Developing a Small Business in Response to a Stormwater Utility for the New Jersey Meadowlands-Business Plan

Prepared by the Rutgers P3 Team

Robert Flaherty
Kathleen Kang
Michael Rashkovsky
Jericho Silang
BUSINESS PLAN

EXECUTIVE SUMMARY

This business plan approaches the new market available to engineering firms to retrofit existing structures and stormwater infrastructure to reduce localized flooding and water quality impacts within a stormwater utility district. Property owners within a stormwater utility district will be required to pay user fees based upon their impervious lot coverage. These fees can be reduced by installing stormwater best management practices (BMPs) to minimize the impact of stormwater runoff from their lot’s impervious surfaces. This business plan examines the opportunities of a small business, the Stormwater Response Team, to market their services to individual property owners to design and construct stormwater BMPs to improve stormwater management on their property, thereby reducing the property owner’s utility fees that are levied by the stormwater utility. This business plan also examines the opportunities of the Stormwater Response Team working directly for the stormwater utility. The utility would hire the Stormwater Response Team to conduct audits of businesses within areas known to be susceptible to flooding. The utility would use their fees to pay the Stormwater Response Team to examine opportunities for installing stormwater management practices on properties in these critical areas. Then the utility would fund these projects with fees collected from the property owners within the critical areas.

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The user fee of the stormwater utility is based on the amount of impervious surface owned by the user. The fee is $31.06/1000 ft² per year. Due to the low cost of the fee this plan focuses its effort toward larger commercial and industrial areas that are mostly made of large swaths of impervious surface. The user fee is a moderate rate for the district and even with a credit reduction program it will be hard to have economic incentives for landowners to take the initiative to hire an engineering firm to improve their site. According the Stormwater Utility Report for the Meadowlands Commission the minimum allowable fee for the Stormwater Utility to charge and still be able to do basic maintenance is $8.44/1000 ft² per year. This will only give a savings of $22.62/1000 ft² per year or $985.32/acre per year. Structural BMPs will cost much more than $985.32 to install and design. Even with a fee reduction the economic incentive to encourage property owners to be pro-active about implementing BMPs on their property to reduce flooding is the increase in business revenue they will receive from the reduction of flooding.

Another way to view the economic opportunities available to the Stormwater Response Team in the Meadowlands District due to the Stormwater Utility is being contracted by the Stormwater Utility to work with specific property owners whose property is the source of flooding issues in a specific region. The firm would negotiate a fee that they would charge the stormwater utility to work with a specific amount of property owners, or meet a specific reduction in runoff or flooding events for a predetermined area in the district. This could include granting the property owners a fee reduction for participating with the firm in the project. That will need to be determined during negotiations with the Stormwater Utility.
REVIEW OF FINANCIAL MARKET

A stormwater utility is being considered by the Hackensack Meadowlands Commission for the residential/commercial/industrial district that they regulate. Rutgers University was contracted by the Meadowlands Commission to determine the feasibility of a Stormwater Utility. The Stormwater Utility Feasibility Report was issued in July 2007. Presently, the State of New Jersey is working to pass legislation to allow for the creation of stormwater utilities in New Jersey. New Jersey is the most densely populated state and is closing on a built out status. Stormwater utilities are rapidly becoming a necessity in the State for managing aging infrastructure and minimizing the impact of vast impervious surfaces. The creation of these utilities will result in charging fees to residents and business owners to support better stormwater management that will reduce flooding and improve water quality.

This business plan uses the fee structures outlined in the Stormwater Utility Feasibility Report to evaluate the future of the market available to a small business in the region. There are several fee structures suggested in the flat rates, gross parcel area, impervious coverage area, intensity development factor, runoff coefficient and fixed base amount. While the report suggests all of these fee structures as options for the stormwater utility it recommends the impervious coverage or Intensity Development Factor as the two preferred fee structures. These fee structures will be the most fair and the easiest to administer. The Impervious Coverage structure will base the fee on a flat rate charged to the user by the amount of impervious coverage on their property. The Intensity Density Factor (IDF) is typically measured as the amount of impervious coverage relative to the total gross square footage of a parcel. As with impervious coverage, this factor is a meaningful measure of a property’s contribution to stormwater runoff. When using an IDF, parcels are typically grouped into land use categories when applying rates. IDF may be used in combination with some other factors, but not with comparable measures (such as a runoff coefficient), because this would result in duplicating like factors.

The Stormwater Utility Feasibility Report describes the varying levels of responsibility that can be achieved by a stormwater utility. For the Hackensack Meadowlands District, the report outlines three different levels of service support that the utility can provide to the users. The three scenarios are explained below.

