The definition is appropriate in that the City desires to be a community, complete with needful and desirable services but not giving way or yielding to compromising the quality and richness of the environment. With the emergence of sustainability, water, wastewater and stormwater management is taking a new direction. The City’s Master Plan identified that the water and sewer policies and infrastructure are to make use of best practices in environmental protection and provide incentives for conservation. The stormwater utility feasibility study will incorporate this important concept as a priority and selling point throughout the stormwater utility feasibility study.

4. Program Cost and Revenue

It is expected, as part of the feasibility study, that an in depth analysis will be conducted to determine how much revenue a utility would raise based on potentially acceptable rates and rough cost estimates of a desired stormwater management program. The process will constantly be balancing between the current program and the desired program; the actual costs of the program, and the revenue needed.

Following is a portion of the analysis from the City’s Stormwater Master Plan. The calculations of how much revenue a utility would need to raise would include these projected capital and O&M costs. This is not the final analysis, rather the foundation to what the potential program will need to address.
### Table 1
Projected Cost of Capital Recommendations
Portsmouth Stormwater Master Plan

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Immediate ($)</th>
<th>5 Years ($)</th>
<th>10 Years ($)</th>
<th>15 Years ($)</th>
</tr>
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<tbody>
<tr>
<td><strong>1. Mapping Related Expenditures</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>a. Complete Outfall Inspections</td>
<td>$13,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Complete Storm Drain System Map – Field checks</td>
<td>$45,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Complete Storm Drain System Map – Rim survey</td>
<td>$60,000</td>
<td></td>
<td></td>
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<tr>
<td><strong>2. Purchase new Vacuum Truck</strong></td>
<td></td>
<td></td>
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<tr>
<td>(Catch Basin Cleaning)</td>
<td>$250,000</td>
<td></td>
<td></td>
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<tr>
<td><strong>3. Planning Budgets for Capital Projects</strong></td>
<td></td>
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<tr>
<td>Area A South Market (Cutts Street Area)</td>
<td>$1,000,000</td>
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<td></td>
<td></td>
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<tr>
<td>Area B Hoover/Coolidge Area</td>
<td>$500,000</td>
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<td>Area C Nathaniel Drive Area</td>
<td>$500,000</td>
<td></td>
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<tr>
<td><strong>4. Budget to Replace 2% of Storm Drain System each year (10% over 5 years)</strong></td>
<td></td>
<td></td>
<td>$2,500,000</td>
<td>$2,500,000</td>
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<tr>
<td><strong>Total: (2006 Dollars)</strong></td>
<td>$368,000</td>
<td>$2,000,000</td>
<td>$2,500,000</td>
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<tr>
<td><strong>Total: (Assuming Inflation at 4%)</strong></td>
<td>$368,000</td>
<td>$2,318,600</td>
<td>$3,359,750</td>
<td>$3,895,000</td>
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</table>

Notes: Cost shown are total costs for the 5-year periods, not annual costs.

### Table 2
Projected Cost of Immediate Recommendations Operation and Maintenance Program

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Staff Time (hours)</th>
<th>Expenses ($)</th>
<th>Vac Truck (hours)</th>
<th>Televise Truck (hours)</th>
<th>Projected Budget ($)</th>
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</thead>
<tbody>
<tr>
<td><strong>Task 3 Recommendations based on Infrastructure Observations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clean all pipes associated with 43 outfalls identified as plugged, ¾ full, or ½ full of sediment.</td>
<td>350</td>
<td>$7,500</td>
<td>175</td>
<td>0</td>
<td>$31,475</td>
</tr>
<tr>
<td>Televise, 5,750 lineal feet of pipe where 23 outfalls observed to be plugged or ¾ full of sediment (after cleaning).</td>
<td>140</td>
<td>$0</td>
<td>0</td>
<td>70</td>
<td>$10,290</td>
</tr>
<tr>
<td>Clean 14 catch basins and their associated piping where sediment condition observed to be “critical” or “full”</td>
<td>120</td>
<td>$2,500</td>
<td>50</td>
<td>0</td>
<td>$10,070</td>
</tr>
<tr>
<td>Televise 5,000 lineal feet of pipes where the 14 catch basin or drain manhole structure observed to be full or critical (after cleaning).</td>
<td>80</td>
<td>$0</td>
<td>0</td>
<td>40</td>
<td>$5,880</td>
</tr>
<tr>
<td>Televise 750 feet of pipe where three outfalls had illicit discharge potential</td>
<td>20</td>
<td>$0</td>
<td>0</td>
<td>10</td>
<td>$1,470</td>
</tr>
</tbody>
</table>
scores greater than 25.
Televise selected streets in North Mill Pond Area. 50 $0 0 25 $3,675
GPS 35 Outfalls that were inspected but not part of the City’s GIS. 40 $200 0 0 $1,640
Update the City’s GIS based on mapbook markup. 80 $0 0 0 $2,880

<table>
<thead>
<tr>
<th>Table 2 (continued)</th>
<th>Projected Cost of Immediate Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Task 3 Operation and Maintenance Program</td>
<td></td>
</tr>
<tr>
<td>Repair 118 Outfall aprons identified as failing/poor.</td>
<td>3,800 $120,000 0 0 $256,800</td>
</tr>
<tr>
<td>Televise 20,000 lineal feet of pipes in Areas A, B and C to further assess condition.</td>
<td>400 $0 0 200 $29,400</td>
</tr>
</tbody>
</table>

**Task 1 Recommendation based on Regulatory Review**

| Peirce SWPPP | 280 $6,500 20 0 $17,880 |
| Pease SWPPP | 220 $5,400 20 0 $14,620 |
| DPW SWPPP | 520 $14,000 20 0 $34,020 |
| MS4 Issues | 310 $1,000 0 40 $15,160 |
| **Total:** | 6,410 $157,100 285 385 $435,260 |

**Table 3**

<table>
<thead>
<tr>
<th>Item</th>
<th>5-Year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Staff (hours/yr)</td>
</tr>
<tr>
<td>1. Catch Basin</td>
<td></td>
</tr>
<tr>
<td>Cleaning/Inspection (1)</td>
<td>3,400 $24,000</td>
</tr>
<tr>
<td>Illicit Issues</td>
<td>Nominal</td>
</tr>
<tr>
<td>Repairs</td>
<td>See Note 2</td>
</tr>
<tr>
<td>2. Pipe</td>
<td></td>
</tr>
<tr>
<td>Televising</td>
<td>800</td>
</tr>
<tr>
<td>Cleaning</td>
<td>100 $2,300</td>
</tr>
<tr>
<td>Illicit Issues</td>
<td>160</td>
</tr>
<tr>
<td>3. Outfalls</td>
<td></td>
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<tr>
<td>Inspections</td>
<td>400</td>
</tr>
<tr>
<td>Illicit Issues</td>
<td>200</td>
</tr>
<tr>
<td>Repair Outfall Aprons</td>
<td>1,920 $50,000</td>
</tr>
<tr>
<td>4. Mapping</td>
<td></td>
</tr>
<tr>
<td>Continue Updating GIS system</td>
<td>400 $3,000</td>
</tr>
<tr>
<td>5. Capital Projects Oversight</td>
<td>800 $5,000</td>
</tr>
<tr>
<td>6. Recommendations from Task 1</td>
<td></td>
</tr>
<tr>
<td>Peirce SWPPP</td>
<td>160 $1,800</td>
</tr>
</tbody>
</table>
The above Table is only a portion, detailing the 5-year recommendations of an Operations and Maintenance Program. The Stormwater Master Plan included projected costs for 10-, and 15-year recommendations. The total 10-year projected cost was estimated to be $629,970.00 (2006 dollars) and $846,617.00 (assuming 3% inflation). The total 15-year projected cost was estimated to be $629,970.00 (2006 dollars) and $981,493.00 (assuming 3% inflation).

Based on the above numbers, the following projections could be made. Assuming one ERU equals one acre. There are approximately 6,000 ERUs in the City of Portsmouth. Based on the City’s Stormwater Master Plan, the estimate operating cost is $5.9 million. The annual cost of an ERU would be $983.00 or $81.9 per month. The study will develop the methodology and real numbers.

5. Implementation Needs and Potential Barriers – The following are recognized as the needs and potential barriers to a stormwater utility.

From the previous sections, it is apparent that Portsmouth’s stormwater program has developed and progressed acceptably. Portsmouth’s stormwater program is at the launching point for the next step to implement a comprehensive stormwater program. The missing component is a proper and sufficient funding mechanism; and consolidating and coordinating responsibilities that were previously dispersed among several City departments and divisions. This feasibility study will assist in finding the most appropriate solutions as well as bringing the issue to the forefront of policy makers, administrators and residents.

Municipal Policy Implications: Policy makers are becoming increasingly more aware of stormwater infrastructural needs. However, in today’s political and economic environment, any increase in taxes or an additional utility fee would need to be fully justified and the requirements and potential environmental benefits need to be fully understood in order for policy makers to embrace adopting a utility fee.

Residents: Taxes and/or fees are always an issue; any increase in taxes or additional fees will be met with resistance. Recently at a City Council work session where City Engineers were presenting the details with regard to an Environmental Appeals Agreement with the EPA and CLF, a passing reference was made to studying the possibility of a stormwater utility fee. This passing comment became the headline and
cover story for the Portsmouth Herald the following day. The negative reaction City personnel received from the public was but a snap shot of the barrier that exists to implementing a stormwater utility fee.

Residents will also need to be educated about the potential benefits of a utility fee, which may include reducing the drain on general funds to pay for stormwater improvements, resolving some of the more chronic issues with flooding and sewer back-ups in certain areas that directly impact residents during large storm events and the benefits of a more equitable distribution of funding based on impervious area.

**Business interests**: Businesses will need to be convinced that the introduction / development of a stormwater utility, which may result in fees for local businesses, will result in a long term benefit offsetting greater costs in the future (i.e. TMDL or EPA imposed requirements). The feasibility study should carefully evaluate the possibility of certain allowances and/or credits for the purposes of transitioning to a new method for assessing and collecting stormwater related revenue.

### 6. Roadmap – Following are the steps needed to evaluate the feasibility of a stormwater utility.

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.

1. Issue a request for qualifications to consultant companies qualified for this project. Review submittals and hire a consultant.

