

***WHITEMARSH TOWNSHIP STORMWATER TASK FORCE
2005 END OF YEAR REPORT
Dated January 2006***

INTRODUCTION

As the Board of Supervisors (the “Board”) is aware, a series of significant storm events in the fall of 2004 caused widespread damage throughout Whitemarsh Township (the “Township”). Following on the heels of those storms, the Supervisors began a series of public meetings with Township Residents from many of the most severely affected neighborhoods in an effort to both begin to understand the extent of damage local residents were facing and to start to identify a strategy for moving forward with a plan to address the long-term, and seemingly increasing, negative impact of stormwater runoff within the Township.

The Board, recognizing both the value of direct input from residents most directly impacted by flooding and the significant progress that can result from a collaborative effort among the Township and its residents, created the Stormwater Task Force (the “Task Force”) – a group formed by the Board with one purpose in mind: to create a Township-wide Action Plan for Stormwater Management that (1) proposed strategies for identification and prioritization of stormwater management improvements throughout the Township, (2) identified potential funding strategies and mechanisms, (3) developed and implemented a public education program and (4) proposed a communication plan for keeping residents “up to date” on stormwater management related programs. Initially established with a representative from each of the neighborhoods most hard hit by the 2004 storms (Whitemarsh Valley Farms, Fairway Road, Cedar Drive, Warner/Center/Edmonds, and Barren Hill Road/Harts Lane), as well as various Township Staff and Consultants, the Task Force also recommended the addition of a representative from the Sheaff Lane/ Stenton Avenue neighborhood to its rolls. In addition, through public participation at its monthly meetings, the Task Force has identified still more areas in need of stormwater management improvements.

The Task Force has spent the better part of a year meeting monthly to review the progress on stormwater improvement projects already under construction, to review and comment on proposed stormwater improvement projects under study, to investigate and debate potential funding options available for the financing of long term stormwater management improvements and to begin to identify key avenues of education and communication on stormwater related topics.

As the year draws to a close, the Task Force thought it an appropriate opportunity to report back to the Board not just on what has been accomplished to date, but perhaps most importantly, on the many tasks still left to complete. As outlined in the Resolution that created it, the Task Force has focused on four critical areas of investigation, each of which is individually addressed below: (1) stormwater management improvements, (2) funding mechanisms, (3) public education and (4) communication.

If the Board and the Township-at-large take only one thing away from this summary, it should be the Task Force’s carefully considered belief that the “stormwater problem” in Whitemarsh Township is not the isolated problem of the occasional unlucky homeowner or a few individual neighborhoods, but rather is a Township-wide concern that impacts each and every member of the community. This direct impact can be seen not

just through flooded basements, but via impassable roads, washed out bridges and the like, and in an area perhaps easiest for every individual to identify with: the direct costs to the Township of addressing such events. The long-term implications of flooding include a decrease in property values and an increase in dangerous conditions, not just at individual private properties, but on and around public roads and other amenities.

Adequately addressing stormwater management problems will be neither quick nor easy. It will require a long-term, sustained effort on the part of this Township and its neighbors and, by necessity, must involve not only “government action” but also “individual participation.” It is, quite simply, a problem that can no longer be ignored.

STORMWATER MANAGEMENT IMPROVEMENTS

Our work to date

Throughout the year, the Task Force has devoted at least a portion of each monthly meeting to a presentation by Schoor DePalma, Township Engineers, wherein Schoor DePalma was asked to update the Task Force on stormwater management projects under construction and to further discuss potential projects under study. Through candid and open discussion with the very residents living in the impacted neighborhoods, Schoor DePalma was able to continually refine proposed solutions to best address on-the-ground realities. While this is by no means a completed process, the following represents a comprehensive look at the work done to date.

The stormwater studies (the “Studies”) performed have considered the various areas within the Township that are adversely impacted during heavy rainfall events. They define conceptual stormwater management improvement designs and cost estimates for each affected area and take into account the constructive input received from the residents and area representatives during Task Force meetings. *Although the Studies have evolved over time through the cooperative effort of Schoor DePalma and the Task Force, they by no means represent a “complete solution” that will solve all stormwater management related issues facing the Township. Rather, the Studies represent proposed improvements for those areas initially identified as requiring assistance. As the Task Force moves forward in the coming year, it fully expects that, not only will additional areas be identified as requiring similar study, but also that the improvements identified to date will be further refined as our understanding of the full scope of the stormwater management issues facing the Township expands.*

The Studies involved the use of hydrologic and hydraulic modeling to prepare conceptual designs for collection systems and detention basins to alleviate flood impacts on the residents who are directly affected by stormwater. Secondary benefits of the improvements include safer roadways and reduced streambank erosion downstream of the improvements. Detention basins will be designed with best management practices (BMPs) to recharge stormwater and improve water quality. These BMPs, such as wetland creation, employed in the basins to improve water quality, may also be useful as an educational resource. Selected basins may be designed to provide a dual benefit of stormwater rate reduction (by slowing the

rate of stormwater discharge into the Township's storm sewer system) while serving as an open space area or a sports field during clear weather.