Scenario 1. Operation and Maintenance only - $1.8 million

In this scenario, only basic operations and maintenance (O+M) are performed, including periodic catch basin cleaning and weekly street sweeping. Repairs are performed on an as-needed basis in a reactive fashion. This scenario essentially calls for what is currently being required of the public works departments of the Counties or the District municipalities, but adds some inspections and increases the cleanout frequency.

This program cost option assumes annual inspection of tide gates, pump stations, and other water control structures, but does not include a budget for repairs. It was assumed that catch basins and sewers would be repaired in a reactive fashion as complaints were
received and that ditches would be cleaned when they became clogged or obstructed. Capital equipment was amortized over a ten year period. This scenario requires an annual budget of approximately $1.8 million per year.

Scenario 2. Maintenance Plus Critical Improvements – “Minor Capex” $4.0 million

This scenario includes everything describe in Scenario 1, and adds critical annual capital improvements, including the replacement of one major water control structure (tide gate or pump) per year. It also adds more sophisticated equipment, such as a video camera inspection unit and a jet truck, as well as additional maintenance equipment, such as dump trucks, pickup trucks, and a backhoe. This option assumes the reconstruction or replacement of deteriorated catch basins and critical storm sewers totaling $55,000 per year. This second scenario requires an annual budget of approximately $4.0 million.


The third scenario examined includes everything in the first two programs and adds the complete implementation of the Floodplain Management Plan over a ten-year period, which was developed for the Army Core Engineers to address the flooding problems in the district. The annual budget for this program scenario is approximately $6.7 million, much of which is outsourced to repair major water control structures.

The calculations in the stormwater utility feasibility report assume that under Scenario 3 the annual fee for the users will be approximately $31.06/1,000 square feet of impervious coverage. Under Scenario 1 the annual fee is estimated to be $8.22/1,000 square feet of impervious coverage. The Feasibility report goes on to discuss that a credit program can be created to allow users to improve their property through a stormwater management point view to get a reduced fee. The report does not go into detail about what a minimum fee would be or if a fee could be completely eliminated but for the this plan, it will be assumed that the minimum charge the utility can give is what they offer for Scenario 1 and the maximum will be for Scenario 3. This will give a savings of $22.62/1,000 square feet of impervious coverage per year or $985.32/acre of impervious coverage per year. Since structural BMPs to treat a one acre impervious surface will likely cost much more than $985.32 to install and design, a fee reduction will not be enough to encourage property owners to hire a small business to design and build BMPs on their property. Therefore, the marketing of the program must include increased business revenue to commercial and industrial sites that will result from reduced flooding and an increase in the quality of life for residential areas.

Every year in the Meadowlands district, there is an unusually high number of flooding events. These flooding events disrupt business operations and reduce the quality life for residents in the district. The frequent flooding in the region occurs due to the low elevation of the district; it’s proximity to waterways, tidal influences and failing infrastructure. By improving and repairing the stormwater infrastructure of the district flooding should become a much less frequent occurrence. During many of the flood
events each year, this area has several businesses that must stop operations because the flood waters limit access to their property. Additionally, residents throughout the district are put out several times throughout the year due to flooding. This is where the marketing plan program has to emphasize the other benefits to hiring the Stormwater Response Team consulting firm or cooperating with the Stormwater Response Team to improve their property thus improving their business and/or quality of life.

**Service**

Once a fee structure and credit program is in place for the District, there will be a strong demand from users wishing to modify their existing rate and reduce the economic costs of flooding by implementing stormwater BMPs on their property. Part of the audit would include estimates of rate reductions that correspond to the recommendations as well as estimates of the economic benefits (e.g., reduced lost work time, reduction in property damage, and/or reduced insurance premiums). If the user wishes to proceed, site-specific designs and cost estimates will be prepared as the next step. The final step would involve actual implementation.

Take, for example, a commercial property at Broad Street in Carlstadt, the property owner recently implemented the following (NJMC 2005):

1. Increased the hydraulic capacity of inlet grates,
2. Added a high-power pump with backup,
3. Redirected roof water away from parking areas,
4. Installed a one-way valve on the system outlet,
5. Constructed a flood wall around critical properties to the 10 year surge elevation, and
6. Repaved the lot to reduce the amount of grit entering the pump chamber.

