

APPENDIX A

**EXPENDITURES AND FUNDING SOURCES
SUMMARY**

SUSSEX COUNTY SURFACE WATER MANAGEMENT LEVEL OF SERVICE ANALYSIS

EXPENDITURES AND FUNDING SOURCES SUMMARY

Function	General Fund	Other Legislative Funds	DNREC Fees	SCD Fees	Sussex County	De/DOT	Tax Ditch Organizations	Municipalities	Other (21st Century, CTF's, private sources, etc.)	Total
Stormwater Program										
DNREC salaries and overhead	\$160,000		\$60,000							\$220,000
SCD salaries and overhead				\$1,100,000						\$1,100,000
De/DOT salaries and overhead						\$150,000				\$150,000
General Drainage										
DNREC salaries and overhead	\$195,000	\$205,000								\$400,000
DNREC projects								\$400,000		\$400,000
Sussex County salaries					\$100,000					\$100,000
De/DOT salaries and overhead						\$1,700,000				\$1,700,000
De/DOT projects						\$2,300,000				\$2,300,000
DNREC contractual & supplies*		\$380,000								\$380,000
Municipal projects								\$200,000		\$200,000
Tax Ditches										
DNREC salaries and overhead	\$225,000	\$375,000								\$600,000
SCD salaries and overhead	\$35,000			\$50,000			\$70,000			\$155,000
Tax Ditch projects	\$75,000	\$100,000		\$175,000			\$280,000		\$70,000	\$700,000
De/DOT projects								\$100,000		\$100,000
Dam Safety										
DNREC salaries and overhead	\$40,000									\$40,000
EAP's	\$85,000									\$85,000
Miscellaneous										
Watershed modeling	\$250,000									\$250,000
Flood plain mapping	\$350,000									\$350,000
Total	\$1,415,000	\$1,060,000	\$60,000	\$1,100,000	\$325,000	\$4,150,000	\$350,000	\$200,000	\$570,000	\$9,230,000

* Supports Stormwater and Drainage Program

APPENDIX B

AGENCY AREAS OF RESPONSIBILITY

SUSSEX COUNTY SURFACE WATER MANAGEMENT LEVEL OF SERVICE ANALYSIS

AGENCY AREAS OF RESPONSIBILITY

Drainage Situation	DNREC			SCD			DEDOT			County			Tax Ditch			City or Town			Private Entity			Other			Undefined				
	Performed or Contracted	Financing Provided	Technical Assistance	Performed or Contracted	Financing Provided	Technical Assistance	Performed or Contracted	Financing Provided	Technical Assistance	Performed or Contracted	Financing Provided	Technical Assistance	Performed or Contracted	Financing Provided	Technical Assistance	Performed or Contracted	Financing Provided	Technical Assistance	Performed or Contracted	Financing Provided	Technical Assistance	Performed or Contracted	Financing Provided	Technical Assistance	Performed or Contracted	Financing Provided	Technical Assistance		
Drainage Situation																													
Ponding water on private parcel																													
Flooding on private parcel due to inadequate lines and grades																													
Flooding on private parcel due to flow from adjacent parcels																													
Ponding water in private ditch																													
Ponding water in tax ditch																													
Routine maintenance of private ditch	1	1																											
Routine maintenance of tax ditch																													
Obstruction of private ditch																													
Obstruction of tax ditch																													
Routine maintenance in roadside channel (private)			2																										
Routine maintenance in roadside channel (dedicated to public use)																													
Routine maintenance in roadside channel (public)	5	5																											
Routine maintenance in roadside channel (municipal)																													
Obstruction of culvert (private)																													
Obstruction of culvert (dedicated to public use)																													

SUSSEX COUNTY SURFACE WATER MANAGEMENT LEVEL OF SERVICE ANALYSIS

AGENCY AREAS OF RESPONSIBILITY

Drainage Situation	DNREC			SCD			DEDOT			County			Tax Ditch			City or Town			Private Entity			Other			Undefined			
	Performed or Contracted	Financing Provided	Technical Assistance	Performed or Contracted	Financing Provided	Technical Assistance	Performed or Contracted	Financing Provided	Technical Assistance	Performed or Contracted	Financing Provided	Technical Assistance	Performed or Contracted	Financing Provided	Technical Assistance	Performed or Contracted	Financing Provided	Technical Assistance	Performed or Contracted	Financing Provided	Technical Assistance	Performed or Contracted	Financing Provided	Technical Assistance	Performed or Contracted	Financing Provided	Technical Assistance	
Obstruction of culvert (public)																												
Obstruction of culvert (municipal)																												
Obstruction of roadside channel (public)																												
Obstruction of roadside channel (municipal)																												
Routine maintenance of detention basins and/or BMP's (private)																												
Routine maintenance of detention basins and/or BMP's (public)																												
Major maintenance of detention basins and/or BMP's (private)																												
Major maintenance of detention basins and/or BMP's (public)																												
Routine maintenance of inlets and pipes (private)																												
Routine maintenance of inlets and pipes (dedicated to public use)																												
Routine maintenance of inlets and pipes (public)																												
Routine maintenance of inlets and pipes (municipal)																												
Major repair of inlets and pipes (private)																												
Major repair of inlets and pipes (dedicated to public use)																												
Major repair of inlets and pipes (public)																												

SUSSEX COUNTY SURFACE WATER MANAGEMENT LEVEL OF SERVICE ANALYSIS

AGENCY AREAS OF RESPONSIBILITY

	DNREC			SCD			DelDOT			County			Tax Ditch			City or Town			Private Entity			Other			Undefined		
	Performed or Contracted	Financing Provided	Technical Assistance	Performed or Contracted	Financing Provided	Technical Assistance	Performed or Contracted	Financing Provided	Technical Assistance	Performed or Contracted	Financing Provided	Technical Assistance	Performed or Contracted	Financing Provided	Technical Assistance	Performed or Contracted	Financing Provided	Technical Assistance	Performed or Contracted	Financing Provided	Technical Assistance	Performed or Contracted	Financing Provided	Technical Assistance			
Drainage Situation																											
Preparation of lot grading regulations																											
Preparation of drainage conveyance regulations																											
Preparation of stormwater management regulations (quantity)																											
Preparation of stormwater management regulations (quality)																											
Preparation of erosion and sediment control regulations																											
Preparation of development regulations																											
Good housekeeping measures at public works facilities																											

Notes:

- 1 - In partnership with the Department of Prisons
- 2 - DNREC, if constructed prior to 1991 and SCD if constructed after 1991
- 3 - County has jurisdiction during construction
- 4 - DelDOT will perform work if financed by Legislators
- 5 - DNREC will address if blockages are outside of the right-of-way
- 6 - Center for the Inland Bays
- 7 - Work performed only with landowner permission
- 8 - Clean Water Advisory Council
- 9 - DNREC Sediment and Stormwater Regulations

General Note:

This table is intended to provide an approximate guide only to responsibilities of organizations involved in surface water management in Sussex County. Inaccuracies may exist.