2. Kick off meeting with City staff to discuss existing program; problems, needs, goals.

3. Data Compilation – Utilize existing reports and GIS data and update as necessary.
   - Parcel Identification
   - Land Use
   - Existing Utility Database Accounts
   - Parcel Ownership Database Accounts
   - Parcel Ownership & Address
   - Impervious Surface Coverage

4. Review (existing data and update as necessary) and Compile Capital and O&M Needs

5. Identify advantages and disadvantages of a adopting a stormwater utility for purposes of needs identified in previous task.

6. Rate Structure Analysis
   - Potential Rate Methodologies
     - Impervious Area
- Impervious Area + Gross Area
- Gross Area/Intensity of Development/Land Use
- Base Fee & Impervious Area Rate
- Others
- Credit Allowances

7. Review of and Recommend a Billing Methodology

**Three Billing System Options**
- Existing Public Utility Bill*
- Tax Bill
- Stand Alone Bill

**Billing Issues**
- What frequency?
- Billing database source?
- Who should receive the bill – the owner or the tenant?
- Long term database management?
- Delinquencies?
- Appeals?

8. Evaluate and recommend operation/division/structural changes necessary to manage Stormwater requirements within utility framework.

9. Identify Education & Outreach Strategies

10. Review Legal Requirements Necessary for Stormwater Utility Implementation


12. Presentation of study to City Council.

13. City Staff Recommend to City Council for action.

**Schedule of Work Tasks**
Below is a proposed schedule of work tasks. Presently these dates are not fixed. The schedule is a general proposal to ensure the project is progressing appropriately. Once the project begins, more firm dates will be determined and agreed upon. This Table serves as a guideline so that expectations are clear.

<table>
<thead>
<tr>
<th>Task</th>
<th>Begin Date</th>
<th>Completion Date</th>
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<tbody>
<tr>
<td>1. RFQ</td>
<td>Mid-July 2009</td>
<td>Beginning Aug. 2009</td>
</tr>
<tr>
<td>2. Kick-off Meeting</td>
<td>August 2009</td>
<td>--</td>
</tr>
<tr>
<td>3. Data Compilation</td>
<td>End August 2009</td>
<td>End September 2009</td>
</tr>
<tr>
<td>4. Review and Compile Capital and O&amp;M Needs</td>
<td>Mid-September</td>
<td>End September 2009</td>
</tr>
<tr>
<td>5. Identify advantages and disadvantages of a adopting a stormwater utility</td>
<td>September 2009</td>
<td>October 2009</td>
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<tr>
<td></td>
<td>Rate Structure Analysis</td>
<td>September 2009</td>
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<tr>
<td>---</td>
<td>-------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>8.</td>
<td>Evaluate and recommend operation/division/structural changes necessary</td>
<td>Beginning Jan. 2010</td>
</tr>
<tr>
<td>9.</td>
<td>Identify Education &amp; Outreach Strategies</td>
<td>August 2009</td>
</tr>
<tr>
<td>10.</td>
<td>Review Legal Requirements for SW Utility</td>
<td>January 2010</td>
</tr>
<tr>
<td>12.</td>
<td>Presentation of study to City Council</td>
<td>Beginning May 2010</td>
</tr>
<tr>
<td>13.</td>
<td>City Staff Recommend to City Council for action</td>
<td>June 2010</td>
</tr>
</tbody>
</table>
Appendix B:

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

Sealed proposals, plainly marked, RFP # 03-10 “MUNICIPAL STORMWATER UTILITY FEASIBILITY STUDY” addressed to the Finance/Purchasing Department, City Hall, 1 Junkins Avenue, Portsmouth, New Hampshire, 03801. Proposals will be accepted until July 13, 2009 at 2:00 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 third floor at the above address, or at www.cityofportsmouth.com. Addenda to this request for proposal, if any, including written answers to questions, will be posted on the City of Portsmouth website at http://www.cityofportsmouth.com/finance/purchasing.htm under the proper heading. Addenda and updates will NOT be sent directly to vendors. Questions may be addressed to the Purchasing Coordinator.

Firms may contact Silke Psula with the City of Portsmouth at 603-766-1454 for additional information. In consideration to all proposers, no oral interpretations will be given to any proposers as to the meaning of the specification documents or any part thereof. Every request for such a consideration shall be made in writing. Fax inquiries to Silke Psula at the Public Works Department, 603-766-1447, or email Silke Psula at spsula@cityofportsmouth.com by July 2, 2009. Based upon such inquiry, the City may choose to issue an Addendum.

The City of Portsmouth reserves the right to reject any and all proposals, to waive technical or legal deficiencies, to accept any proposal that is in the best interest of the City and to negotiate the terms and conditions of any proposal leading to acceptance and final execution of a contract for services.

If you have any questions pertaining to the submittal and review process of this request for proposal please contact the Purchasing Coordinator at: 603-610-7227.
I. INTENT OF SOLICITATION

The City of Portsmouth (City) is soliciting competitive proposals from qualified applicants to assist with a stormwater utility feasibility study. 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, types of user fees as well as assess the implementation costs associated with a stormwater utility. Ultimately the study will assist in finding the most appropriate solutions 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 III, SCOPE OF SERVICES.

Addenda to this proposal, if any, including written answers to questions, will be posted on the City of Portsmouth website at http://www.cityofportsmouth.com/finance/purchasing.htm 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.

II. BACKGROUND

The City of Portsmouth, located on the Piscataqua River, has a population of approximately 21,000 and consists of approximately 17 square miles. Portsmouth 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 Council, by charter, must adopt a budget by June 30 of each year. The Portsmouth Mayor and City Council are aided in governing the City by various volunteer advisory boards and commissions, for example the Fee Schedule Study Committee was established to create a more efficient system for the City to adopt and adjust municipal fees annually.

Under the City Manager’s direction, are the Finance Department and the Public Works 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 Public Works Department consists of ten Divisions. Of the ten Divisions the Highway and the Sewer Divisions implement the stormwater management program. The Highway Division’s primary responsibility is maintaining all City streets, including cleaning and plowing 136 miles of streets - and 49 miles of sidewalks. It also maintains
the City’s Recycling Center, vehicle and equipment fleet, performs snow removal, and provides daily sweeping and litter control and disposal in the central business district.

The Sewer Division maintains and installs sewer mains and performs catch-basin cleaning in Portsmouth and at the Pease Tradeport. The Sewer Division also operates two Wastewater Treatment Plants: 1) the Pease Treatment Plant; and 2) the Pierce Island Treatment Plant and maintains over 100 miles of combined and sanitary sewers. Additionally, the Sewer Division operates 21 pump stations.

The City is regulated under two distinct components of the Stormwater Phase II regulations:

3) The City operates three facilities that are subject to the NPDES Stormwater Multi-Sector General Permit (MSCP) for Industrial Facilities (Peirce Island Wastewater Treatment Plant, Pease Tradeport Wastewater Treatment Plant and the City’s Recycling Center).

4) The City’s storm drain system discharges are subject to the NDPDES Stormwater Phase II Municipal Separate Storm Sewer System (MS4) General Permit.

Compliance with these two components requires the City of Portsmouth to conduct additional operation and maintenance activities and make additional capital expenditures. Currently the stormwater program is funded through the General Fund and managed by the Highway and Sewer Divisions.

The City’s infrastructure is some of the oldest in the state. Over the past years the City has been working to repair and upgrade old, failing infrastructure. Since 1997 the City has invested $20 million to improve its sanitary and stormwater system. The City has separated 24,000 lineal feet of combined sewer and successfully eliminated one Combined Sewer Overflow (CSO).

Portsmouth’s stormwater infrastructure consists of approximately 323,000 lineal feet of pipe, 4,700 catch basins or manhole structures and 450 outfalls. In FY ‘07 the City prepared a Stormwater Master Plan to facilitate compliance with the USEPA NPDES Stormwater Phase II regulations. This Master Plan helped prioritize the City’s efforts, identified areas for improvement and projected necessary funds for operating and maintaining the stormwater infrastructure.

Also, in FY ‘07 the Sewer Division, in response to the 2006 TMDL study for Little Harbor, completed an extension of the Municipal Sewer System to the Pleasant Point area.

Despite the investments and a variety of local and non-local pollution sources, the local waterbodies do not meet water quality standards and the City continues to have flooding
and sewer back-ups. Portsmouth has some of the highest development density in the state and is a low lying coastal community with high tides.

Traditionally, the City pays for its stormwater infrastructure operation & maintenance and capital improvement projects through bonds and the general tax fund. The City has had past successes using single-purpose bonds as a funding mechanism for major infrastructure projects. The method is useful for the initial capital improvement, but not for long-term maintenance issues identified in the Stormwater Master Plan. Further, bonding incurs additional costs for interest on the debt, and imposes a long-term commitment of funds to debt service that reduces flexibility in the future.

III. 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:

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 Portsmouth’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 Portsmouth.

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
**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.

**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.

**IV. 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 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 August 2009 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 VI in a sealed envelope.

V. 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 discontinue the selection process at any time prior to the awarding of a contract. There will be no reimbursement to any candidate firm if the selection process is terminated.

iv. Reservation of Rights
This Request for Proposals (RFP) does not commit the City to award a contract, to pay any costs incurred in the preparation of a response to this request, or to procure or contract for services or supplies.

The City anticipates execution of a contract within 90 days of RFP opening.