Summarized findings of the initial Studies can be found within the spreadsheet and plan sheet figures following the Report in *Appendix "A"*. The project number indicated on the spreadsheet and the plans provide reference between the spreadsheet, the figures, and the following summaries. Studies to date include eight distinct areas within the Township identified as follows:

Barren Hill Road/ Reserve Area (figure and spreadsheet reference numbers 1 through 9) - The Barren Hill Road/ Reserve Area, an area located generally south of Joshua Road, west of the Township Building, north of the Ace Center Golf Course and Harts Ridge Road and east of the Schuylkill River, has a watershed drainage area of 632 acres. The watershed is approximately 1.75 miles long by 0.75 miles wide and slopes from the east to the west toward the Schuylkill River.

Schoor DePalma estimates approximately 68 residences, regularly impacted during large storm events, will directly benefit from the improvements. These include properties along the north side of Barren Hill Road between Red Maple Drive and River Road and properties along Dogwood Lane and Brook Lane. Excess stormwater draining from Hart's Ridge is not adequately captured and safely conveyed across Barren Hill Road to the receiving stream below. Consequently the excess stormwater flows across Barren Hill Road and directly into the properties on the north side of the road.

The Phase I improvements completed to date include a stormwater collection and inlet system within Cedar Drive, west of Pine Ridge Road, and an embankment repair and stabilization project at Evergreen Lane, west of Pine Ridge Road.

The Phase II improvements include the installation of curb and sidewalk along the north side of Barren Hill Road to intercept and divert the stormwater away from the homes. A collection system is required to capture the stormwater that flows along the south and north sides of this portion of the roadway and convey it to the stream. Additional collection systems are required to capture and safely convey stormwater that currently flows in an uncontrolled manner across properties and down Brook Lane and Dogwood Lane. Enlarged driveway cross piping is required on the south side of Barren Hill Road to supplement the above noted collection system to convey some of the water along the south side of the road. Additionally, improvements to the existing basins that exist on Hart's Ridge and construction of an additional basin at the headwater of the watershed will compensate for increased flowrates resulting from the installation of the new collection and conveyance stormwater piping systems. Lastly, a gabion streambank protection structure is proposed adjacent to a home whose foundation is being scoured adjacent to the stream near River Road.

The storm sewer system located in Chinaberry Road and in the area of Pine Ridge Road was televised during April and March of 2005 to determine the location and evaluate the condition of the existing system. Overall the system was found to be in a functional condition with a few pipe runs containing debris.

The estimated cost for the currently identified improvements within the Barren Hill Road Watershed is approximately \$1,500,000.00.

Hart's Lane Area (figure and spreadsheet reference numbers 10 through 16) - The Hart's Lane Area, an area located generally south of Hart's Ridge Road, northwest of the Ace Center Golf Course, and east of the Schuylkill River, has a watershed drainage area of 124 acres. The watershed is approximately 0.8 miles long by 0.3 miles wide and slopes from the east to the west towards the Schuylkill River.

Schoor DePalma estimates approximately 16 residences and a school, all regularly impacted during large storm events, will directly benefit from the improvements. These include properties along the west side of Hart's Lane between Paddock Lane and River Road. Excess stormwater draining from Hart's Ridge and the golf course is not adequately captured and safely conveyed along Hart's Lane and within the stream channel. Consequently the excess stormwater flows across Hart's Lane and directly into the properties on the west side of the road. Excess stormwater also exists at constriction points at Paddock Lane, which causes localized flooding.

The Phase I and II improvements include the installation of a collection system along lower Hart's Lane to intercept and direct stormwater to the stream west of Hart's Lane. A detention basin is required at the golf course to intercept and reduce stormwater runoff rates from the golf course to the stream at Paddock Lane. A diversion swale is required along the edge of the golf course to divert water away from Hart's Lane and toward another stream channel east of Hart's Lane. Two smaller detention basins are required along the stream west of Hart's Lane to reduce flooding of the school and residential properties along the stream.