APPENDIX C
MEETING MINUTES

SUSSEX COUNTY LEVEL OF SERVICE ANALYSIS
SURFACE WATER MANAGEMENT PROGRAM NEEDS

MEETING MINUTES

July 11, 2007

Present:

Debbie Absher	Sussex Conservation District
Jessica Watson	Sussex Conservation District
Bill McGowan	Sussex Conservation District
Frank Piorko	DNREC
Brooks Cahall	DNREC
Jennifer Campagnini	DNREC
Hal Godwin	Sussex County
Elizabeth Treadway	AMEC
Kyle Gulbranson	URS
David Athey	URS (recording)

Meetings of the Joint Coordinating Committee (JCC) will occur more or less on a monthly basis but a fixed date each month will not be established. In other words meetings will be held as needed. Report sections will be presented in draft for at each meeting so the final report will be built incrementally through the process.

DelDOT will be included in interviews and as part of the needs assessment but will not be included in the JCC. Joe Wright (South District Engineer) will be the primary point of contact but other DelDOT sections will include program managers in Dover such as bridges as well as the NPDES program.

There are generally three types of roads in Sussex County: those owned by DelDOT, those privately owned, and those within a public right-of-way but where DelDOT's responsibility is limited to pavement only. In these latter cases, municipalities (within corporate boundaries) or private entities (within the unincorporated County) are responsible for drainage, particularly roadside open channels. In many instances, these drainage responsibilities are not recognized or, if known, not adequately acted upon. In incorporated areas, agreements vary from town to town and often multiple agreements exist within a given town.

The Municipal Questionnaire prepared by URS was reviewed without comment. URS will seek to get on the agenda of the August 3rd meeting of the Sussex County Association of Towns (SCAT) Steering Committee to inform them of the project and seek their assistance in encouraging cities and towns to participate. In any event, all 25 municipalities will be contacted.

The Level of Service Analysis will also recognize the on-going efforts of other initiatives including the Clean Water Advisory Council, the Dam Safety Program, and DNREC's coordination efforts with FEMA.

URS will seek to schedule a meeting in early August with Brooks Cahall, Jessica Watson, Joe Wright, and Mike Izzo from Sussex County. It was generally felt that it would be more productive to meet collectively with representatives from these four primary groups than to meet individually.

A separate questionnaire and database will be developed for tax ditch organizations based upon the municipal questionnaire and database. Brooks Cahall volunteered to assist in this effort. New legislation regarding tax ditch rights-of-way and related issues will require engagement. Debbie Absher will prepare a short article about the project and the importance of tax ditch organizations returning the survey for a pending newsletter. DNREC and/or SCD will handle the mailing of the survey to the 136 organizations within the County.

A discussion was held about if and when to hold a public meeting regarding the Level of Service Analysis. It was decided to revisit the subject at the next meeting.

The impetus of the project is the lack of discussion and coordination among the various parties involved in surface water issues in the County, the need to clarify and define roles, and better educate decision makers. A primary outcome of the project will be to determine which organization(s) are best suited to perform the various tasks required.

It was generally acknowledged that constituent expectations are changing as new residents move into the County from other states. There is a need for better regulations regarding drainage and stormwater management at the County level. The County should set the standards for towns to follow.

The costs of managing data need to be understood and recognized. For example, if watershed plans are eventually prepared County-wide, the costs of GIS systems, data housing, and data sharing could be substantial.

The final report will need to be prepared by early next year so it can be presented to the Stormwater Committee of the Clean Water Advisory Council and coincide with their initiatives to the General Assembly.

The next meeting of the JCC was scheduled for Wednesday, September 26 at 1:30 at the SCD office.

SUSSEX COUNTY LEVEL OF SERVICE ANALYSIS
SURFACE WATER MANAGEMENT PROGRAM NEEDS

MEETING MINUTES

September 13, 2007

Present:

Jessica Watson	Sussex Conservation District
Brooks Cahall	DNREC
Jennifer Campagnini	DNREC
Michael Izzo	Sussex County
Joseph Wright	DeIDOT
Jeff Read	DeIDOT
Marvin Roberts	DeIDOT
David Athey	URS (recording)

There are three types of roads in Sussex County: private, dedicated to public use, and State maintained. Whereas the maintenance responsibility for the private and public roads is fairly clear, it is less clear for those roads dedicated to public use. Typically the responsible party is not identified when these roads, often in subdivisions, are built. When a maintenance issue related to stormwater arises, DNREC's Drainage Section will try to address it with 21st Century funds or a State legislator may fund a repair.

For State maintained roadways, DeIDOT's agreements in subdivisions and municipalities are often "curb to curb" meaning the responsibility for work on roadside swales may be undefined although DeIDOT is in the process of updating their Subdivision Regulations which will address this.

Development is a major concern. Everyone agreed that downstream impacts of development need to be better addressed and the question of "how far downstream is enough?" answered. The need for watershed-wide studies and models was recognized. It was acknowledged that DNREC is currently revising its Sediment and Stormwater Regulations and will hopefully address both the peak flow as well as volume components of this subject.

Each agency was asked to speculate on what issues will be important in five years. DeIDOT has a significant backlog of drainage-related projects and believes that they will still be working on these in that time period. Everyone agreed that more problems will likely develop with more development. There is currently concern about the maintenance of privately-owned detention basins and everyone agreed that unless better documentation of these privately as well as publicly owned basins was improved, this too would be a major consideration in five years. DeIDOT made the same documentation observation about their storm drainage systems.

The setting of priorities was discussed. DeIDOT stressed that safety is their highest priority for fixing problems. It was generally agreed that elected officials have some influence in the prioritization process but most felt that this impact is not as great as in the more densely populated New Castle County.

The prevalence of tax ditches is a concern. It is commonly understood that ditches are designed such that they hold water for as long as 24 hours after a rain event but newer residents often do not understand this and expect ditches to be dry. Ditches were designed mostly to handle flow from agricultural lands but more and more are accepting flow from developed areas. Increased development could increase problems related to ditches.

Sussex County currently does not have a drainage code. Therefore it is very difficult to keep track of changes to lines and grades. As-builts are needed for developments. The County is currently revising its Subdivision Regulations.

It was generally considered that design plans by consultants are often lacking. It was felt that designers need to be better trained.

Everyone agreed that even though precise areas of responsibility are not always known, by and large the system works today. This was attributed to the working relationships which have been formed over the years and the periodic meetings between agencies. It was recognized that for the sake of continuity the areas of responsibility for each agency should be better clarified.