The City of Portsmouth reserves the right to reject any and all proposals, to waive technical or legal deficiencies, to make such investigation as it deems necessary to evaluate Contractor's qualifications, to accept any proposal that may be deemed in the best interest of the City and to negotiate terms and conditions of any proposal leading to acceptance and final execution of a contract for services.
VI. 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 Portsmouth’s “Municipal Stormwater Utility Feasibility Study”, in accordance with the Scope of Services, the following:

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<th>Unit Price (Words and Numbers)</th>
<th>Total</th>
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<td>2</td>
<td>Stormwater Program Analysis and Planning</td>
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<td>3</td>
<td>Compelling Case</td>
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<tr>
<td>4</td>
<td>Education &amp; Outreach Strategies</td>
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<td>5</td>
<td>Data Compilation for Rate Methodology</td>
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<td>6</td>
<td>Rate Structure Analysis</td>
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<td>7</td>
<td>Billing Methodology</td>
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<td>8</td>
<td>Recommendations</td>
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<td>Final Feasibility Study Report</td>
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<td>Presentation and Final Recommendations</td>
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Total

________________________________________________________________________

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

Signature: …
..................................................................................................................
Appendix C:

Consultant BID Results
### Appendix C

<table>
<thead>
<tr>
<th>RFP 103-11</th>
<th>Vanasse Hangen Brustlin, Inc.</th>
<th>AMEC Earth &amp; Environment</th>
<th>Swarns &amp; Wheeler</th>
<th>Municipal &amp; Financial Services</th>
<th>Black &amp; Veatch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipal Stormwater Utility Feasibility Study</td>
<td>Six Bedford Farms Dr., Suite 407</td>
<td>2 Robbins Road</td>
<td>1345 Lynamough Road</td>
<td>911-A Commerce Rd.</td>
<td>11401 Lamar Avenue</td>
</tr>
<tr>
<td>Bedford, NH 03110-6532</td>
<td>Westford, MA 01886</td>
<td>Hyannis, MA 02601</td>
<td>Annapolis, MD 21401</td>
<td>Overland Park, KS 66211</td>
<td></td>
</tr>
</tbody>
</table>

**Respondents:**
- William R. Arceeri
- Kevan P. Gale
- Laura Chan
- William Hall Jr.
- Edwin Donahue
- Peggy Howe
- Peter Walker

**Item 1: Stormwater Utility Development Workshop**
- 6,222.00$  
  - 13,258.00$  
  - 13,032.00$  
  - 8,015.00$  
  - 22,640.00$  

**Item 2: Stormwater Program Analysis and Planning**
- 4,362.00$  
  - 4,530.00$  
  - 4,716.00$  
  - 30,057.00$  
  - 16,980.00$  

**Item 3: Compelling Case**
- 3,218.00$  
  - 2,445.00$  
  - 4,063.00$  
  - 4,342.00$  
  - 6,250.00$  

**Item 4: Educational Outreach Strategies**
- 6,330.00$  
  - 1,959.00$  
  - 4,842.00$  
  - 5,677.00$  
  - 4,720.00$  

**Item 5: Data Compilation for Rate Methodology**
- 2,270.00$  
  - 5,363.00$  
  - 4,718.00$  
  - 5,544.00$  
  - 8,770.00$  

**Item 6: Rate Structure Analysis**
- 3,434.00$  
  - 3,528.00$  
  - 5,667.00$  
  - 5,010.00$  
  - 6,310.00$  

**Item 7: Billing Methodology**
- 3,224.00$  
  - 5,457.00$  
  - 4,890.00$  
  - 4,676.00$  
  - 3,090.00$  

**Item 8: Recommendations**
- 4,020.00$  
  - 4,037.00$  
  - 4,742.00$  
  - 9,685.00$  
  - 5,130.00$  

**Item 9: Final Feasibility Study Report**
- 7,658.00$  
  - 2,570.00$  
  - 1,807.00$  
  - 8,015.00$  
  - 6,700.00$  

**Item 10: Presentation and Final Recommendations**
- 4,442.00$  
  - 2,570.00$  
  - 1,875.00$  
  - 6,679.00$  
  - 9,410.00$  

**Total**
- 45,180.00$  
  - 45,717.00$  
  - 49,972.00$  
  - 87,500.00$  
  - 90,000.00$  

---

**Copy to:**
- John Bohenko, City Manager
- Judy Belanger, Finance Director
- Steve Parkinson, Public Works Director
- Silke Psula, Solid Waste Coordinator
- Lori MacGillis, Purchasing Coordinator

**Awardees:**
- Vanasse Hangen Brustlin, Inc.
- AMEC Earth & Environment
- Swarns & Wheeler
- Municipal & Financial Services
- Black & Veatch

**Short Listed:**
- Forrest & Smith
- Black & Veatch

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**Note:**
- 

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**Appendix C**
Appendix D:

Professional Services Agreement

(Please Contact DES to request a copy)
Appendix E:

Pre-Workshop Meeting Minutes/Materials
This brief report serves to both document a two-day meeting of key staff and frame an ongoing discussion concerning how to best manage and fund our important natural surface water resources in Portsmouth.

Overview

Stormwater Management
Stormwater management is an aggregation of all the efforts a local government puts forward to deal with flooding and water quality. It includes planning, constructing, operating, and maintaining miles of ditches, channels, pipes and streams and thousands of culverts, catch basins, and other facilities. It is the “third leg” on the local water management stool – the other two being drinking water and wastewater.

Local communities have a large investment in the stormwater drainage system and appropriate stewardship of that public infrastructure is important to local safety, property values, aesthetics and recreation, the coastal environment, and in terms of permit compliance. It is all the more important in framing and defining the experience of living in a coastal community such as Portsmouth.

While the other two water resources services are funded and managed as focused enterprises of local government, stormwater has not enjoyed this attention. The outcome has been a series of floods, infrastructure failures, and the identification of a number of local streams as not meeting clean water criteria.

Two-Day Workshop
The purposes for the workshop were to:

✓ understand Portsmouth stormwater program functions and costs;
✓ identify, describe and frame the key issues facing the City;
✓ develop the framework for stormwater program improvements to address these issues and opportunities at an appropriate level; and
✓ to understand funding options to support the program and to specifically explore the use of a stormwater user fee and supporting structure.

The workshop was held over the course of two half-days with different purposes. Day 1 addressed funding and billing related issues, while Day 2 covered program and public education. The following City staff participated:

David Allen, Public Works Deputy Director
Existing and Future Stormwater Programs

Based on a detailed cost of service spreadsheet developed with staff, Portsmouth currently spends about $512,500 annually on all aspects of stormwater management. This level of expenditure can be characterized as "minimal to low moderate" when compared to other stormwater programs across the country. Table 1 shows both existing and proposed future program summaries.

Table 1. Cost of Service Existing and Proposed Stormwater Program

<table>
<thead>
<tr>
<th>Summary of Future Stormwater Program Estimated Costs</th>
<th>Current</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>MS4 General Permit</td>
<td>$31,000</td>
<td>$81,800</td>
<td>$32,600</td>
<td>$37,600</td>
<td>$29,000</td>
<td>$44,000</td>
</tr>
<tr>
<td>Billing and Finance</td>
<td>$</td>
<td>$258,800</td>
<td>$211,200</td>
<td>$217,300</td>
<td>$218,700</td>
<td>$222,600</td>
</tr>
<tr>
<td>Engineering and Master Planning</td>
<td>$38,500</td>
<td>$108,600</td>
<td>$39,500</td>
<td>$41,700</td>
<td>$32,500</td>
<td>$33,400</td>
</tr>
<tr>
<td>Operations and Maintenance</td>
<td>$221,400</td>
<td>$655,700</td>
<td>$621,900</td>
<td>$640,500</td>
<td>$662,100</td>
<td>$679,900</td>
</tr>
<tr>
<td>Regulation/Enforcement</td>
<td>$</td>
<td>$8,000</td>
<td>$16,700</td>
<td>$25,600</td>
<td>$22,300</td>
<td>$22,900</td>
</tr>
<tr>
<td>Capital Improvements</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Management</td>
<td>$21,600</td>
<td>$100,000</td>
<td>$50,000</td>
<td>$50,000</td>
<td>$50,000</td>
<td>$50,000</td>
</tr>
<tr>
<td>Stormwater Major Capital Projects</td>
<td>$200,000</td>
<td>$1,000,000</td>
<td>$500,000</td>
<td>$500,000</td>
<td>$500,000</td>
<td>$500,000</td>
</tr>
<tr>
<td>Stormwater CSO Projects</td>
<td>$</td>
<td>$1,023,000</td>
<td>$1,024,000</td>
<td>$1,025,000</td>
<td>$1,025,000</td>
<td>$1,026,000</td>
</tr>
<tr>
<td>Land and ROW Acquisition</td>
<td>$</td>
<td>$22,500</td>
<td>$17,800</td>
<td>$17,800</td>
<td>$17,800</td>
<td>$17,800</td>
</tr>
<tr>
<td>Subtotal:</td>
<td>$221,600</td>
<td>$2,145,500</td>
<td>$1,591,600</td>
<td>$1,592,700</td>
<td>$1,592,800</td>
<td>$1,593,800</td>
</tr>
<tr>
<td>TOTAL:</td>
<td>$512,500</td>
<td>$3,348,000</td>
<td>$2,513,500</td>
<td>$2,555,400</td>
<td>$2,557,400</td>
<td>$2,568,600</td>
</tr>
</tbody>
</table>

There was concern expressed that separation costs under the CSO program might be partially a stormwater cost, and therefore are reflected in the table above. This cost, which is 40% of the total program or approximately $1M annually, may or may not be considered a stormwater cost to be funded by user fee revenue.

Review of the detailed spreadsheets shows that approximately 14% of the costs associated with the Stormwater program ($70,000) are currently being funded by the Enterprise funds for Water and Sewer.
Future demands and correcting for past deficiencies are expected to significantly increase this level of expenditure. The detailed cost of service projections put the anticipated stormwater program need at about $2.5 M annually for a typical year.

Detailed cost tables were provided to the meeting attendees, comments made and final tables developed. They are available through Public Works.

**Issues, Needs and Opportunities**

Why is it important to make stormwater program improvements – are the reasons compelling?

In every community there are good, even compelling, reasons to improve the way stormwater programs are executed. Such issues can draw the attention and energy of stakeholders and leaders and turn into opportunities for action.

The exercise to develop staff concepts of the compelling case consisted of three steps:

1. Moving consecutively around the room allowing each person to define a reason for the utility fee that they feel might be compelling.

2. Giving each member several votes to vote for what they perceived and understood to be the top three most critical stormwater funding and program issues.

3. Post-meeting analysis to categorize the issues and create themes.

There were seven general categories of issues that felt compelling to the staff. These are laid out in the table along with voting.

From Table #2 it can be seen that Water Quality and Flooding Concerns were the primary concern.

- Water Quality is characterized by: regulatory compliance, estuary quality, stream quality and sediment runoff.

- Flooding is primarily concerns for basement flooding though tidal, roadway, and simply "unresolved" flooding are also seen as important.

- Care for the system (maintenance), preparation for climate change, sustainability and green concerns, and interaction with the CSO system round out the top seven categories.