The estimated cost for the currently identified improvements within the Hart's Lane Watershed is approximately \$926,000.00

Warner Road Area (figure and spreadsheet reference numbers 17 through 23) - The Warner Road Area, located near the intersection of Joshua Road and Germantown Pike, has a watershed drainage area of 138 acres. The watershed is approximately 0.7 miles long by 0.4 miles wide and slopes from the east to the west and drains towards the Spring Mill Creek.

Schoor DePalma estimates approximately 104 residences, regularly impacted during large storm events, will directly benefit from the improvements. These include properties that exist throughout the watershed that follow the existing inadequate storm collection trunk line that crosses South and North Warner Roads, Center Avenue and First Avenue. These also include those properties that exist at the bottom of the watershed from the intersection of First Avenue and Germantown Pike to and along the low-lying area of Edmonds Road.

The current storm collection system is sized to accommodate small storm events and is currently inadequate for large storm events. Consequently, when the system is overwhelmed by excess storm water, the stormwater cannot enter the collection system, resulting in overland flow that impacts the low-lying properties. The stormwater collects at

the lowest portion of the watershed at First Avenue and Germantown Pike causing localized flooding and ponding in the roadways.

The Phase I improvements completed to date include a stormwater collection and inlet system at Second Street and Center Avenue. The Phase II improvements include the installation of a new supplemental collection system that generally parallels the existing storm system. The new system starts at Center Avenue, crosses Germantown Pike and travels through and along the low-lying areas of Edmonds Road. The parallel pipe provides additional capacity to collect excess stormwater during the large storm events. Schoor DePalma is also proposing collection systems within North and South Warner Roads to provide underground detention and conveyance to the improved downstream system noted above, as well as a proposed expansion of the existing detention basin at North Lane (Whitemarsh Woods basin). It is anticipated that the new collection systems will result in an increase in peak rate of runoff, which may require a detention basin at the Green Valley Country Club golf course. Final design of the collection systems and the basin expansion noted will determine the ultimate need for a basin at this location to protect downstream areas from adverse impact due to increased peak flow. Proposed Phase II improvements also include the installation of a collection system behind the residences to the south of Quarry Lane, then extending along Quarry Lane and Mathers Mill Road to safely collect and convey runoff from these areas to Phase I storm collection systems in Edmonds Road

The majority of the storm sewer system located in this study area was televised during February of 2005 to determine the location and evaluate the condition of the existing system. Overall the system was found to be in a functional condition with several runs containing debris. Water infiltration was noted in the box culvert crossing Germantown Pike near the intersection with Joshua Road. Two pipe runs were noted to have minor deterioration, which may require repair or replacement.

The estimated cost for the currently identified improvements within the Warner Road Watershed is approximately \$2,500,000.00

Whitemarsh Valley Farms North Area (figure and spreadsheet reference numbers 24 through 27) – The Whitemarsh Valley Farms North Area, an area located east of Germantown Pike, south of Arbour Boulevard and west of Thomas Road, has a watershed drainage area of 267 acres. The watershed is approximately 0.9 miles long by 0.5 miles wide and slopes from the west to the east towards the Wissahickon Creek.

Schoor DePalma estimates approximately 65 residences, regularly impacted during large storm events, will directly benefit from the improvements. These include residences along Westaway Drive and Fields Drive extending from the basins in Whitemarsh Woods, which are located near Fox Lane and the upper end of Fields Drive. These also include properties in low-lying areas to the north of Fields Drive, particularly residences along Kottler Drive, Laurel Drive, Juniper Drive and Pine Tree Drive.

The Phase I improvements completed to date include the installation of swale improvements from Juniper Drive to Pine Tree Road and storm collection and piping at

Juniper Drive. The Phase II improvements include the installation of collection systems along Westaway Drive and along Fields Drive to safely collect and convey the stormwater. The Westaway Drive collection system will capture stormwater flowing from the Fox Lane and Fields Drive basins and convey it to an existing downstream storm collection system. These basins will also be enlarged to reduce runoff rates to the downstream areas.

The majority of the storm sewer system located in this study area was televised during February of 2005 to determine the location and evaluate the condition of the existing system. Overall the system was found to be in a functional condition with several runs containing debris. A few pipe runs were noted to have minor deterioration, which may require repair or replacement.