DeIDOT maintains approximately 4,000 lane miles of roadways in Sussex County and it can therefore be assumed that the agency maintains 4,000 miles of swales. They do not know how many inlets, miles of pipes, or basins/BMP's are maintained but there is effort underway to survey these. The County, DNREC, and the Conservation District do not own any such facilities.

DeIDOT has about 20 full time equivalent (FTE's) personnel working on drainage issues in the County. Correctional facility inmates are frequently used for activities including trash pick-up, mowing of swales, and some grading. Personnel for the remaining three organizations will be determined separately.

In FY 2006, DeIDOT spent \$595,000 on open drainage projects, \$1,095,000 on closed drainage, and \$200,000 on entrance pipes. Of this, \$1,690,000 was performed by agency personnel and the remaining \$200,000 by contractors. Another \$200,000 was spent purchasing pipe and stone for drainage system installations. Costs for the remaining three organizations will be determined separately. If budgets were not a concern, DeIDOT would hire more personnel and/or retain additional contractors to better reduce their backlog. All agreed that watershed studies would be a good idea.

A future meeting of the agencies represented at this meeting was not set but the need was recognized. Participants felt that mid November would be an appropriate time frame.

SUSSEX COUNTY LEVEL OF SERVICE ANALYSIS
SURFACE WATER MANAGEMENT PROGRAM NEEDS

MEETING MINUTES

September 26, 2007

Present:

Debbie Absher	Sussex Conservation District
Jessica Watson	Sussex Conservation District
Bill McGowan	Sussex Conservation District
Frank Piorko	DNREC
Brooks Cahall	DNREC
Jennifer Campagnini	DNREC
Hal Godwin	Sussex County
Kyle Gulbranson	URS
David Athey	URS (recording)

Minutes of the July 11, 2007 meeting were accepted.

Discussions were held on the “pros and cons” of holding a public meeting. It was decided that input from various constituency groups could be collected more efficiently and effectively through a series of individual meetings as opposed to a large open forum. URS was instructed to contact and arrange interviews with Joe Farrell (LID Committee), Ed Lewandowski (Center for the Inland Bays), Rick Collins (Positive Growth Alliance to include real estate interests), and Jennifer Campagnini of DNREC (Stormwater Advisory Group).

The final project report is still planned for completion in January.

The minutes from the Service Providers meeting of September 13, 2007 were reviewed. The manpower and annual maintenance costs provided by DeIDOT were reviewed. While this data is useful and informative, URS will seek further information about the levels of additional staffing or expenditures that would be needed to close the gap between what is being done and what needs to be done. Ted Bishop and Vince Davis from the Department will be contacted.

The September 13, 2007 minutes included brief summaries of the three types of roadway ownership in Sussex County. It was clarified that roads identified as “dedicated to public use” allow legislators to spend their Community Transportation Funds on repairs.

The need for the project to keep the quantitative and qualitative aspects of surface water management needs separate was discussed. The report will need to define the current level of service and project what future levels of surface will need to be. It will also need to opine if current efforts and expenditures are adequate and if not, what they will need to be.

The municipal survey and response summary were reviewed. To date 13 of the 25 surveys have been returned. URS will continue to contact the remaining 12 and seek their input. *Note: after the meeting Jennifer Campagnini stated that Bryan Hall from the Office of State Planning Coordination will assist in this effort.* All agreed that follow up interviews with select cities or towns would be valuable and URS was directed to contact Seaford, Georgetown, Ocean View, Dagsboro, Milton, and Millsboro for a meeting to be held at 1:30 on Tuesday, November 6. URS will present the results of the survey at the next meeting.

The tax ditch survey and response summary were reviewed. To date 49 of the 136 surveys have been returned. URS will provide Brooks Cahall with a list of those organizations that have returned the surveys and DNREC will contact those who have not returned the surveys and encourage their participation. URS will present the results of the survey at the next meeting.

URS will schedule interviews with Jessica Watson, Brooks Cahall, and Hal Godwin to obtain manpower and expenditure information from each.

The Areas of Responsibility spreadsheet developed by URS was presented. It was suggested that the columns indicating agencies be revised to better indicate whether they provide technical assistance, perform the work described, or just provide funding. The report should provide an assessment if some of the work categories should even be performed by a public agency or if so, criteria for when and how this would occur.

The next meeting of the JCC was scheduled for Tuesday, October 30 at 1:30 at the SCD office.

SUSSEX COUNTY LEVEL OF SERVICE ANALYSIS
SURFACE WATER MANAGEMENT PROGRAM NEEDS

MEETING MINUTES

October 30, 2007

Present:

Debbie Absher	Sussex Conservation District
Jessica Watson	Sussex Conservation District
Bill McGowan	Sussex Conservation District
Frank Piorko	DNREC
Brooks Cahall	DNREC
Jennifer Campagnini	DNREC
Mike Brown	DNREC
Hal Godwin	Sussex County
Ryan Mawhinney	URS
David Athey	URS (recording)

Minutes of the September 26, 2007 meeting were accepted.

The municipal surveys were discussed. To date 17 of 25 municipalities have participated and the responses to the "Yes/No" questions were reviewed. URS will perform a more detailed review of the more subjective questions and provide a summary of observations for the next meeting. URS will also develop a list of five or six general questions to send to the municipalities planning to attend the meeting on November 6, 2007 and forward to Frank and Jessica for review. Upon concurrence, the questions will be forwarded. Five of the six municipalities that were invited to the meeting plan to attend. Frank will contact Dolores Slatcher of Seaford to request her attendance. The general purpose of the meeting will be to ascertain what needed assistance and guidance the municipalities seek from DNREC and/or the Conservation District.

The tax ditch surveys were discussed. To date 51 of 136 organizations have participated and the responses to the "Yes/No" questions were reviewed. URS will perform a more detailed review of the more subjective questions and provide a summary of observations for the next meeting. It was decided that a meeting would be convened with a select group of about six to eight organizations for follow up and URS will develop a list of five or six general questions in advance of this meeting. The date is to be determined but is tentatively planned for early December. URS gave Brooks and list of those organizations that had responded and DNREC, using the process of elimination, will determine if effort should be made to contact that who have not yet responded. Brooks agreed to forward to URS a GIS shape file of tax ditches and associated watersheds.

A meeting will be held on November 28 at DNREC's Dover office with Frank, Brooks, and Jessica to discuss future program opportunities and levels of service. URS will be present to observe and take notes. The Areas of Responsibility spreadsheet will be used as a starting point.