<table>
<thead>
<tr>
<th>Reason</th>
<th># Votes</th>
<th>Category</th>
<th>Total Votes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water quality regulatory compliance</td>
<td>8</td>
<td>WQ</td>
<td></td>
</tr>
<tr>
<td>Well protection from chlorides</td>
<td>6</td>
<td>WQ</td>
<td></td>
</tr>
<tr>
<td>Water quality to runoff into estuaries</td>
<td>5</td>
<td>WQ</td>
<td></td>
</tr>
<tr>
<td>Impaired streams</td>
<td>3</td>
<td>WQ</td>
<td></td>
</tr>
<tr>
<td>Sediment runoff</td>
<td>2</td>
<td>WQ</td>
<td>24</td>
</tr>
<tr>
<td>Basement flooding from all sources</td>
<td>9</td>
<td>FLOOD</td>
<td></td>
</tr>
<tr>
<td>Tidal flooding</td>
<td>2</td>
<td>FLOOD</td>
<td></td>
</tr>
<tr>
<td>Unresolved problems “sorry”</td>
<td>2</td>
<td>FLOOD</td>
<td></td>
</tr>
<tr>
<td>Roadway flooding</td>
<td>2</td>
<td>FLOOD</td>
<td></td>
</tr>
<tr>
<td>House to house drainage problems</td>
<td>0</td>
<td>FLOOD</td>
<td>15</td>
</tr>
<tr>
<td>Stewardship of the system</td>
<td>4</td>
<td>MAINT</td>
<td></td>
</tr>
<tr>
<td>Unknown system condition</td>
<td>2</td>
<td>MAINT</td>
<td></td>
</tr>
<tr>
<td>Failing infrastructure</td>
<td>1</td>
<td>MAINT</td>
<td>7</td>
</tr>
<tr>
<td>Climate change preparation</td>
<td>7</td>
<td>CL</td>
<td>7</td>
</tr>
<tr>
<td>Sustainable green concerns</td>
<td>6</td>
<td>GREEN</td>
<td>6</td>
</tr>
<tr>
<td>CSO separation</td>
<td>5</td>
<td>CSO</td>
<td></td>
</tr>
<tr>
<td>Infiltration and inflow</td>
<td>0</td>
<td>CSO</td>
<td>5</td>
</tr>
<tr>
<td>Equitability fee vs. tax</td>
<td>2</td>
<td>FUNDING</td>
<td></td>
</tr>
<tr>
<td>Credits to stimulate activity</td>
<td>0</td>
<td>FUNDING</td>
<td>2</td>
</tr>
</tbody>
</table>
Messaging
In the workshop we discussed how to frame the messages for the compelling case identified for Portsmouth. The idea is to find clear ways to express the goals and objectives of the program improvements. Key thoughts in the messaging included:

- Make the economic and property value preservation connection with what we are doing; clean water is key to our way of life and economy;
- Private citizens are flooding from public water; it is a public responsibility;
- We have a unfunded mandate and CSO requirements, and there are a lot of things we would do anyway; we all want clean water – it is key to our environment here;
- We need to better protect our drinking water from toxic and polluted runoff;
- We want to be sustainable and green in all our actions concerning stormwater and our environment, way of life, etc.; and
- Climate change may be real and we want to understand its potential impacts and prepare for them as much as possible.

Show Stoppers
We discussed "show stoppers": those things that would be hard to overcome when attempting to establish a stormwater user fee. Included in the list were:

- Fatigue of the staff, and inability to put in the necessary time;
- The sense that citizens would resist the perception of a growing bureaucracy;
- Angry ratepayers at "yet another fee in the face of economic hard times";
- Not wanting to be the first in the State;
- Election season is September 2011 and the potential reluctance to have this public at that time;
- Much of the land is Federal. The City does not want to exempt them from their proportionate share of responsibility.

Several comments were made on how to avoid some negative reaction including:

- Need to show water/sewer rate and how it is paying for stormwater work already.
- Demonstrate how the stormwater utility will maximize efficiency of existing resources — through reorganization. This does not necessarily require creating new Departments/Divisions. It requires dedicating existing resources to effectively address stormwater issues.
- Emphasize that it is not a 5 fold budget increase for existing versus future program, but how some costs will be reallocated from other programs.
- There may be options available to assist in offsetting fees for low income residents.
Funding and Rate Structure

There are a series of interrelated funding policy issues that need preliminary resolution. The decisions may rely on such things as program decisions, legality, or preferences and past practice.

We focused on making preliminary decisions of the larger issues, but also on identifying politically important issues even if they have less monetary impact.

Willingness to Pay

We discussed the staff’s perception of citizen willingness to pay for stormwater “if we made a good compelling case and they knew every penny would go toward those needs.” Most individuals’ estimates were around $5/month. The average was about $4.50. It was suggested to start with a $2/mo. fee and increase each year, but countered that for the City should begin with the appropriate fee for a “sustainable” program because it would be difficult to increase significantly each year. In the end most felt that, given any flexibility in stormwater budget aggressiveness, $4/mo sounded good as it stays below two emotional barriers $5/mo and $50/year.

We discussed approaches to generate more revenue if need be and three ideas were floated:

- Keep at $4 to $5 and bill roads
- Keep at $4 to $5 and reduce $1M through other programs
- Lower fee & establish a built-in schedule for annual increases

Basis for the Charge

The group discussed how to establish the basis for the charge – the basic rate methodology. A stormwater utility rate structure is made up of three components, each of which is built out of a myriad of policy decisions: the basic rate methodology; rate method modification factors; and secondary funding methods.

Some of the policy decisions that frame each of these rate structure components are basic and key to the character of the utility. Some are less important to the overall user fee revenue, though may be very important to the eventual success of the utility. Several options were discussed including:

1. inclusion of a gross area charge;
2. using gross area and an intensity of development factor to “credit” green space; and
3. simply using impervious area.

After significant discussion it was decided to proceed on the basis of impervious area only but to consider giving credit for greenspace that was effective in runoff volume reduction.

There were a number of detailed questions about how to handle various parcel types including condos, apartments, and industrial sites. In the end it was decided to proceed on the basis of an Equivalent Residential Unit and that two or more tiers of residential flat rates was desired.
Preliminary Data Analysis

Standard procedure is to base the billing unit on some representative measure of the housing stock – often the median. Variations on this approach can make it representative of a typical house in the lowest tier if several tiers of residential stock are chosen. By way of representing this data, Figure 1 is a histogram of the housing stock in Portsmouth.

In our example, the representative size home is taken as the median of the whole data set and rounded to the nearest 100 square feet = 2,200 square feet. This is the billing unit or the Equivalent Residential Unit (ERU) for illustration purposes (however we could bill on other bases such as “per 1,000” or “low tier median”, etc.). Single Family Residential (SFR) properties can be handled a number of ways including three demonstrated here: (1) all get a flat 1 ERU; (2) two tiers of residential split at 3,000 sf of impervious area, and (3) each SFR measured individually and charged like NSFR.

Table 3 shows the revenue outcome of the different options for handling SFR. The second section of Table 3 accounts for two special considerations: public roadways (they are impervious) and the Pease Development Authority. The City may or may not choose to charge for these areas. If the City does decide to charge it will have two outcomes:

(1) it will reduce the necessary user fee by over 30%; and

(2) it will retain the City’s current investment in the stormwater program.

The third section of Table 3 shows the revenue implications of decisions to add Pease Dev. Auth. and public roads and the approximate monthly fees necessary per ERU to generate $2.5M annually. As can be seen, the ability to charge less than $5/ERU/Month under the current
rate structure can only achieved through the inclusion of both Pease and public roads. The charge for public roads amounts to an estimated 26.5% of total revenue. For a charge of $4.81 ERU/month the bill to the city for its public roads would be approximately $662,000, a number in the range of its current expenditure for stormwater.

Table 3 Revenue Estimates Under Different Scenarios

<table>
<thead>
<tr>
<th>Option or Topic (Pease Development Authority and Public roads NOT included)</th>
<th>SFR ERUs</th>
<th>NSFR ERUs</th>
<th>Total ERUs</th>
<th>Annual Rev. per $1</th>
<th>= Fee/ERU for $2.5M/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - All SFR are a flat rate</td>
<td>4,003</td>
<td>22,682</td>
<td>26,685</td>
<td>$320,220</td>
<td>$7.80</td>
</tr>
<tr>
<td>2 - SFR two tiers split at 3,000 sf</td>
<td>4,920</td>
<td>22,682</td>
<td>27,602</td>
<td>$331,224</td>
<td>$7.55</td>
</tr>
<tr>
<td>3 - All SFR direct measurement</td>
<td>6,504</td>
<td>22,682</td>
<td>29,186</td>
<td>$350,232</td>
<td>$7.14</td>
</tr>
</tbody>
</table>

Additional Areas

<table>
<thead>
<tr>
<th>Option or Topic</th>
<th>SFR ERUs</th>
<th>NSFR ERUs</th>
<th>Total ERUs</th>
<th>Annual Rev. per $1</th>
<th>= Fee/ERU for $2.5M/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 - Pease Development Authority</td>
<td>N/A</td>
<td></td>
<td>4,274</td>
<td>$51,288</td>
<td>N/A</td>
</tr>
<tr>
<td>8 - Charging for Public Roads</td>
<td>N/A</td>
<td></td>
<td>11,468</td>
<td>$137,816</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Summary Using The Two Residential Tier Option

<table>
<thead>
<tr>
<th>Component</th>
<th>ERUs</th>
<th>Rev./$1</th>
<th>% of Total</th>
<th>Acc. Total Rev./$1</th>
<th>= Fee/ERU for $2.5M/yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 - SFR</td>
<td>4,920</td>
<td>$59,040</td>
<td>11.4%</td>
<td>$59,040</td>
<td>$7.55</td>
</tr>
<tr>
<td>10 - NSFR</td>
<td>22,682</td>
<td>$272,184</td>
<td>52.3%</td>
<td>$331,224</td>
<td></td>
</tr>
<tr>
<td>11 - plus Pease Dev. Auth.</td>
<td>4,274</td>
<td>$51,288</td>
<td>9.9%</td>
<td>$382,512</td>
<td>$6.54</td>
</tr>
<tr>
<td>12 - plus Pease and Public Roads</td>
<td>11,468</td>
<td>$137,616</td>
<td>26.5%</td>
<td>$520,128</td>
<td>$4.81</td>
</tr>
</tbody>
</table>

Stormwater Credits

It was explained that the City could establish credits to be given for private activities and investments that reduce either a parcel's impact on or use of the system, or reduce the City's cost to provide services either to that parcel or overall.

The question was asked, "what level of credit 'feels' appropriate given all we have talked about?" The actual credit level is a policy decision based on cost analysis. Based on voting along a continuum the average response was that a 50% credit for a site that met all peak flow and water quality design standards seemed appropriate.
Several concerns were raised and discussed including:

- How will existing conditions be factored? Do good designs already get credit or do they have to go above and beyond? All private investments to reduce impact should be recognized, past, present and future.
- How is credit given for non-structural practices and how will it be tracked to demonstrate effectiveness? This can be done but is manpower intensive.
- Potential inequity may be perceived with residential credits due to limited abatement options. Residential credits seemed to be very low. There are ways to implement a residential credit mechanism but due regard has to be paid to the administrative costs versus benefit, and streamlining has to be done.
- What is the potential reduction of revenue? Reductions are typically less than 5%.