The estimated cost for the currently identified improvements within the Whitemarsh Valley Farms North Watershed is approximately \$1,200,000.00

Edmonds Road Area (figure and spreadsheet reference numbers 28 and 29) – The Edmonds Road area, an area located west of Germantown Pike and bound by Joshua Road, Ridge Pike, Gowan Lane and a drainage divide east of Ridge Pike, has a watershed drainage area of 60 acres. The watershed is approximately 0.5 miles long by 0.2 miles wide and slopes from the east to the west towards the Spring Mill Creek.

Schoor DePalma estimates approximately 22 residences, regularly impacted during large storm events, will directly benefit from the improvements. These include residences that exist along low-lying areas along Edmonds Road to Ride Pike.

The Phase I and II Improvements include the initial inlet and piping construction at the low point of Edmonds Road near Rebel Road and additional storm piping collection improvements along Edmonds Road connecting to the Ridge Pike system.

The estimated cost for the currently identified improvements within the Edmonds Road Watershed is approximately \$240,000.00

Fairway Road Area (figure and spreadsheet reference numbers 30 through 32) – The Fairway Road area, bounded by Flourtown Road on the north, Germantown Pike on the south, the Colonial Elementary School and Plymouth-Whitemarsh Senior High School on the west and extending east to the Whitemarsh Elementary School and Fountain Green, has a watershed drainage area of 262 acres. The watershed is approximately 0.8 miles long by 0.5 miles wide and slopes from east to west towards the Spring Mill Creek.

Schoor DePalma estimates approximately 69 residences, regularly impacted during large storm events, will directly benefit from the improvements. These include residences that exist along low-lying areas along Miles Park, Fairway Road, Marble Lane and Marquis Road.

The Phase I improvements completed to date include the improvement of an existing swale, installation of inlets and a stormwater piping collection system east of Fairway Road. The Phase II improvements include the installation of collection systems along Fairway

Road, Marble Lane, Marquis Road and Indian Guide Road. Detention basins are also needed at McCarthy Park to reduce the rate of runoff to the culvert at Germantown Pike to reduce stormwater backups at the culvert and reduce flooding of the park. It will also serve to ensure that no increase in runoff rate results from the quicker conveyance of stormwater by the new collection systems. Final design of the proposed Fairway Road improvements must also include an analysis of the stormwater contribution resulting from the development of the Victory Fields Complex and the potential need for additional stormwater management systems in and around Victory Fields.

The storm sewer system located in Fairway Road was televised during April and March of 2005 to determine the location and evaluate the condition of the existing system. Overall the system was found to be in a functional condition with a few pipe runs containing debris.

The estimated cost for the currently identified improvements within the Fairway Road Watershed is approximately \$1,900,000.00

Whitemarsh Valley Farms South Area (figure and spreadsheet reference numbers 33 through 37) - Whitemarsh Valley Farms South Area, located east of Church Road, south of Fields Drive and west of Thomas Road, has a watershed drainage area of 145 acres. The watershed is approximately 0.8 miles long by 0.3 miles wide and slopes from the west to the east towards the Wissahickon Creek.

Schoor DePalma estimates approximately 34 residences, regularly impacted during large storm events, will directly benefit from the improvements. These include residences that exist along low-lying areas of Hain, Jackson, Thornhill and Fields Drives that receive excess stormwater from Germantown Pike and upslope areas.

The Phase I improvements completed to date include the installation of a portion of the Jackson Drive inlet and collection system. The Phase II improvements include the installation of stormwater collection systems along Germantown Pike and Hain Drive and stormwater pipe installation along Fields Drive. It is anticipated that the new collection systems will result in an increase in peak rate of runoff, which will require a detention basin west of Thomas Road.

The majority of the storm sewer system located in this study area was televised during February of 2005 to determine the location and evaluate the condition of the existing system. Overall the system was found to be in a functional condition with several runs containing debris. A few pipe runs were noted to have minor deterioration, which may require repair or replacement.

The estimated cost for the currently identified improvements within the Whitemarsh Valley Farms South Watershed is approximately \$2,600,000.00

Stenton Avenue Area (figure and spreadsheet reference numbers 38 and 39) – The Stenton Avenue drainage area, located north of the Pennsylvania Turnpike and extending above Butler

Pike into Whitpain Township to Norristown Road, has a watershed drainage area of 486 acres. The watershed is approximately 1.3 miles long by 0.7 miles wide and slopes from north to south towards the Wissahickon Creek.