Since the September 26 JCC meeting, URS has interviewed Ed Lewandowski and Eric Buehl (Center for the Inland Bays), Joe Farrell (LID Committee), and Vince Davis (DelDOT). Interviews are scheduled with Randy Cole, Wendy Polasko, Ted Bishop, and Marc Cote (DelDOT). A message was left with a receptionist seeking a meeting with Rick Collins (Positive Growth Alliance) which has not been returned. URS was instructed to make a second effort. It was decided that a meeting with the Stormwater Advisory Group would be somewhat redundant as several members have already been contacted. Instead, a meeting will be arranged near the end of the project (90 percent completion) seeking public comment before it is finalized.

Draft program documents prepared by URS were briefly reviewed. These included sections entitled Integration with Comprehensive Plans, Project and Funding Needs, and Summary of Agency Activities. Discussion was held regarding how Sussex County's Comprehensive Plan could better incorporate stormwater components and Hal noted that Council members may need to be better informed of the associated issues. It was noted that numerous municipalities in the County will need to update their plans in the near future and this will present a similar opportunity.

The next meeting of the entire JCC was not scheduled as several members plan to attend the November 28 meeting.

SUSSEX COUNTY LEVEL OF SERVICE ANALYSIS
SURFACE WATER MANAGEMENT PROGRAM NEEDS
MUNICIPAL MEETING MINUTES

November 6, 2007

Present:

Dolores Slatcher and Charles Anderson	Seaford
Faye Lingo and Larry Gum	Millsboro
Tom Klein	Georgetown
Charlie McMullen and Alan Kercher	Ocean View
Allen Atkins	Milton
Bill Dehaven	Dagsboro
Hal Godwin	Sussex County
Frank Piorko, Brooks Cahall, and Jen Campagnini	DNREC
Jessica Watson	Sussex Conservation District
Kyle Gulbranson and David Athey (recording)	URS

Background for the Level of Service Analysis was provided. The findings from Governor Minner's Task Force on Surface Water Management in 2005 were summarized. Conversations included the expansion of the Wastewater Facilities Advisory Council to include surface water issues and its being renamed the Clean Water Advisory Council. DNREC initiated a centralized call in number for State residents to report drainage issues.

The results of the municipal surveys were summarized. Responses have been received to date from 17 of 25 Sussex County municipalities. Between those cities responding, 122,000 linear feet of open channels, 288,000 linear feet of storm pipes, and over 2,000 inlets are being maintained. Budgets for stormwater-related work varies widely by municipality. A clear majority of responses indicated that flooding and infrastructure decay were the primary drivers of their programs and many believe these will still be concerns in five years.

There was consensus that the lack of maintenance of privately owned stormwater facilities such as detention basins was a major concern. Most private entities such as home owner associations do not have the financial or technical resources to properly perform the needed tasks and there is no mechanism in place to assure that adequate funds are collected and set aside. Significant discussion ensued about the potential use of public funds to address these privately-owned structures (as is happening in New Castle County), methods by which developers could pay into a special fund such that municipalities could assume the maintenance responsibilities, and the need to better assign responsibilities so government agencies are not left with repair in the event of a major failure or maintenance tasks if an association dissolves. The amount of maintenance needed is difficult to determine since most basins are still relatively new and therefore data is sparse. Public and nonprofit agencies recognize the need to better educate owners and have been or will be holding training and seminars accordingly. Access by public agencies onto private lands is a major issue.

The potential collection of per lot charges or fees and if collected, how and where they could be spent, was discussed. It was thought that fees collected in one geographic area but spent in another would not necessarily be problematic unless an urgent need occurred in the first area and funds were then not available. DNREC could provide a model for how these sorts of issues could be resolved. Transferring funds could somewhat reward jurisdictions that do not plan as well as those that do.

Everyone agreed that watersheds know no political boundaries but planning and project assessment on this scale is needed. A mechanism for funding watershed studies which include multiple jurisdictions (and sometimes multiple states) is needed but difficult to implement. Currently developers' engineers address drainage on a site by site basis. Work in one jurisdiction is sometimes needed to resolve problems in another.

A draft Municipal Drainage Plan spreadsheet developed by DNREC was distributed. This described activities in a number of categories associated with three programmatic levels that were more or less patterned after the requirements of the National Pollutant Discharge Elimination System (NPDES) stormwater permitting program. Other than Delmar (as part of the Salisbury Urbanized Area), there are no areas in Sussex County currently mandated to comply with this federal program but it is possible that some will in the future.

Development will continue to create issues that will need to be addressed. Tax ditches were originally designed to drain agricultural lands but are now being used to drain developed areas. How these more impervious lands are assessed fees is not clear. Some developments are difficult to drain and changes to drainage patterns, which can create problems, are often needed as are easements. Municipalities are typically responsible for inspections during construction but DNREC and/or the Conservation District will investigate complaints after construction which creates a discontinuity.

Sussex County and many of the cities and towns within it do not have Lines and Grades ordinances which would govern lot grading. Some do require hydraulic grade line determinations by engineers such that areas of potential flooding can be identified. Others require as-built plans after construction. DNREC is currently updating its Sediment and Stormwater Regulations and could provide model ordinances. The Conservation District recently enacted a pre-application process which should identify potential problems earlier in the process.

The Level of Service Analysis will be completed soon after the first of the year. A 90 percent draft document will be made available for public comment before the study is finished.

SUSSEX COUNTY LEVEL OF SERVICE ANALYSIS
SURFACE WATER MANAGEMENT PROGRAM NEEDS
TAX DITCH ORGANIZATIONS MEETING MINUTES

December 11, 2007

Present:

William Vanderwende	Marshyhope and Stafford Tax Ditches
Richard James	Tyndall Branch Tax Ditch
Henry C. Johnson	Bearhole, Bunting, and Henry C. Johnson Tax Ditches
Keith Carlisle	St. Johnstown Tax Ditch
Nino D'orazio	Millville Tax Ditch
Carl Short	North Prong Tax Ditch
John Mills	Bee Branch and Cart Branch
Debbie Absher	Sussex Conservation District
Michele Garner	DNREC
Matt Grabowski	DNREC
Bob Long	DNREC
Brooks Cahall	DNREC
David Athey	URS
Ryan Mawhinney (recording)	URS

Background for the Level of Service Analysis was provided. It was explained that nearly half of the land in Sussex County drains to a tax ditch. In addition, as development increases, tax ditch organizations will play an increasing role.

The group discussed the adequacy of the current funding mechanism. The tax assessments and the Sussex Conservation District Cost Share Program more or less provide adequate funding for general maintenance such as annual mowing. The managers present are able to "work with what they have". Although funding is not abundant, there does not appear to be urgent need to increase assessments at this time. However, without the Cost Share Program, the managers would not be able to adequately maintain the ditches without significantly raising taxes. It was stated that raising taxes would cause difficulty for property owners in the district. It was also stated that tax rates are based on land use assessments 30 to 40 years ago and therefore these should be readjusted or reassessed.