Recommendation to Proceed

A general discussion was held on the recommendation the staff will make to the City Manager and how the staff felt, after the day's discussion, about establishing a stormwater user fee.

First, it was discussed that the recommendation was not a black and white "GO or NO GO" question, but one of "should we move forward?" and, if so, "how strongly do we feel about this idea?" Based on that idea individuals were asked, "how convinced are you that a stormwater user fee is the right thing to do and do you think we should move forward with the process?"

After considering the needs, the compelling case to be made, the program costs and fees every individual felt it was appropriate to move forward, and half felt that progress should be aggressive.

Stormwater 101 Meeting

The Scope of Services Agreement between the City and with AMEC and the Grant Agreement with the State Department of Environmental Services, outlines the next step based on the results of workshop 1.

Based on the compelling case outline herein, the next task calls for a second workshop - a type of 'Stormwater 101' presentation, similar to the workshops facilitated by the City when under going significant changes with its Wastewater Treatment Plant upgrades. The workshop will cover the basic stormwater issues and mandates, the city's efforts to address them, options for an improved stormwater program, funding options that stress fairness and dedication of funds to meeting needs. We will then solicit questions.
Appendix F:

Workshop #1 Materials
Overview
The purposes for the first workshop were to:

✔ understand program costs and functions, both existing and proposed;
✔ create a compelling case and messaging for the improved program that would assist in "selling" the concept to stakeholders, political leaders and the general public; and
✔ develop a framework for the rate structure that will meet the community and staff needs and requirements and allow for City compliance.

The workshop was held over the course of two half-days with different purposes. Day 1 addressed funding and billing related issues, while Day 2 covered program and messaging. The following City staff participated:

David Allen, Public Works Deputy Director
Judie Belanger, Finance Director
Peter Britz, Environmental Planner/Sustainability Coordinator
Gail Cunningham, Controller
James McCarty, GIS Coordinator
Silke Psula, Solid Waste Coordinator
Peter Rice, Water & Sewer Engineer
Jared Sheehan, Engineer Technician
Robert Sullivan, City Attorney
Rick Taintor, Planning Director

This summary is presented in a logical, not chronological, order.

Existing and Future Stormwater Programs
Based on a detailed cost of service spreadsheet developed with staff, Portsmouth currently spends about $512,600 annually on all aspects of stormwater management (fully burdened costs) or about $43/acre/year. This level of expenditure can be characterized as "minimal to low moderate" when compared to other stormwater programs across the country. In the workshop we reviewed the current program. Table 1 on the next page shows both existing and proposed future program summaries.
# Table 1. Cost of Service Existing and Proposed Stormwater Program

<table>
<thead>
<tr>
<th>Major Cost Category</th>
<th>Cost Subcategory</th>
<th>Current</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Year 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative Costs</td>
<td>General Stormwater Program Administration</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
<td>$ -</td>
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<tr>
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<td>NPDES NOI and SWMP</td>
<td>$ 7,890</td>
<td>$ 18,820</td>
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<td>$ 12,329</td>
<td>$ 8,500</td>
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<td>$ 10,655</td>
<td>$ 7,500</td>
<td>$ 11,505</td>
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<td>Grants Program</td>
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<td>$ 12,329</td>
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<td>$ 7,500</td>
<td>$ 11,505</td>
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<td>Impaired Waters Issues</td>
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<td>$ 12,329</td>
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<td>$ 10,655</td>
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<td>$ 12,329</td>
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<td>Subtotal:</td>
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<tr>
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<td>NPDES investigation</td>
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<td>Capital Improvement Program</td>
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<td>$ -</td>
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<td>$ -</td>
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<td>$ -</td>
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<td>$ 257,083</td>
<td>$ 257,478</td>
<td>$ 257,923</td>
<td>$ 257,934</td>
<td>$ 257,934</td>
</tr>
</tbody>
</table>

*Portsmouth, New Hampshire*

Cost of Service Analysis: All Costs, Summary by Cost Subcategory by Year

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**Note:** The table above provides a detailed breakdown of the cost of service existing and proposed stormwater program for Portsmouth, New Hampshire. Each category and subcategory is listed, along with the costs allocated to each year and total cost over the years. This information is crucial for understanding the financial implications of the stormwater program and planning for future investments in infrastructure and operations.
There was concern expressed that separation costs under the CSO program might be partially a stormwater cost, and therefore are reflected in the table above. This cost, which is 40% of the total program or approximately $1M annually, may push the fee above most members' perceived willingness to pay for stormwater.

Review of the detailed spreadsheets shows that approximately 14% of the costs associated with the Stormwater program ($70,000) are currently being funded by the Enterprise funds for Water and Sewer. Future demands and correcting for past deficiencies are expected to significantly increase this level of expenditure.

Future demands and correcting for past deficiencies are expected to significantly increase this level of expenditure. The detailed cost of service projections put the anticipated stormwater program need at about $2.5 M annually for a typical year. This cost was developed prior to any knowledge of revenue capacity of the rate base.

Detailed cost tables were provided to the meeting attendees, comments made and final tables will be developed. The changes were relatively minor and will not materially affect the outcome of related decisions.

**Compelling Case**

Why is it important to make stormwater program improvements – are the reasons compelling?

In every community there are good, even compelling, reasons to improve the way stormwater programs are executed. Such issues can draw the attention and energy of stakeholders and leaders and turn into opportunities for action.

The exercise to develop staff concepts of the compelling case consisted of three steps:

1. Moving consecutively around the room allowing each person to define a reason for the utility fee that they feel might be compelling.

2. Giving each member several votes to vote for what they perceived and understood to be the top three most critical stormwater funding and program issues.

3. Post-meeting analysis to categorize the issues and create themes.

There were seven general categories of issues that felt compelling to the staff. These are laid out in the table along with voting.

From Table #2 it can be seen that Water Quality and Flooding Concerns were the primary concern.

<table>
<thead>
<tr>
<th>Reason</th>
<th># Votes</th>
<th>Category</th>
<th>Total Votes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water quality regulatory compliance</td>
<td>8</td>
<td>WQ</td>
<td></td>
</tr>
<tr>
<td>Well protection from chlorides</td>
<td>6</td>
<td>WQ</td>
<td></td>
</tr>
<tr>
<td>Water quality to runoff into estuaries</td>
<td>5</td>
<td>WQ</td>
<td></td>
</tr>
<tr>
<td>Impaired streams</td>
<td>3</td>
<td>WQ</td>
<td></td>
</tr>
<tr>
<td>Sediment runoff</td>
<td>2</td>
<td>WQ</td>
<td></td>
</tr>
<tr>
<td>Basement flooding from all sources</td>
<td>9</td>
<td>FLOOD</td>
<td></td>
</tr>
<tr>
<td>Tidal flooding</td>
<td>2</td>
<td>FLOOD</td>
<td></td>
</tr>
<tr>
<td>Unsolved problems &quot;sorry&quot;</td>
<td>2</td>
<td>FLOOD</td>
<td></td>
</tr>
<tr>
<td>Roadway flooding</td>
<td>2</td>
<td>FLOOD</td>
<td></td>
</tr>
<tr>
<td>House to house drainage problems</td>
<td>0</td>
<td>FLOOD</td>
<td></td>
</tr>
<tr>
<td>Stewardship of the system</td>
<td>4</td>
<td>MAINT</td>
<td></td>
</tr>
<tr>
<td>Unknown system condition</td>
<td>2</td>
<td>MAINT</td>
<td></td>
</tr>
<tr>
<td>Failing infrastructure</td>
<td>1</td>
<td>MAINT</td>
<td></td>
</tr>
<tr>
<td>Climate change preparation</td>
<td>7</td>
<td>CL</td>
<td>7</td>
</tr>
<tr>
<td>Sustainable green concerns</td>
<td>6</td>
<td>GREEN</td>
<td>6</td>
</tr>
<tr>
<td>CSO separation</td>
<td>5</td>
<td>CSO</td>
<td></td>
</tr>
<tr>
<td>Infiltration and inflow</td>
<td>0</td>
<td>CSO</td>
<td>5</td>
</tr>
<tr>
<td>Equitability fee vs. tax</td>
<td>2</td>
<td>FUNDING</td>
<td></td>
</tr>
<tr>
<td>Credits to stimulate activity</td>
<td>0</td>
<td>FUNDING</td>
<td>2</td>
</tr>
</tbody>
</table>

✔ Water Quality is characterized by: regulatory compliance, estuary
quality, stream quality and sediment runoff.

✓ Flooding is primarily concerns for basement flooding though tidal, roadway, and simply "unresolved" flooding are also seen as important.

✓ Care for the system (maintenance), preparation for climate change, sustainability and green concerns, and interaction with the CSO system round out the top seven categories.

**Messaging**

In the workshop we discussed how to frame the messages for the compelling case identified for Portsmouth. Key thoughts in the messaging included:

✓ Make the economic and property value preservation connection with what we are doing; clean water is key to our way of life and economy;

✓ Private citizens are flooding from public water; it is a public responsibility;

✓ We have a unfunded mandate and CSO requirements, and there are a lot of things we would do anyway; we all want clean water – it is key to our environment here;

✓ We need to better protect our drinking water from toxic and polluted runoff;

✓ We want to be sustainable and green in all our actions concerning stormwater and our environment, way of life, etc.; and

✓ Climate change may be real and we want to understand its potential impacts and prepare for them as much as possible.

**Show Stoppers**

We discussed "show stoppers"; those things that would be hard to overcome when attempting to establish a stormwater utility. Included in the list were:

✓ Fatigue of the staff, and inability to put in the necessary time;

✓ The sense that citizens would resist the perception of a growing bureaucracy;

✓ Angry ratepayers at "yet another fee in the face of economic hard times";

✓ Not wanting to be the first in the State;

✓ Election season is September 2011 and the potential reluctance to have this public at that time;

✓ Much of the land is Federal. The City does not want to exempt them from their proportionate share of responsibility.

Several comments were made on how to avoid some negative reaction including:

✓ Need to show water/sewer rate and how it is paying for stormwater work already.