Schoor DePalma estimates that approximately 3 residences are regularly impacted from floodwaters and stream bank scour resulting in loss of their property. The additional, and larger, impact the frequent flooding has on the community at large is the loss of roadway access at Stenton Avenue and Militia Hill road due to floodwaters frequently making these roads impassable.

The Phase I and II improvements will replace the two existing inadequate roadway cross culverts with larger, appropriately sized box culverts.

The estimated cost for the currently identified improvements within the Stenton Avenue Watershed is approximately \$416,000.00

Ongoing goals

Now that the improvement strategies for the already identified neighborhoods have been considered, revised and, at least conceptually, agreed upon, the Task Force must begin “Part B” of the Action Plan and, to date, has identified the following critical areas for continued study in the coming year:

- Each meeting brings a new face, with a new story of property damage, stream erosion and growing concern. Identification of those additional neighborhoods in need of significant stormwater management improvements and, when appropriate, development of stormwater improvement studies to address their needs. Expansion of the stormwater improvement studies to include issues – and recommended solutions – related to riparian corridors and streambank erosion as those issues must also be addressed if the Township has any real hope of effecting any positive, long-term improvements in the arena of stormwater management.

- Prioritization of projects moving forward. Establish a system of prioritization, with an emphasis on public safety and health, such that demonstrated risks to personal safety and property are the initial test of priority. Further considerations regarding priority include a balancing of the relative merits of each project, comparison of the cost to be expended and the benefit realized and consideration of projects that may be “coupled” to increase benefits.

- Identification of existing stormwater management facilities within the Township that could and/or should be improved, with particular focus on the inter-relationship of developments within the community. To date, the Task Force has identified several existing properties within the Township that it believes have, as a result of their relatively recent development, contributed significantly to increased stormwater runoff problems on adjacent properties. Moving forward, the Task Force intends to take a careful look at the contributions these properties have made to the Township’s stormwater management problems and to engage these property owners in discussion about effective, long-term solutions designed to decrease stormwater run-off onto adjacent properties and Township roads. This involves tough questions and often contentious solutions – convincing the “new” development that has allegedly caused increased problems downstream to step-up

and do its part to address the problem may not be easy, but it is imperative to an effective solution. Often, this may be a matter of existing facilities that are not functioning as designed and for which the Township may have direct recourse via existing development agreements, remaining escrow funds and the like. Just as often, however, this may involve the identification of existing facilities that, though functioning “properly,” are not functioning “adequately” and we suspect even more frequently, facilities that would function more effectively if only properly maintained. In such a case, creative solutions that encourage “good citizenship” and help identifying long term, cost effective improvement strategies will be critical.

- Although the Board undertook, and subsequently adopted in 2004, a comprehensive rewriting of Township ordinances pertaining to stormwater management, the Task Force believes still more can be done to truly place the Township at the cutting edge of stormwater management requirements and techniques in the coming years. Identification of existing ordinances that can be further strengthened to both reduce stormwater runoff and provide the Township with immediate recourse when systems prove inadequate, as well as inclusion in the ordinances of non-traditional materials, systems and techniques that encourage property owners and developers to make a positive contribution to development by not merely maintaining the status quo, but by actually improving upon existing conditions represent opportunities for additional positive change. An additional opportunity would be to provide benefits to property owners and developers who voluntarily improve upon ordinance requirements. This is an area ripe for overlap with other existing Township Boards, particularly the Environmental Advisory Board, so that efforts are not duplicated.

- Identification of proposed stormwater management improvements that can be coordinated with other on going or proposed improvements, (i.e. sanitary sewer projects, sidewalk installation, recreational facilities, etc.) in an effort to be as efficient and cost effective as possible with limited Township resources.

- Establishing connections and developing positive working relationships with other existing organizations (watershed associations, conservation groups, PennDOT, DEP, etc.) to better address the multi-municipal reality of stormwater runoff.

FUNDING MECHANISMS

Our work to date

In late 2004, the Board authorized targeted spending to begin the design and implementation of selected stormwater management infrastructure improvements in the most severely affected areas of the Township – the Phase I Improvements. As the Board is aware, due to budgetary constraints and higher than anticipated construction costs, some of the Phase I Improvement projects originally planned for 2005 have been delayed to 2006. And that does not end the problem. Phase II improvements identified to date are estimated at almost \$11,000,000.00 - a number that will only increase as time goes on. Current funding simply does not exist to implement the kinds of stormwater management improvements needed to deliver significant, long-term solutions to flooding. To effectively and realistically address the Township-wide stormwater problems, the Board must be willing to take a bold step forward.