Less frequent but more costly operations such as dip outs appear to be non-budgeted items and funds usually need to be obtained before these operations can occur. It was noted that smaller ditches generally do not have as significant a need for a dip-out program. Dip-outs and blow out or erosion repair are performed on an as-needed basis.

One major issue of significant concern is pressure from new and future developments. As development increases, so does the cost to maintain ditches as the costs for clean-up including disposal of trash and debris (tires, leaves, etc.) typically rises.

In agreement with the survey responses, the group expressed concern about development in the right-of-way both from an administrative as well as a technical viewpoint as increased development also increases conflicts within right-of-ways. Property owners occasionally place obstructions, sometimes

permanent structures, in the maintenance easement without being fully aware of the consequences such as impeding the ability to adequately access and mow. Property owners causing the conflicts are sometimes opposed to moving the obstruction even though per case law precedence, the property owner is legally responsible to remove the obstruction, even if a permanent structure. There was discussion if new developments should bear the costs for the impacts and how to distribute the costs. It was suggested that development should pay for the increased maintenance costs, not the existing taxpayers. It is noted that this is an item that the Tax Ditch Task Force is currently discussing.

Some other items that the Tax Ditch Right-of-Way Task Force is considering are how to verify rights-of-way in deeds, how to provide information in the internet, and how to better educate developers and landowners. It is unclear on why the right-of-way sometimes goes undetected during a title search. Tax ditches are sometimes not being recorded in the County Recorder of Deeds office. It was noted that since the county does not require permits for some minor improvements, a development review process does not exist to identify potential conflicts in tax ditch rights-of-way. Utility conflicts are also an important issue.

Consistent with the survey respondents, the group indicated that education of developers and the public on the importance of tax ditches is needed. Education is key to minimize conflicts in the right-of-way. The property owners, largely new residents, need to be made and kept aware of the purpose and importance of the ditches. The group discussed topics that would need to be addressed in an education outreach program. Ideas included an information brochure, signs, public notices and outreach. The idea of an information brochure to provide landowners was suggested. The brochure could include an aerial showing the location of the property in relation to the right-of-way. Signs identifying the location of the right-of-way were also suggested and those that exist at Simpler Branch were cited as an example. Possible public notices and invites to meetings could be provided in newspapers and/or mailings to residents. Coordination through homeowners associations may also be a decent source for educating property owners.

As part of the education process, it is important to recognize that tax ditches not only serve agricultural lands. Approximately 98% of the tax ditches were designed to drain agricultural lands. New designs (and redesigns) should consider the cumulative impacts of new developments based on urban runoff, not just agricultural. Tax ditches capture overflow of detention/ retention basins, which are often designed to less than the 100-year event. The overflow into the tax ditches increase erosion and maintenance needs. Design must start considering increased runoff volume and flow rates. This may require additional land area, which raises the issue on how the right-of-ways will be acquired. It was also suggested to look into BMP's to assist with future potential drainage issues.

Potential outcomes to this Level of Service Analysis include programmatic changes throughout the County. It was noted that the Conservation District could establish an administrative position to help coordinate and administer various organizational tasks, such as conduct inspections, organize and facilitate annual meetings, and be point of contact for managers and landowners. The 'administrator' could coordinate with the County staff and officials, consult managers on best management practices, and identify funding mechanisms. It was noted that such an administrator would need to be proactive. The Conservation District could also establish a "Best Management" program to educate and advise managers, especially new managers, to better maintain ditches if needed.

In addition, consideration should be given to what is going to happen in 20 years. With the significant increase in development and new residents from out of state coupled with tax ditch managers who have been in office sometimes for decades, there will be resulting changes in membership in tax ditch organizations.

SUSSEX COUNTY LEVEL OF SERVICE ANALYSIS
SURFACE WATER MANAGEMENT PROGRAM NEEDS

MEETING MINUTES

January 17, 2008

Present:

Debbie Absher	Sussex Conservation District
Jessica Watson	Sussex Conservation District
Bill McGowan	Sussex Conservation District
Frank Piorko	DNREC
Jennifer Campagnini	DNREC
Ryan Mawhinney	URS
David Athey	URS (recording)

Minutes of the October 30 (JCC), November 6 (municipalities), and December 11 (tax ditch organizations) meetings were accepted.

The conversations focused mostly on the topic of formatting the existing program analysis and potential levels of service. URS was asked to prepare a spreadsheet that would include various program elements on one axis and at least three approaches on the other. The program elements will be based on information obtained through the various agency interviews and would note gaps in service or issues not being addressed. Two ways to describe and quantify the approaches were discussed: 1) a relatively straight forward assessment with incremental increases in service with associated costs and 2) a more fundamental consideration of needed tasks with pros and cons of each, drawbacks and trade-offs, implementation issues, and costs.

URS will develop a draft spreadsheet and will work with DNREC in fine tuning prior to it being shared with the rest of the JCC. Funding related to various levels of service will need to consider not only agency staff increases but alternatives such as the use of consultants in lieu of additional staff. Options for how agencies would increase their funding sources need to be addressed. A holistic methodology will be needed to ascertain how the various program elements are related. The cohesiveness or lack thereof of approaches and their affect on the long term health of the County will be evaluated.

A brief discussion was held regarding the involvement of elected officials and members of the public. It was decided that elected officials should be given a project summary along with recommendations so they have an opportunity to develop a policy before any presentations to the general public.

A summary of the interview held with the Positive Growth Alliance that morning was presented. URS also interviewed Mike Powell from DNREC on flood plain issues since the last meeting.

Another meeting of the entire JCC was not scheduled but the meeting between DNREC and URS will be held in a two week time frame.

SUSSEX COUNTY LEVEL OF SERVICE ANALYSIS
SURFACE WATER MANAGEMENT PROGRAM NEEDS

MEETING MINUTES

March 6, 2008

Present:

Debbie Absher	Sussex Conservation District
Jessica Watson	Sussex Conservation District
Bill McGowan	Sussex Conservation District
Frank Piorko	DNREC
Jennifer Campagnini	DNREC
Brooks Cahall	DNREC
Hal Godwin	Sussex County
Elizabeth Treadway	AMEC (subconsultant to URS)
Ryan Mawhinney	URS
David Athey	URS (recording)

Minutes of the January 17, 2008 meeting were accepted.