✓ Demonstrate how the stormwater utility will maximize efficiency of existing resources – through reorganization. This does not necessarily require creating new Departments/Divisions. It requires dedicating existing resources to effectively address stormwater issues.
Emphasize that it is not a 5 fold budget increase for existing versus future program, but how some costs will be reallocated from other programs.

There may be options available to assist in offsetting fees for low income residents.

**Funding and Rate Structure**

There are a series of interrelated funding policy issues that need preliminary resolution. The decisions may rely on such things as program decisions, legality, or preferences and past practice.

We focused on making preliminary decisions of the larger issues, but also on identifying politically important issues even if they have less monetary impact.

**Willingness to Pay**

We discussed the staff’s perception of citizen willingness to pay for stormwater “if we made a good compelling case and they knew every penny would go toward those needs.” Most individuals’ estimates were around $5/month. The average was about $4.50. It was suggested to start with a $2/mo. fee and increase each year, but countered that for the City should begin with the appropriate fee for a “sustainable” program because it would be difficult to increase significantly each year. In the end most felt that, given any flexibility in stormwater budget aggressiveness, $4/mo sounded good as it stays below two emotional barriers $5/mo and $50/year.

We discussed approaches to generate more revenue if need be and three ideas were floated:

- Keep at $4 to $5 and bill roads
- Keep at $4 to $5 and reduce $1M through other programs
- Lower fee & establish a built-in schedule for annual increases

**Basis for the Charge**

The group discussed how to establish the basis for the charge – the basic rate methodology. A stormwater utility rate structure is made up of three components, each of which is built out of a myriad of policy decisions: the basic rate methodology; rate method modification factors; and secondary funding methods.

Some of the policy decisions that frame each of these rate structure components are basic and key to the character of the utility. Some are less important to the overall user fee revenue, though may be very important to the eventual success of the utility. Several options were discussed including:

1. Inclusion of a gross area charge;
2. Using gross area and an intensity of development factor to “credit” green space; and
3. Simply using impervious area.

After significant discussion it was decided to proceed on the basis of impervious area only but to consider giving credit for greenspace that was effective in runoff volume reduction.
There were a number of detailed questions about how to handle various parcel types including condos, apartments, and industrial sites. In the end it was decided to proceed on the basis of an Equivalent Residential Unit and that two or more tiers of residential flat rates was desired.

**Preliminary Data Analysis**

Standard procedure is to base the billing unit on some representative measure of the housing stock – often the median. Variations on this approach can make it representative of a typical house in the lowest tier if several tiers of residential stock are chosen. By way of representing this data, Figure 1 is a histogram of the housing stock in Portsmouth.

![Single Family Parcels - Histogram](image)

**Figure 1. Single Family Residential Structure Histogram**

In our example, the representative size home is taken as the median of the whole data set and rounded to the nearest 100 square feet = 2,200 square feet. This is the billing unit or the Equivalent Residential Unit (ERU) for illustration purposes (however we could bill on other bases such as "per 1,000" or "low tier median", etc.). Single Family Residential (SFR) properties can be handled a number of ways including three demonstrated here: (1) all get a flat 1 ERU; (2) two tiers of residential split at 3,000 sf of impervious area, and (3) each SFR measured individually and charged like NSFR.

Table 3 shows the revenue outcome of the different options for handling SFR. The second section of Table 3 accounts for two special considerations: public roadways (they are impervious) and the Pease Development Authority. The City may or may not choose to charge for these areas. If the City does decide to charge it will have two outcomes:

(1) it will reduce the necessary user fee by over 30%; and
(2) it will retain the City’s current investment in the stormwater program.

The third section of Table 3 shows the revenue implications of decisions to add Pease Dev. Auth. and public roads and the approximate monthly fees necessary per ERU to generate $2.5M annually. As can be seen, the ability to charge less than $5/ERU/Month under the current rate structure can only achieved through the inclusion of both Pease and public roads. The charge for public roads amounts to an estimated 26.5% of total revenue. For a charge of $4.81 ERU/month the bill to the city for its public roads would be approximately $662,000, a number in the range of its current expenditure for stormwater.

Table 3 Revenue Estimates Under Different Scenarios

<table>
<thead>
<tr>
<th>Option or Topic (Pease Development Authority and Public roads NOT included)</th>
<th>SFR ERUs</th>
<th>NSFR ERUs</th>
<th>Total ERUs</th>
<th>Annual Rev. per $1</th>
<th>Fee/ERU for $2.5M/yr</th>
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</thead>
<tbody>
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<td>1 - All SFR are a flat rate</td>
<td>4,003</td>
<td>22,682</td>
<td>26,685</td>
<td>$320,220</td>
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<td>2 - SFR two tiers split at 3,000 sf</td>
<td>4,920</td>
<td>22,682</td>
<td>27,602</td>
<td>$331,224</td>
<td>$7.55</td>
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<td>3 - All SFR direct measurement</td>
<td>6,504</td>
<td>22,682</td>
<td>29,186</td>
<td>$350,232</td>
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Additional Areas

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<th>Option or Topic</th>
<th>SFR ERUs</th>
<th>NSFR ERUs</th>
<th>Total ERUs</th>
<th>Annual Rev. per $1</th>
<th>Fee/ERU for $2.5M/yr</th>
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<td>7 - Pease Development Authority</td>
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<td>8 - Charging for Public Roads</td>
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<td>$137,616</td>
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</table>

Summary Using The Two Residential Tier Option

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<th>Component</th>
<th>ERUs</th>
<th>Rev./ $1</th>
<th>% of Total</th>
<th>Acc. Total Rev./ $1</th>
<th>Fee/ERU for $2.5M/yr</th>
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<td>9 - SFR</td>
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<td>11.4%</td>
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<td>$272,184</td>
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<td>11 - plus Pease Dev. Auth.</td>
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<td>9.9%</td>
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<td>12 - plus Pease and public Roads</td>
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<td>$137,616</td>
<td>26.5%</td>
<td>$520,128</td>
<td>$4.81</td>
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</table>

Stormwater Credits

It was explained that the City could establish credits to be given for private activities and investments that reduce either a parcel’s impact on or use of the system, or reduce the City’s cost to provide services either to that parcel or overall.
The question was asked, "what level of credit 'feels' appropriate given all we have talked about?" The actual credit level is a policy decision based on cost analysis. Based on voting along a continuum the average response was that a 50% credit for a site that met all peak flow and water quality design standards seemed appropriate.

Several concerns were raised and discussed including:

- How will existing conditions be factored? Do good designs already get credit or do they have to go above and beyond? *All private investments to reduce impact should be recognized, past, present and future.*
- How is credit given for non-structural practices and how will it be tracked to demonstrate effectiveness? *This can be done but is manpower intensive.*
- Potential inequity may be perceived with residential credits due to limited abatement options. Residential credits seemed to be very low. *There are ways to implement a residential credit mechanism but due regard has to be paid to the administrative costs versus benefit, and streamlining has to be done.*
- What is the potential reduction of revenue? *Reductions are typically less than 5%.*

**Recommendation to Proceed**

A general discussion was held on the recommendation the staff will make to the City Manager and how the staff felt, after the day's discussion, about establishing a stormwater user fee.

First, it was discussed that the recommendation was not a black and white "GO or NO GO" question, but one of "should we move forward?" and, if so, "how strongly do we feel about this idea?" Based on that idea individuals were asked, "how convinced are you that a stormwater user fee is the right thing to do and do you think we should move forward with the process?"

After considering the needs, the compelling case to be made, the program costs and fees every individual felt it was appropriate to move forward, and half felt that progress should be aggressive.

**Stormwater 101 Meeting**

The Scope of Services Agreement between the City and with AMEC and the Grant Agreement with the State Department of Environmental Services, outlines the next step based on the results of workshop 1.

Based on the compelling case outline herein, the next task calls for a second workshop - a type of 'Stormwater 101' presentation, similar to the workshops facilitated by the City when under going significant changes with its Wastewater Treatment Plant upgrades. The workshop will cover the basic stormwater issues and mandates, the city's efforts to address them, options for an improved stormwater program, funding options that stress fairness and dedication of funds to meeting needs. We will then solicit questions.
Appendix G:

Workshop #1 Summary
Overview

The purposes for the first workshop were to:

- understand program costs and functions, both existing and proposed;
- create a compelling case and messaging for the improved program that would assist in “selling” the concept to stakeholders, political leaders and the general public; and
- develop a framework for the rate structure that will meet the community and staff needs and requirements and allow for City compliance.

The workshop was held over the course of two half-days with different purposes. Day 1 addressed funding and billing related issues, while Day 2 covered program and messaging. The following City staff participated:

  - David Allen, Public Works Deputy Director
  - Judie Belanger, Finance Director
  - Peter Britz, Environmental Planner/Sustainability Coordinator
  - Gail Cunningham, Controller
  - James McCarty, GIS Coordinator
  - Silke Psula, Solid Waste Coordinator
  - Peter Rice, Water & Sewer Engineer
  - Jared Sheehan, Engineer Technician
  - Robert Sullivan, City Attorney
  - Rick Taintor, Planning Director

This summary is presented in a logical, not chronological, order.

Existing and Future Stormwater Programs

Based on a detailed cost of service spreadsheet developed with staff, Portsmouth currently spends about $512,600 annually on all aspects of stormwater management (fully burdened costs) or about $43/acre/year. This level of expenditure can be characterized as “minimal to low moderate” when compared to other stormwater programs across the country. In the workshop we reviewed the current program. Table 1 on the next page shows both existing and proposed future program summaries.
# Table 1. Cost of Service Existing and Proposed Stormwater Program

<table>
<thead>
<tr>
<th>Major Cost Category</th>
<th>Current</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
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<td><strong>Subtotal:</strong></td>
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<td>Site, Design, Field &amp; Ops Engineering (Private Projects)</td>
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<td><strong>Subtotal:</strong></td>
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**Total:** $12,566,000,000

**Cost of Service Analysis:** All Costs, Summarized by Cost Subcategory by Year
There was concern expressed that separation costs under the CSO program might be partially a stormwater cost, and therefore are reflected in the table above. This cost, which is 40% of the total program or approximately $1M annually, may push the fee above most members’ perceived willingness to pay for stormwater.

Review of the detailed spreadsheets shows that approximately 14% of the costs associated with the Stormwater program ($70,000) are currently being funded by the Enterprise funds for Water and Sewer. Future demands and correcting for past deficiencies are expected to significantly increase this level of expenditure.