The availability, or lack thereof, of sufficient funding for stormwater management improvements has occupied much of the Task Force discussion in recent months. The Task Force has looked carefully at a wide range of funding options, including:

▪ *Grant Programs:* Although grant programs provide “free money,” dependency upon grants to fund long-term stormwater management improvements presents significant, largely insurmountable and somewhat obvious obstacles. First and foremost, “grant” certainly does not equal “guarantee” – the Township could apply tomorrow for every stormwater related grant it is eligible for and receive only a small portion, if any, of the support applied for. Further, each fiscal year brings a new round of applications, additional preparation costs and a constant unknown – how much will we qualify for this year? Real fiscal planning cannot depend only upon grant money for funding. That is not to say, however, that grant programs do not present a viable option for funding at least a portion of proposed stormwater management improvements. It is, however, the recommendation of this Task Force that any such grant money be treated as “gravy” – an opportunity to underwrite the direct costs of a particular improvement, the ability to undertake a project previously thought beyond our scope, the chance to get creative – and not as the primary funding source for much needed stormwater management improvements.

▪ *Dedicated Funds in the Yearly Budget:* Arguably the most straightforward and “easy to sell” approach to financing stormwater management improvements; the dedicated funding approach has obvious pitfalls in this arena. Most significantly, the Township does not have the type and scope of “excess” money within its yearly budget to fund stormwater management improvements at any significant level even with a significant rebalancing of discretionary funding. Without increasing taxes or otherwise increasing income, the Township could, at best, hope to earmark \$200,000.00 to \$300,000.00 per year for stormwater related improvements. Based upon current estimates for the Phase II work alone, it would take a minimum of 35-55 years to complete currently proposed projects at that rate of investment. Such a strategy also assumes that not just this Board, but also every Board for the next 35-55 years would continue to earmark the necessary funds. While it is possible that the Township could experience an occasional “banner year” wherein it was able to dedicate otherwise “unclaimed” funds to a particular project, it is unrealistic to presume that this approach will be sufficient, standing alone, to fund the full scope of needed improvements.

▪ *Special Districts:* After lengthy discussion and debate on the Special Districts approach, the Task Force finds such a system to be largely unworkable and decidedly unfair and ardently recommends that the Board reject such a funding mechanism. It simply can not be reiterated often enough that stormwater management is a Township-wide infrastructure concern – equivalent in scope to roads, streetlights, emergency services and the like – and should be funded accordingly.

Pursuant to Section 4 of the Neighborhood Improvement District Act, 73 P.S. §831 et. seq. (the “Act”), a home rule municipality such as Whitmarsh may establish a special district(s) within which special property assessments are collected to fund, among other things, storm sewer improvement projects. Although initially discussed as an intriguing option for long term funding of stormwater management improvements, the Task Force, after careful consideration, has determined that a funding strategy that relies upon the creation of special districts is certain to result in, at best, a “divided” Township wherein downstream residents are forced to bear the bulk, if not all, of the cost of a Township-wide problem simply by virtue of living at a lower elevation. It is the ardent contention of the Task Force

that stormwater management, and the concomitant cost of implementing improvements to inadequate and outmoded systems, is as much the responsibility of up-stream residents as it is their downstream neighbors. After all, as a Task Force member so aptly put it, “it rains as much on your side of the street as it does on mine.” A funding mechanism which relies on the drawing of district lines to generate revenue is certain to result in the almost instantaneous balkanization of the Township as property owners in the “stormwater ghettos” watch their property values fall while their “special district assessments” rise.

Even setting aside for a moment the “class conscious” aspects of a system of funding based upon Special Districts; the approach presents additional procedural difficulties, which are problematic in their own right. Under the Act, after a municipality “draws” the proposed boundary lines of a special district and generates a preliminary plan including, among other things, a boundary map and a report including a detailed description of services to be provided along with their estimated cost, it must hold a public hearing on the proposed district. Property owners who fall within the proposed district then have 45 days following the last public hearing to register their objection to the creation of the district. If 40% or more of the affected property owners within a proposed district fail to properly register their objection to its creation, the municipality may enact an ordinance establishing the district. This process must be followed for each district proposed. The obvious disadvantage, then, of a special district system is the difficulty involved in “drawing the lines” in such a fashion as to avoid the “40% veto”. If the lines are drawn too broadly, it is likely that a large enough number of “up-hill” or otherwise unaffected property owners will register their opposition such that the proposed district will be rejected. In the alternative, if the lines are drawn too narrowly, property owners within the proposed district may oppose on the platform that the lines are not broad enough, i.e. “up-hill” residents contribute to the “down-hill” problem and should be made to share equally in the solution.