The majority of the meeting was spent discussing the draft program document that had been distributed in advance. Suggestions made were as follows:

- Information regarding dams in Sussex County should be included
- A trend graph showing dwindling 21st Century funds should be added
- Approximate costs for retrofit and source reduction programs may be available for the Nanticoke Pollution Control Strategies from DNREC's Division of Water Resources and if so should be included
- Project program names will be changed to "Minimum Additional" and "Optimal Program"
- Funding needs will be clarified to better show that expenditures for the Optimal Program do not include those calculated for the Minimum Additional (in other words the Current Level is the baseline for both cases)
- Whether or not FEMA is the source of funds for flood mapping will be clarified as will projecting Minimum Additional and Optimal Program projections
- Sussex County's Source Water Protection Ordinance will be summarized
- Private expenditures for the maintenance of stormwater management facilities at the Current Level will be estimated
- Various expenditures will be moved from one program element category to another to better indicate public versus private responsibilities
- Additional personnel will be included in the Public Outreach and Public Involvement program element to coincide with the expenditure estimates

- The appendices will not include the actual municipal and tax ditch surveys but rather summaries of the results instead

A discussion was held regarding formatting of the final report and framing the program elements into a broader perspective. It was decided to use a governance approach likely with four different methods of providing services:

- Existing Framework with each agency acting more or less independently
- Shared Governance with agency roles clarified and potentially changed through Memoranda of Understanding
- Watershed Governance with the County being divided into three basins (Inland Bays, Delaware Bay, and Chesapeake Bay) with separate approaches developed for each
- Countywide Approach with a new entity assuming the roles of the various public agencies involved

In order to bring the project to a timely completion, the following tasks were agreed to:

- The draft program document will be reviewed by all with comments given to Dave by March 14
- DNREC existing personnel expenditures will be reviewed by Frank and Brooks
- The average number of general drainage projects in a given year performed or overseen by DNREC will be provided by Brooks
- Descriptions of tax ditch assistance will be provided by Debbie and Brooks
- The Areas of Responsibility spreadsheet will be reviewed for accuracy and completeness by Brooks and Jessica
- Details regarding Sussex County's Subdivision Code update will be furnished by Hal
- A list of stakeholders for a public meeting (see below) will be prepared by Franks and Jen

Two more versions of the program document will be prepared. The first will incorporate each addition as described above for presentation at a public meeting. Recommendations will not be provided at this point but will be included for the second and final version based on comments received at the meeting. The final document will be structured such that it leads to an on-going dialogue regarding the issues included within it.

The next draft program document will be reviewed at a JCC meeting scheduled for April 1st at 1:30 at the Sussex Conservation District offices. The public meeting has tentatively been scheduled for the evening of either April 22nd or 29th. Bill agreed to facilitate the discussions by holding group exercises and utilizing an audience response system.

SUSSEX COUNTY LEVEL OF SERVICE ANALYSIS
SURFACE WATER MANAGEMENT PROGRAM NEEDS

MEETING MINUTES

April 1, 2008

Present:

Debbie Absher	Sussex Conservation District
Jessica Watson	Sussex Conservation District
Bill McGowan	Sussex Conservation District
Frank Piorko	DNREC
Jennifer Campagnini	DNREC
Brooks Cahall	DNREC
Mike Brown	DNREC
David Athey	URS (recording)

Minutes of the March 6, 2008 meeting were accepted.

The majority of the meeting was spent discussing draft sections five and six of the program document as well as the program summary that had been distributed in advance. Suggestions made were as follows:

- Tax ditch management expenditures as shown in the drafts need to include the 50 percent match by tax ditch organizations.
- Retrofit programs will be included in the Maintenance Of And Improvements To Private Infrastructure program element and not Source Reduction Strategies.
- Due to lack of solid information, current expenditures Source Reduction Strategies will be indicated as negligible. The entity responsible for projected expenditures will be indicated as Not Yet Identified.
- The Shared Governance structure will include more actions to increase capacity such as municipalities carrying a larger role, the County adopting a Drainage Code, Tax Ditch Organizations given more control over rights-of-way and ability to increase warrants, and homeowner associations taking on responsibilities better but with governmental oversight.
- Each governance structure will discuss fiscal implications and levels of efficiency.

Discussions for the remainder of the meeting were focused on the public meeting to be held on April 29 and included:

- Bill McGowan will introduce the project and facilitate the discussions. David Athey will present the findings and program projections.
- URS will also prepare a four sheet handout which will be printed in 11 x 17 format.

Drafts of the presentation and handout will be distributed electronically and will be discussed at a meeting on April 21st at 1:30.

SUSSEX COUNTY LEVEL OF SERVICE ANALYSIS
SURFACE WATER MANAGEMENT PROGRAM NEEDS

MEETING MINUTES

April 21, 2008

Present:

Debbie Absher	Sussex Conservation District
Jim Elliott	Sussex Conservation District
Bill McGowan	Sussex Conservation District
Frank Piorko	DNREC
Jennifer Campagnini	DNREC
Brooks Cahall	DNREC
Mike Brown	DNREC
Hal Godwin	Sussex County
David Athey	URS (recording)

Jim Elliott will serve on the committee while Jessica Watson is out on maternity leave.

The majority of the meeting was spent discussing the draft handout that will be distributed to those planning to attend the April 29 public meeting. Suggestions made included the following:

- The first and second governance structures should be flipped such that Shared Governance is Structure #1 and Existing Framework is Structure #2.
- Structure #3, County-wide Approach, will be changed to Regional Approach and references to an Authority will be changed to Organization.
- Structure #3 will also include the possibility of a watershed-based approach.

Discussions for the remainder of the meeting were focused on logistics for the April 29 meeting and included the following:

- Though over 100 invitations have been sent, less than two dozen have indicated they will attend. DNREC and the Conservation District will call those who have not yet responded and urge them to attend. All acknowledged that a wide range of groups need to be represented at the meeting.
- Bill McGowan will introduce the project and facilitate the discussions. David Athey will present the findings and program projections.

A follow up meeting will be scheduled after the public meeting.

SUSSEX COUNTY LEVEL OF SERVICE ANALYSIS
SURFACE WATER MANAGEMENT PROGRAM NEEDS

MEETING MINUTES

May 29, 2008

Present:

Debbie Absher	Sussex Conservation District
Jim Elliott	Sussex Conservation District
Bill McGowan	Sussex Conservation District
Frank Piorko	DNREC
Jennifer Campagnini	DNREC
Brooks Cahall	DNREC
Hal Godwin	Sussex County
Elizabeth Treadway	AMEC (subconsultant to URS)
David Athey	URS (recording)

The meeting focused on steps needed to complete the final report and bring the project to closure.

URS is in the process of developing recommendations. After lengthy discussion, it was decided that recommendations about future uses of the report were appropriate but those detailing programmatic changes were not since they would necessitate policy level discussions. The report will offer recommendations to various groups or organizations such as the JCC, the General Assembly, and County Council. AMEC will provide comparisons for how other jurisdictions handled similar milestones in the evolution of their programs.