Future demands and correcting for past deficiencies are expected to significantly increase this level of expenditure. The detailed cost of service projections put the anticipated stormwater program need at about $2.5 M annually for a typical year. This cost was developed prior to any knowledge of revenue capacity of the rate base.

Detailed cost tables were provided to the meeting attendees, comments made and final tables will be developed. The changes were relatively minor and will not materially affect the outcome of related decisions.

**Compelling Case**

Why is it important to make stormwater program improvements – are the reasons compelling?

In every community there are good, even compelling, reasons to improve the way stormwater programs are executed. Such issues can draw the attention and energy of stakeholders and leaders and turn into opportunities for action.

The exercise to develop staff concepts of the compelling case consisted of three steps:

1. Moving consecutively around the room allowing each person to define a reason for the utility fee that they feel might be compelling.

2. Giving each member several votes to vote for what they perceived and understood to be the top three most critical stormwater funding and program issues.

3. Post-meeting analysis to categorize the issues and create themes.

There were seven general categories of issues that felt compelling to the staff. These are laid out in the table along with voting.

From Table #2 it can be seen that Water Quality and Flooding Concerns were the primary concern.

- Water Quality is characterized by: regulatory compliance, estuary

<table>
<thead>
<tr>
<th>Reason</th>
<th># Votes</th>
<th>Category</th>
<th>Total Votes</th>
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<td>Water quality regulatory compliance</td>
<td>8</td>
<td>WQ</td>
<td></td>
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<tr>
<td>Well protection from chlorides</td>
<td>6</td>
<td>WQ</td>
<td></td>
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<tr>
<td>Water quality for runoff into estuaries</td>
<td>5</td>
<td>WQ</td>
<td></td>
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<tr>
<td>Impaired streams</td>
<td>3</td>
<td>WQ</td>
<td></td>
</tr>
<tr>
<td>Sediment runoff</td>
<td>2</td>
<td>WQ</td>
<td></td>
</tr>
<tr>
<td>Basement flooding from all sources</td>
<td>9</td>
<td>FLOOD</td>
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<tr>
<td>Tidal flooding</td>
<td>2</td>
<td>FLOOD</td>
<td></td>
</tr>
<tr>
<td>Unresolved problems “sorry”</td>
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<tr>
<td>Roadway flooding</td>
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<td>FLOOD</td>
<td></td>
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<tr>
<td>House to house drainage problems</td>
<td>0</td>
<td>FLOOD</td>
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<tr>
<td>Stewardship of the system</td>
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<td>MAINT</td>
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<tr>
<td>Unknown system condition</td>
<td>2</td>
<td>MAINT</td>
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</tr>
<tr>
<td>Failing infrastructure</td>
<td>1</td>
<td>MAINT</td>
<td></td>
</tr>
<tr>
<td>Climate change preparation</td>
<td>7</td>
<td>CL</td>
<td></td>
</tr>
<tr>
<td>Sustainable green concerns</td>
<td>6</td>
<td>GREEN</td>
<td></td>
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<tr>
<td>CSO separation</td>
<td>5</td>
<td>CSO</td>
<td></td>
</tr>
<tr>
<td>Infiltration and inflow</td>
<td>0</td>
<td>CSO</td>
<td></td>
</tr>
<tr>
<td>Equivalency fees vs tax</td>
<td>2</td>
<td>FUNDING</td>
<td></td>
</tr>
<tr>
<td>Credits to stimulate activity</td>
<td>0</td>
<td>FUNDING</td>
<td></td>
</tr>
</tbody>
</table>
quality, stream quality and sediment runoff.

✓ Flooding is primarily concerns for basement flooding though tidal, roadway, and simply “unresolved” flooding are also seen as important.

✓ Care for the system (maintenance), preparation for climate change, sustainability and green concerns, and interaction with the CSO system round out the top seven categories.

**Messaging**

In the workshop we discussed how to frame the messages for the compelling case identified for Portsmouth. Key thoughts in the messaging included:

✓ Make the economic and property value preservation connection with what we are doing; clean water is key to our way of life and economy;

✓ Private citizens are flooding from public water; it is a public responsibility;

✓ We have a unfunded mandate and CSO requirements, and there are a lot of things we would do anyway; we all want clean water – it is key to our environment here;

✓ We need to better protect our drinking water from toxic and polluted runoff;

✓ We want to be sustainable and green in all our actions concerning stormwater and our environment, way of life, etc.; and

✓ Climate change may be real and we want to understand its potential impacts and prepare for them as much as possible.

**Show Stoppers**

We discussed “show stoppers”; those things that would be hard to overcome when attempting to establish a stormwater utility. Included in the list were:

✓ Fatigue of the staff, and inability to put in the necessary time;

✓ The sense that citizens would resist the perception of a growing bureaucracy;

✓ Angry ratepayers at “yet another fee in the face of economic hard times”;

✓ Not wanting to be the first in the State;

✓ Election season is September 2011 and the potential reluctance to have this public at that time;

✓ Much of the land is Federal. The City does not want to exempt them from their proportionate share of responsibility.

Several comments were made on how to avoid some negative reaction including:

✓ Need to show water/sewer rate and how it is paying for stormwater work already.

✓ Demonstrate how the stormwater utility will maximize efficiency of existing resources — through reorganization. This does not necessarily require creating new Departments/Divisions. It requires dedicating existing resources to effectively address stormwater issues.
Emphasize that it is not a 5 fold budget increase for existing versus future program, but how some costs will be reallocated from other programs.

There may be options available to assist in offsetting fees for low income residents.

**Funding and Rate Structure**

There are a series of interrelated funding policy issues that need preliminary resolution. The decisions may rely on such things as program decisions, legality, or preferences and past practice.

We focused on making preliminary decisions of the larger issues, but also on identifying politically important issues even if they have less monetary impact.

**Willingness to Pay**

We discussed the staff’s perception of citizen willingness to pay for stormwater “if we made a good compelling case and they knew every penny would go toward those needs.” Most individuals’ estimates were around $5/month. The average was about $4.50. It was suggested to start with a $2/mo. fee and increase each year, but countered that for the City should begin with the appropriate fee for a “sustainable” program because it would be difficult to increase significantly each year. In the end most felt that, given any flexibility in stormwater budget aggressiveness, $4/mo sounded good as it stays below two emotional barriers $5/mo and $50/year.

We discussed approaches to generate more revenue if need be and three ideas were floated:

- Keep at $4 to $5 and bill roads
- Keep at $4 to $5 and reduce $1M through other programs
- Lower fee & establish a built-in schedule for annual increases

**Basis for the Charge**

The group discussed how to establish the basis for the charge – the basic rate methodology. A stormwater utility rate structure is made up of three components, each of which is built out of a myriad of policy decisions: the basic rate methodology; rate method modification factors; and secondary funding methods.

Some of the policy decisions that frame each of these rate structure components are basic and key to the character of the utility. Some are less important to the overall user fee revenue, though may be very important to the eventual success of the utility. Several options were discussed including:

1. inclusion of a gross area charge;
2. using gross area and an intensity of development factor to “credit” green space; and
3. simply using impervious area.

After significant discussion it was decided to proceed on the basis of impervious area only but to consider giving credit for greenspace that was effective in runoff volume reduction.
There were a number of detailed questions about how to handle various parcel types including condos, apartments, and industrial sites. In the end it was decided to proceed on the basis of an Equivalent Residential Unit and that two or more tiers of residential flat rates was desired.

**Preliminary Data Analysis**

Standard procedure is to base the billing unit on some representative measure of the housing stock – often the median. Variations on this approach can make it representative of a typical house in the lowest tier if several tiers of residential stock are chosen. By way of representing this data, Figure 1 is a histogram of the housing stock in Portsmouth.

In our example, the representative size home is taken as the median of the whole data set and rounded to the nearest 100 square feet = 2,200 square feet. This is the billing unit or the Equivalent Residential Unit (ERU) for illustration purposes (however we could bill on other bases such as “per 1,000” or “low tier median”, etc.). Single Family Residential (SFR) properties can be handled a number of ways including three demonstrated here: (1) all get a flat 1 ERU; (2) two tiers of residential split at 3,000 sf of impervious area, and (3) each SFR measured individually and charged like NSFR.

Table 3 shows the revenue outcome of the different options for handling SFR. The second section of Table 3 accounts for two special considerations: public roadways (they are impervious) and the Pease Development Authority. The City may or may not choose to charge for these areas. If the City does decide to charge it will have two outcomes:

1. it will reduce the necessary user fee by over 30%; and
(2) it will retain the City’s current investment in the stormwater program.

The third section of Table 3 shows the revenue implications of decisions to add Pease Dev. Auth. and public roads and the approximate monthly fees necessary per ERU to generate $2.5M annually. As can be seen, the ability to charge less than $5/ERU/Month under the current rate structure can only achieved through the inclusion of both Pease and public roads. The charge for public roads amounts to an estimated 26.5% of total revenue. For a charge of $4.81 ERU/month the bill to the city for its public roads would be approximately $662,000, a number in the range of its current expenditure for stormwater.

Table 3 Revenue Estimates Under Different Scenarios

<table>
<thead>
<tr>
<th>Option or Topic (Pease Development Authority and Public roads NOT included)</th>
<th>SFR ERUs</th>
<th>NSFR ERUs</th>
<th>Total ERUs</th>
<th>Annual Rev. per $1</th>
<th>≈ Fee/ERU for $2.5M/yr</th>
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<tbody>
<tr>
<td>1 - All SFR are a flat rate</td>
<td>4,003</td>
<td>22,682</td>
<td>26,685</td>
<td>$320,220</td>
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<td>2 - SFR two tiers split at 3,000 sf</td>
<td>4,920</td>
<td>22,682</td>
<td>27,602</td>
<td>$331,224</td>
<td>$7.55</td>
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<td>3 - All SFR direct measurement</td>
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<td>22,682</td>
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<td>$350,232</td>
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Additional Areas

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<tr>
<th>Option or Topic</th>
<th>SFR ERUs</th>
<th>NSFR ERUs</th>
<th>Total ERUs</th>
<th>Annual Rev. per $1</th>
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<td>8 - Charging for Public Roads</td>
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<td>$137,616</td>
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Summary Using The Two Residential Tier Option

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<th>Component</th>
<th>ERUs</th>
<th>Rev./ $1</th>
<th>% of Total</th>
<th>Acc. Total Rev./$1</th>
<th>≈ Fee/ERU for $2.5M/yr</th>
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<tr>
<td>9 - SFR</td>
<td>4,920</td>
<td>$59,040</td>
<td>11.4%</td>
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<td>10 - NSFR</td>
<td>22,682</td>
<td>$272,184</td>
<td>52.3%</td>
<td>$331,224</td>
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<td>11 - plus Pease Dev. Auth.</td>
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<td>$51,288</td>
<td>9.9%</td>
<td>$382,512</td>
<td>$6.54</td>
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<tr>
<td>12 - plus Pease and public Roads</td>
<td>11,468</td>
<td>$137,616</td>
<td>26.5%</td>
<td>$520,128</td>
<td>$4.81</td>
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Stormwater Credits

It was explained that the City could establish credits to be given for private activities and investments that reduce either a parcel’s impact on or use of the system, or reduce the City’s cost to provide services either to that parcel or overall.
The question was asked, “what level of credit ‘feels’ appropriate given all we have talked about?” The actual credit level is a policy decision based on cost analysis. Based on voting along a continuum the average response was that a 50% credit for a site that met all peak flow and water quality design standards seemed appropriate.