After a preliminary audit by the Rutgers researchers, it was discovered that additional measures could be taken on this property. They included:

1. Converting some of the area between the buildings to a detention pond that could hold water at least through one tidal cycle,
2. Installing several large cisterns to capture roof runoff that would be released at low tide,
3. Installation of additional one-way valves in local drains,
4. Repair of the Broad Street & 20th Street tide gate,
5. Cleanout of all catch basins and drainage ditches, and
6. Installation of additional pump stations.

**CUSTOMERS**

Once a small business that specializes in design and implementation of stormwater BMPs, the Stormwater Response Team, is created; there are two different types of customers available to them. The Stormwater Response Team could work directly for
residents and business owners on a one to one basis helping them reduce their contribution to flooding. In turn, this will result in these property owners receiving a reduction in their stormwater utility fee. In this fashion, every property owner in the district would be a potential candidate as a customer to the Stormwater Response Team. Secondly, the Stormwater Response Team could work directly for the stormwater utility. The utility would hire the Stormwater Response Team to conduct audits of businesses within areas known to be susceptible to flooding. The utility would use their fees to pay the Stormwater Response Team to examine opportunities for installing stormwater management practices on properties in these critical areas. Then the utility would fund these projects with fees collected from the property owners within the critical areas.

The list of every resident in the district is not a feasible. Not every resident is equally affected by flooding in the region. Some residents would be more interested in the program than others. The Hackensack Meadowlands Floodplain Management Plan outlines 17 specific areas that are serious affected by flooding each year. This would be the starting point to narrowing the list down. Obviously, a list of 17 properties is not enough of a list to invest in a program of advertising in the district. The firm would research other flood management reports, and flood incident reports that can be filled out by private land owners documenting when and how their property flooded on a specific date. FEMA Flood maps will also indicate regions of the district that have chronic flooding problems.

Since stormwater utilities have yet to be created in New Jersey, a market for these services does not yet exist. Therefore, there is no competition to the Stormwater Response Team. If the Meadowlands Commission decides to create a stormwater utility, that action will create the market that is addressed in the plan. Some consulting firms may have an existing working relationship with businesses throughout the district that may be resulted from state requirements in developing site plans or pollution prevention plans. While there may be existing relationships, it is not unreasonable to believe that businesses will seek out specialists that deal with stormwater management instead of looking to typical engineering companies to complete the stormwater management designs that are needed. The Stormwater Response Team would have superior design experience in addressing stormwater issues, especially in areas where tidal influences and a high groundwater table are problematic. This tied with an aggressive marketing campaign should convince businesses that have loyalties to other firms to work with the Stormwater Response Team.

The largest problem in working directly with the property owner instead of the stormwater utility is to determine how often businesses in the area have closed due to flooding and determining if a reduction in flooding would increase business revenue; then convincing the property owner that investing in measures to reduce flooding will be financially worthwhile. Determining which areas have the worst flooding conditions should be a simple task but determining for which businesses will profit enough from the reduced flooding events to buy into the program may be more difficult. The best approach is to find whatever financial information is available in the district and to start
by targeting the businesses that make the most money but are in the worst areas for flooding.

**MARKETING STRATEGY**

The creation of the Stormwater Utility will help users to connect the dots between the conditions of their property to the conditions of the district especially to flooding. The marketing strategy for this plan should focus on two principles, if the firm decides to work directly with the users, fee reduction and increased business revenue and improved quality of life. If the firm decides it is best to work directly through the Stormwater Utility, the marketing should focus on how working with the firm as a user can only benefit the users by improving the conditions of their property and surrounding environment.

While there will be targeting of the specific businesses as discussed above, there should be an attempt to reach as many users as possible to maximize the potential for profit. The marketing strategy should include door to door canvassing of locations with the greatest flooding potential and the maximum profit. Educational material will be distributed to the users to educate them on the status of the utility and inform them on stormwater related issues. It would be a good idea to try to purchase advertising space on these letters to advertise the services available to the users whether or not the firm decides to work with users on a one on one basis or to partner with the utility.

**CASH FLOW**

Table 1: Estimate of Operating Cost for Business

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<th>Staff</th>
<th>Quantity</th>
<th>Salary</th>
<th>Total</th>
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<tbody>
<tr>
<td>Engineers</td>
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<tr>
<td>Secretary</td>
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<tr>
<td>Total Direct Costs:</td>
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<td>Overhead (30%):</td>
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<tr>
<td>Profit (30%):</td>
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<td></td>
<td>$48,000</td>
</tr>
<tr>
<td><strong>TOTAL ANNUAL BUDGET:</strong></td>
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<td><strong>$256,000</strong></td>
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