▪ *General Obligation Bond:* The Task Force is of the firm belief that a general obligation bond represents the most viable option for funding long-term stormwater management improvements. Recognizing that stormwater is not the only “big ticket” item the Township must address in the coming years, a general obligation bond represents a unique opportunity to fund a series of long term capital improvements in a fiscally responsible and individually palatable manner. It further places the onus of funding Township-wide improvements upon the Township as a whole. The creative packaging of a bond issue to include stormwater, open space and parks & recreation acquisitions and improvements effectively serves a wide array of “special interests” sufficient to generate the community support necessary to incur such an obligation. Further, identifying a dedicated funding source to support the debt service – proceeds from a real estate transfer tax, for example – eases the strain on the Township’s general fund while simultaneously having the kind of major impact that a dedicated yearly budget amount simply can not. As part and parcel of any general obligation bond, a prioritization of projects – i.e. delineation as to the type and scope of projects, which a bond can be used to fund – must be established so that all funds are expended in a fiscally responsible manner on the projects for which they were anticipated.

Ongoing goals

- To identify and assist Township Staff in applying for available grant money to target specific and readily quantifiable stormwater improvement projects, including the education and communication components discussed below.

- To develop working relationships with local and regional businesses to develop opportunities for our “corporate neighbors” to contribute to stormwater management improvements. Convincing local businesses, for example, to purchase rain barrels to be used at public facilities within the Township provides a unique opportunity – the local business does a good deed, the Township helps reduce stormwater runoff and users of the facilities get a first hand education in the potentially big impact of small scale action.

- To identify and assess the unique opportunities available through multi-municipal approaches, such as the Wissahickon Watershed Partnership Program and the potential for a multi-municipal stormwater authority.

- To investigate and recommend possible incentive programs to encourage individual residents to voluntarily and proactively implement stormwater management improvements on private properties.

- To work with other Township organizations such as the Environmental Advisory Board, the Open Space Committee and the Parks and Recreation Department to identify potential projects that, as a result of potential overlap of amenities, could share funding and provide the Township with “bigger bang for its buck.” For example, constructing new soccer fields as large detention basins or stabilizing a stream bank as part of a walking trail project.

- To identify potential dedicated funding sources sufficient to support the debt service on a general obligation bond.

- To establish a “quick-fix” priority list of smaller-scale projects that could be accomplished with Township staff or as the Township finds an unexpected “windfall” in the budget, so that the entirety of the Township’s stormwater response is not tied to large scale funding.

PUBLIC EDUCATION

Our work to date

First and foremost, it cannot be overstated that the primary focus of any public education component regarding stormwater management issues must be that both the “problems” and the “solutions” are a Township-wide undertaking. Second, it must be emphasized that, “Township-wide” does not simply mean “Township staff.” Rather, large scale, long term improvement will only be realized through a combination of “government-based” improvement projects and individual lifestyle adjustment from private individuals. Finally, it must be noted that only through an effective and informative public education program can the Township hope to make any truly lasting changes in its approach to stormwater management. It cannot be overstated that, to be truly successful, a wide reaching, all inclusive public education program must be implemented – and such a program must be viewed as an on-going, long term “investment” that reaches out to all Township constituents, as well as those in neighboring municipalities.

To date, and in addition to on-going study of “infrastructure based,” Township funded stormwater improvement projects, the Task Force has identified both “big picture” and “small scale” strategies for stormwater management improvements that residents, both large and small, can undertake. Big picture strategies include installation of on-lot basins and swales, reduction in impervious surfaces (i.e. installation of grass paver systems in lieu of asphalt driveways) and other large-scale improvements that can be undertaken by individual property owners to better manage on-lot stormwater. Recognizing that not every resident is going to be in a position to undertake large scale improvements, the Task Force has also discussed small scale/big impact strategies including rain gardens, rain barrels, and the like that, when taken individually may have only minimal impact, but, when aggregated with neighbors, can render significant change. These are strategies that can be employed by all Township residents – both “uphill” and “downhill” – to effect significant aggregate decreases in Township wide stormwater run-off.