Several concerns were raised and discussed including:

- How will existing conditions be factored? Do good designs already get credit or do they have to go above and beyond? All private investments to reduce impact should be recognized, past, present and future.
- How is credit given for non-structural practices and how will it be tracked to demonstrate effectiveness? This can be done but is manpower intensive.
- Potential inequity may be perceived with residential credits due to limited abatement options. Residential credits seemed to be very low. There are ways to implement a residential credit mechanism but due regard has to be paid to the administrative costs versus benefit, and streamlining has to be done.
- What is the potential reduction of revenue? Reductions are typically less than 5%.

**Recommendation to Proceed**

A general discussion was held on the recommendation the staff will make to the City Manager and how the staff felt, after the day’s discussion, about establishing a stormwater user fee.

First, it was discussed that the recommendation was not a black and white “GO or NO GO” question, but one of “should we move forward?” and, if so, “how strongly do we feel about this idea?” Based on that idea individuals were asked, “how convinced are you that a stormwater user fee is the right thing to do and do you think we should move forward with the process?”

After considering the needs, the compelling case to be made, the program costs and fees every individual felt it was appropriate to move forward, and half felt that progress should be aggressive.

**Stormwater 101 Meeting**

The Scope of Services Agreement between the City and with AMEC and the Grant Agreement with the State Department of Environmental Services, outlines the next step based on the results of workshop 1.

Based on the compelling case outline herein, the next task calls for a second workshop - a type of ‘Stormwater 101’ presentation, similar to the workshops facilitated by the City when undergoing significant changes with its Wastewater Treatment Plant upgrades. The workshop will cover the basic stormwater issues and mandates, the city’s efforts to address them, options for an improved stormwater program, funding options that stress fairness and dedication of funds to meeting needs. We will then solicit questions.
Appendix H:

Stormwater 101
Public Meeting Materials
PORTSMOUTH – With the federal government imposing tighter restrictions on how the City of Portsmouth deals with stormwater -- rainwater flowing off public and private streets, driveways, roofs, yards and open spaces -- City officials will hold a “Stormwater 101” information session for the public Wednesday (Dec. 14).

The session, which begins at 7 p.m. in the Library’s Levenson Room, will address Portsmouth’s ongoing stormwater program, future options to reduce pollution, and the costs to implement.

More than one-quarter of Portsmouth is covered by surfaces impervious to rainwater, such as parking lots, roads and driveways. Studies have found that percentages above 10% can contribute to degradation of the quality of surrounding water bodies due to a lack of natural soil filtration or groundwater recharge.

“The Environmental Protection Agency is imposing more regulations on how we deal with our stormwater runoff,” said Dave Allen, deputy Department of Public Works director and head of the City’s water and sewer division. “This session will address the complexity and what needs to get done from the viewpoint of our capital and operational needs for our stormwater system in order to meet these tighter standards.”

After providing background on the definitions of stormwater, the session will focus on the federal government’s Clean Water Act Phase 1 and Phase II Regulations. This will include permit requirements, Portsmouth’s
efforts to meet them -- such as its recent stormwater study; the City’s long-term control plan; and how to fund improvements.

The City has been working with the New Hampshire Department of Environmental Services (DES) to develop future plans for its stormwater system. “Clean water is a vital resource to Portsmouth’s way of life, economy, property values and tourism. This session will provide information about the City’s critical stormwater infrastructure and ways to keep it functioning to protect water quality,” said Barbara McMillan, DES Watershed Outreach Coordinator. “This is a great opportunity for local residents and businesses to have input into how their water resources are preserved.”

# # #

The Stormwater 101 Presentation is at:
Appendix I:

Stormwater

Webpages at:
http://www.cityofportsmouth.com/publicworks/stormwater.htm
STORMWATER

Welcome to the stormwater section, this section is intended to help you understand the importance of stormwater and what can cause stormwater pollution. Please refer to the following link for more information.

- Stormwater Meetings, Reports and Videos
- What is Stormwater Pollution?
- What is the City doing about Stormwater Pollution?
- What can you do about Stormwater Pollution?
- Identifying + Reporting Water Pollution

The City of Portsmouth is part of four watersheds.

When it rains, or snow melts or water flows into Portsmouth's stormwater system, it will ultimately make its way [or flow] and discharge into one of the following watersheds (arrows indicate direction of flow).

- Portsmouth Harbor Watershed
- Berry’s Brook-Rye Harbor Watershed
- Winnicut River Watershed
- Great Bay Watershed

As storm water flows (or snow melts, etc.), it picks up debris, chemicals - such as fertilizers and pesticides - dirt, cigarette butts and other pollutants. Many times, rainfall events result in the closure of clam beds for 48 hours or more.
Appendix J:

Portsmouth Final Feasibility Study is at:

Appendix K:

Related Outreach Documents, Presentations, and Press
PORTSMOUTH — The snow may not have dampened the spirits of the two dozen people who traveled to the city to listen to proposed changes to stormwater quality standards, but the Environmental Protection Agency certainly did.

With the expiration of the first municipal separate storm sewer system general permit in 2008, the EPA is seeking to reissue the permit in 2009 with more stringent regulations and maintenance plans aimed at limiting stormwater pollution. A majority of the two dozen engineers and public works officials, who came from as far as Goffstown, felt many of the new requirements are needless and costly — at a time when communities can't afford it.

The draft permit requires municipalities street sweep twice a year, increase monitoring programs, regularly clean catch basins, inspect new construction sites and educate the public. Many who spoke said the new administrative costs would be excessive and not improve water quality.

"You're setting up the municipalities to fail, and you're setting up the EPA to fail," said Dean Peschel, environmental project manager for the city of Dover. "I urge you to rethink the permit in light of the current economic realities."

The forum included a question-and-answer session, as well as a public comment period that lasted into the afternoon.

Portsmouth City Manager John Bohenko told officials that even though the city has a longstanding commitment to the environment, new regulations in the draft permit would cost the city $2.1 million over the permit cycle. At a time when the city is looking at a zero increase in the budget, he said that money would be better served by improving infrastructure.

"Although we applaud the EPA's efforts in this area, some aspects of the proposed permit are excessively burdensome and will not improve stormwater quality," Bohenko said.

David Cedarholm, town engineer in Durham, said the measures could increase the public works budget by 25 percent.

Robert Robinson, of Manchester's environmental protection division, said just to clean each of the city's 14,000 catch basins every other year, as required in the draft, would cost $350,000 per year.

"This will definitely be financially burdensome," he said.

Thelma Murphy, EPA regional stormwater coordinator, told the representatives the agency is willing to be flexible and will take their comments under advisement as a final draft is formed.
"We know people are concerned about monitoring requirements and costs involved," Murphy said. "Some people felt we were being too prescriptive while others seem to like it. So there's a middle ground we will try ... to allow communities to build on what they've already done rather than recreate it."

FOR MORE INFORMATION:  
Rick Dolce, Engineering Project Manager, 766-1413  
Peter Rice, P.E., City Engineer, 766-1416

Major City Work Projects Closed Down for Winter

PORTSMOUTH — All of the City’s major long-term construction projects have now closed down for the winter but work is scheduled to resume in the spring.

These projects involve separating the City’s aged combined water-sewer pipes remaining in sections of Portsmouth as part of the long-term program to improve drinking water quality and deal with pollutants from stormwater runoff.

The $5.5 million Lincoln Area Sewer Separation Project work has been suspended until mid-March. The 15-month project, which began last summer is part of the City’s ongoing Combined Sewer Overflow-Long Term Control Plan and required by a U.S. Environmental Protection Agency administrative order, includes water, sewer, drainage and streetscape modifications on Lincoln Avenue from Middle Street to Richards Avenue. Utility work is also being performed on Miller Avenue, Broad Street, Spring Street, Willow Lane, Union Street and Wibird Avenue to separate the current combined sewer lines and storm drains. The project is funded by the State Revolving Fund loan, and City of Portsmouth Sewer and Water System Revenues.

The majority of the yearlong, $4 million Bartlett and Islington Area Sewer Improvements Project to install sewer, drainage and water system components has been completed, with crews scheduled to return in the spring to lay the final layer of asphalt and permanent traffic striping on Islington & Bartlett Streets, Jewell Court and Brewery Lane. This project also is part of the long-term control plan and included water, sewer, drainage and minor streetscape upgrades on Bartlett Street, Islington Street, and Jewell Court up through the old Department of Public Works site.

Crews in December completed work on the of the 18-month, $4.2 million State Street Reconstruction Project after installing new sewer and water pipes, drainage, sidewalks, lighting, paving and landscaping in the portion of State Street between Pleasant Street and the Memorial Bridge. The project was funded with a State
Revolving Fund loan, federal stimulus money, and City sewer & water, and highway funds.

The City has some of the oldest water-sewer and stormwater infrastructure in the state, but has been working to improve water quality to meet the standards necessary to maintain Portsmouth’s quality of life, and meet regulations established and enforced by the federal government. Another goal is to protect the City’s water bodies from detrimental and polluted runoff, which is made difficult by the fact that 27% of Portsmouth is comprised of impervious surfaces that cannot filter debris and toxins before rainwater and other runoff enters the stormwater system and ultimately discharges into surrounding water bodies. Portsmouth’s impervious surface is almost three times the level where studies have shown a negative impact to receiving waters. The City’s Capital Improvement Plan includes additional projects in the near future that are designed to continue the program of meeting water quality standards.

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What's in a name? New utility means new tax