A follow up meeting was not scheduled nor is one planned to be held. Existing sections of the report have already been reviewed by the JCC and now accepted. The recommendations section will be distributed for review by Email and once comments are received will be incorporated into the overall document for final distribution.

APPENDIX D

MUNICIPAL QUESTIONNAIRE AND SUMMARY TABLES

SUSSEX COUNTY SURFACE WATER MANAGEMENT LEVEL OF SERVICE STUDY

MUNICIPAL QUESTIONNAIRE

Municipality:

Point of Contact (Municipality)	Secondary Point of Contact (Engineer/Public Works)
Name:	Name:
Position:	Position:
Phone:	Phone:
Fax:	Fax:
E-Mail:	E-Mail:
Date:	

1. STORM WATER FUNCTIONS: For each of the following stormwater functions, please indicate if they are performed in your municipality. If yes, please indicate who performs the function (town employees, contractor, engineer, other agency, etc). If a function is not performed, please state why.

Stormwater Function	Performed	By who? / Why not performed
New Development Plan Review	YES / NO	
Stormwater Facility Inspection	YES / NO	
Stormwater Facility Maintenance	YES / NO	
New Construction and Oversight	YES / NO	

2. MAINTENANCE: Please indicate how many of the following you are responsible for.

Number of basins or ponds: _____

Linear footage of open water courses: _____

Linear footage of drainage pipe: _____

Number of inlets (catch basins): _____

Number of BMP's and other: _____

3. BUDGET:

a. What do you spend annually (capital expenses as well as operations and maintenance):

b. What is (are) the source(s) of that funding:

c. Is stormwater work performed by: Percent of budget:

Town / City Employees	YES / NO
--------------------------	----------

Contractors	YES / NO
-------------	----------

d. Do you have a five year capital improvements plan for drainage and stormwater construction and if so, what is that budget amount?

4. RESOURCES:

a. How many people/full time equivalent (FTE's) positions do you have working on stormwater?

b. What equipment (vehicles and others) are dedicated to work related to drainage?

5. DRIVERS:

a. What are the "drivers" for your stormwater program (e.g. flooding, infrastructure decay, mandates)?

b. Which of these are you able to adequately address?

c. Which remain unresolved?

d. What issues do you think will be important in five years?

Contacts

Town	Primary Contact	Position	Phone	E-Mail	Secondary Contact	Position	Phone	E-Mail
City of Lewes								
City of Milford	David Baird	Assistant City Manager	302 422 6616 ext. 179	dbaird@milford-de.gov	Mark Mallamo	City Engineer	302 422 6616 ext. 131	mmallamo@milford-de.gov
City of Rehoboth Beach	Greg Ferrese	City Manager	302 227 4641		Kercher Engineering			
City of Seaford	Dolores Slaticher	City Manager	302 629 9173	dslaticher@seafordde.com	Berley Mears	Public Works Superintendent	302 629 8307	publicworks@seafordde.com
Town of Bethany Beach	Clifford Graviet	Town Manager	302 537 3771	admin@townofbethanybeach.com	Brett J. Warner	Public Works Director	302 539 1339	Wmbr3@aol.com
Town of Bethel								
Town of Blades								
Town of Bridgeville	Bonnie Walls	Town Manager	302 337 7135	bwalls@ddmg.net	Rick Passwaters	Street Superintendent	302 337 7135	

Town	Primary Contact	Position	Phone	E-Mail	Secondary Contact	Position	Phone	E-Mail
Town of Dagsboro	Wayne Baker	Mayor	302-732-3777	302-732-3907	William DeHaven	Code Enforcement Officer	302-732-3777	marshal102@mcclsi.com
Town of Delmar								
Town of Dewey Beach								
Town of Ellendale								
Town of Fenwick Island	Anthony J. Carson Jr.	Town Manager	302 539 3011			Director of Public Works	302 228 5310	nhanrahan@fenwickisland.org
Town of Frankford								
Town of Georgetown	Tom Klein	Director Planning & Zoning	302-853-0104	tklein@georgetowntowndel.com	William Bradley	Director Public Works	302-856-6045	
Town of Greenwood	Doris Adkins	Acting Town Manager	302 349 4534	townclerk@townofgreenwood.org				
Town of Henlopen Acres	Thomas A. Roth	Town Manager	302 227 6411	townmgr@henlopenacres.com	Alexander McClure	Public Works Director	302 227 6411	townhall@henlopenacres.com
Town of Laurel								

Town	Primary Contact	Position	Phone	E-Mail	Secondary Contact	Position	Phone	E-Mail
Town of Millsboro	Faye L. Lingo	Town Manager	302 934 8171	FayeL.Millsboro@mchsi.com	George K. Niblett, Jr.	Public Works Supervisor	302 934 8171	
Town of Millville	Bill Winter	Code Enforcement Officer	302 539 0449					
Town of Milton	Allen Atkins	Supervisor of Public Works	302-384-4110	aatkins@ci.milton.de.us	Scott Hoffman	Senior Engineer, Cabe Associates	302-674-9280	
Town of Ocean View	Charis F. McMullen	Administrative Official/ Public Works Director	302 539 9797	admintov@verizon.net	Alan Kercher, PE	Town Engineer - Consultant	302 894 1098	ask@kercheri.com
Town of Selbyville	Gary F. Taylor	Town Administrator	302 436 8314	tmselbyville@mchsi.com	Richard Duncan	Town Councilman	302 436 8314	
Town of Slaughter Beach	Frank Draper	Mayor	302-422-2293	townofslaughterbeach@comcast.net				
Town of South Bethany	Melvin A. Cusick	Town Manager	302 539 3653 ext. 213	townmanager@southbethany.org	Don Chrobot	Maintenance Supervisor	302 539 3653 ext. 216	maintenance@southbethany.org

Stormwater Management Resources

Town	Annual Budget	Population	FTE	Equipment	Other Resources
Town of Slaughter Bea	\$0.00	0	0	0	
Town of Fenwick Isln	\$8,000.00	0	5	CASE 580 Backhoe; 1986 Chevrolet Dump Truck; Bobcat A 300 - Backhoe, Loader, Sweeper; John Deer Loader	
City of Milford	\$25,000.00	0	0	None.	
Town of Millsboro	\$0.00	0	0	None	None
Town of Millsville	\$0.00	0	0	None	None
City of Rehoboth Beac	\$40,000.00	0	1	General operation vehicles. Sewer vac to clean.	
City of Seaford	\$10,000.00	0	8	Two backhoes; Three dump trucks; One Street sweeper; Two leaf machines; Several Service trucks and additional pupps and main cleaning equipment.	
Town of Selbyville	\$1,000.00	0	0	None	None
Town of South Bethan	\$35,000.00	0	1	1	
Town of Ocean View	\$0.00	0	0	0	
Town of Dewey Beach		0			
Town of Ellendale		0			
Town of Frankbrd		0			
Town of Georgetown	\$10,000.00	0	1	2006 Street Sweeper with vac attachment	
Town of Greenwood	\$50,000.00	0			
City of Lewes		0			