Through our discussions, the Task Force has begun to identify a series of ideas and opportunities for educating the public and, moving forward into 2006, intends to further explore the many educational possibilities available. To be truly effective, a comprehensive, “grass roots” education plan that involves and engages the largest number of residents and businesses is critical. A main goal in the coming year will be to get as many of our fellow residents as possible informed, interested and involved in stormwater management related issues and activities. The Task Force believes this also represents an excellent opportunity to collaborate with other Township organizations such as the Environmental Advisory Board, the Open Space Committee and the Parks and Recreation Department; to develop comprehensive education programs designed to effectively reach – and engage – the largest audience possible.

Ongoing goals

- Organize a “Stormwater Symposium” for local residents with representatives from the Pennsylvania Legislature, PennDOT, DEP, the Montgomery County Planning Commission and others. Reach out to other local municipalities experiencing similar stormwater management issues to collaborate and attend.
- Develop education outreach programs through tie-ins with other community organizations: a program in the local schools, programs with local recreation leagues, religious organizations, etc. Develop environmental service projects where local students earn credits for participating in Township stormwater management improvement projects.
- Make recommendations regarding expansion of Township “demonstration projects”
- Develop and organize “Stormwater Day” programs to encourage local residents and businesses to participate in basin cleaning, rain garden planting, etc.
- Develop a “Flood Response” handout: who to contact when you spot a potential problem (clogged inlets, etc), who to contact in emergency situations, the availability of flood insurance, safety tips for reaction in flood situations, etc.
- Educate individuals on both their rights and their liabilities – long-term damage with short-term fixes: sump pumps in the sewers, grading without a permit, etc.
- Reach out to local businesses to develop long-term partnerships dedicated to improving the community by decreasing the damaging effects of stormwater run-off.

COMMUNICATION PLAN

Our work to date:

This component goes hand in hand with the Public Education component and, in many ways, is seen by the Task Force as the culmination of each of the preceding areas of study – now that we have developed all these great ideas, how do we go about “getting the word out” to residents and businesses. What combination of strategies will most effectively get information into the hands of the people who need it and will act on it? The development and implementation of an effective Communication Plan will be a significant focus of the Task Force in the coming months and, again, represents an opportunity for collaboration with other Township organizations.

Ongoing goals

- Now that the Township’s new website is up and running, create a “stormwater central” section where residents can go to find up to date information on Township-funded improvement projects (completed, on-going and “coming soon to a storm drain near you”), ideas for individual action, announcements about upcoming stormwater related events, etc.

- Develop an annual or semi-annual “stormwater report” sent to all residents and business owners outlining stormwater related matters.

- Develop and implement a “simple solution” postcard program wherein postcards are periodically sent to residents and business owners with simple ideas for stormwater management improvements that can have immediate impact: “*Rain barrels – what do they do?*” “*When it rains it drains*” “*Rain gardens – really all that different?*” etc.

- Develop a “Flood Prevention/Flood Response” handout: what to do when you think your neighbor is grading without a permit, who to call when an inlet is clogged, safety tips, etc.

SUMMARY OF CONCLUSIONS

A little more than one year into its mission, and with the bulk of its work still ahead, the Task Force has reached a series of considered conclusions regarding stormwater management and flooding related issues within the Township which we offer to the Board as a “roadmap” for moving forward.

▪ *Stormwater management must be viewed as a Township-wide responsibility that will only be adequately and effectively addressed if stormwater is treated as the infrastructure component that it is.*

▪ *The damaging effects from flooding due to inadequate or outmoded stormwater management systems in the Township is significant – and growing – and will only be adequately and effectively addressed by dedicating significant funds, via a general obligation bond, to long-term solutions.*

▪ *As development pressures on the Township increase in the coming years, issues associated with stormwater management will increase as well. It is no longer adequate to approach stormwater management on a case-by-case, house-by-house, property-by-property basis. Rather, a true “watershed-based” approach must be established and all property owners – new and old alike – must be educated on the impact of stormwater throughout the Township and, most importantly, on how they can help mitigate its effects.*

▪ *A comprehensive education and communication program must be implemented to both inform the Township-at-large of the growing threat of stormwater to our community and to provide ample opportunity for becoming a part of the solution.*

▪ *A Township-wide problem demands a Township-wide solution: the various Boards, committees and task forces of the Township must work together to identify common goals, combine resources and work collectively towards long-term improvement.*

▪ *Adequately addressing stormwater management requires a sustained effort on all fronts. Anything less will result in, at best, maintenance of the status quo and, at worst and decidedly more likely, an increase in stormwater runoff problems throughout the Township and a gradual, persistent decline in the quality of life for all Township residents.*

Appendix A
Spreadsheet and Plan Figures
(Separate pdf Files)