Town	Annual Budget	Population	FTE	Equipment	Other Resources
Town of Milton		0	0	None.	
Town of Bethany Beac	\$480,000.00		2	Small Dump Truck and Trailer; Takeuchi (TB145) Excavator; POSI TRAC Skid Steer Loader; Pick-up Truck; Hand Tools; Road Saws; Pick-Up Truck	
Town of Bethel					
Town of Blades					
Town of Bridgeville	\$0.00		0.5		Contractors provide street sweeper, utility truck, bobcat, mowers for routine maintenance as needed.
Town of Dagsboro			1	Contractor supplied labor & materials. Note - Much of the material is purchased by the town to control overall costs.	
Town of Delmar					

Stormwater Functions

Town	Plan Review	By Inspections	By Maintenance	By Construction	By	Basins Maintained	Open Channels	Piping L.F.	Inlets	BMPs
City of Lewes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						0
City of Milford	<input checked="" type="checkbox"/>	SCD; KCD <input checked="" type="checkbox"/>	SCD; KCD <input type="checkbox"/>	Owner (if done) <input checked="" type="checkbox"/>	City	7				0
City of Rehoboth Beach	<input checked="" type="checkbox"/>	Consulting Engineers <input checked="" type="checkbox"/>	City employees <input checked="" type="checkbox"/>	City employees <input type="checkbox"/>		0		95,568	622	0
City of Seaford	<input checked="" type="checkbox"/>	City Code Department, City Engineer <input checked="" type="checkbox"/>	City Code and Public Works Department <input checked="" type="checkbox"/>	City Public Works Dept; Contractors <input checked="" type="checkbox"/>	City Code Department, City Engineer	2	2500	90000	500	
Town of Bethany Beach	<input checked="" type="checkbox"/>	Building Inspector, SCD, Town Engineer <input checked="" type="checkbox"/>	Public Works Department, Town Engineer <input checked="" type="checkbox"/>	Public Works Department, Contractors <input checked="" type="checkbox"/>	Building Inspector, SCD, Public Works	0	52800	52800	100	0
Town of Bethel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						0
Town of Blades	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
Town of Bridgetown	<input checked="" type="checkbox"/>	Town Engineer <input type="checkbox"/>	<input checked="" type="checkbox"/>	Town Employees, Contractor <input checked="" type="checkbox"/>	Town Engineer, Town Employees	0		20,000	225	0
Town of Dagsboro	<input checked="" type="checkbox"/>	Planning & Zoning Commission, <input checked="" type="checkbox"/>	Town Engineer, Code Enforcement <input checked="" type="checkbox"/>	Code Enforcement Official, Contractors <input checked="" type="checkbox"/>	Town Engineer, Code Enforcement	15	TBD	TBD	TBD	

Town	Plan Review	By Inspections	By Maintenance	By Construction	By	Basins Maintained	Open Channels	Piping L.F.F.	Inlets	BMPs
Town of Delmar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						
Town of Dewey Beach	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						0
Town of Ellendale	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						0
Town of Fenwick Island	<input checked="" type="checkbox"/>	Engineer, Public Works Department	Public Work Department	<input checked="" type="checkbox"/>	Public Work Department	0	54900	6075	150	5
Town of Frankford	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						0
Town of Georgetown	<input checked="" type="checkbox"/>	Town Engineer (DBF), Sussex County	Sussex County Conservation District	<input checked="" type="checkbox"/>	Home Owners Association					0
Town of Greenwood	<input checked="" type="checkbox"/>	SCD; Town Engineer	SCD; Town Engineer	<input checked="" type="checkbox"/>	Town; Homeowners Association	1	8200	5900	151	0
Town of Henlopen Acres	<input checked="" type="checkbox"/>	Zoning Officer	Public Works Manager	<input checked="" type="checkbox"/>	Public Works Manager	0		6789	90	0
Town of Laurel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						0
Town of Millsboro	<input checked="" type="checkbox"/>	SCD	Engineers; SCD	<input checked="" type="checkbox"/>	Engineers; SCD	0	1320			0
Town of Millville	<input checked="" type="checkbox"/>	Engineer	SCD	<input checked="" type="checkbox"/>	Homeowners Association	0	0	0	0	0

Town	Plan Review	By Inspections	By Maintenance	By Construction	By	Basins Maintained	Open Channels	Piping L.F.	Inlets	BMPs
Town of Milton	<input checked="" type="checkbox"/>	Town Engineer <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		0	0	0	0	0
Town of Ocean View	<input checked="" type="checkbox"/>	SCD <input checked="" type="checkbox"/>	SCD <input checked="" type="checkbox"/>	SCD <input checked="" type="checkbox"/>	SCD	0	0	0	0	0
Town of Selbyville	<input checked="" type="checkbox"/>	Engineer <input checked="" type="checkbox"/>	SCD <input checked="" type="checkbox"/>	Homeowners Association <input checked="" type="checkbox"/>	Engineer, SCD	0	0	1000	245	0
Town of Slaughter Beach	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		0	0	0	0	0
Town of South Bethany	<input checked="" type="checkbox"/>	Code Enforcement Constable <input checked="" type="checkbox"/>	Code Enforcement Constable <input checked="" type="checkbox"/>	Maintenance Department <input checked="" type="checkbox"/>	Code Enforcement Constable	3	27000	10000	62	0

APPENDIX E

MUNICIPAL STORMWATER FUNCTIONS

Municipal Stormwater Functions

Municipality	Plan Review	By	Inspections	By	Maintenance	By	New Construction & Oversight	By
Bethany Beach	Yes	Building Inspector, SCD, Town Engineer	Yes	Public Works Department, Town Engineer	Yes	Public Works Department, Contractors	Yes	Building Inspector, SCD, Public Works Director, Code Enforcement, Engineer
Bridgeville	Yes	Town Engineer	No	N/a	Yes	Town Employees, Contractor	Yes	Town Engineer, Town Employees
Dagsboro	Yes	Planning Commission, Code Enforcement Official, Town Council, Town Engineer	Yes	Town Engineer, Code Enforcement Official	Yes	Code Enforcement Official, Contractors	Yes	Town Engineer, Code Enforcement Official
Fenwick Island	Yes	Engineer, Public Works Department	Yes	Public Work Department	Yes	Public Work Department	Yes	Public Work Department
Georgetown	Yes	Town Engineer, SCD	Yes	SCD	Yes	Homeowners Association	Yes	Sussex County and Town Construction Coordinator
Greenwood	Yes	SCD; Town Engineer	Yes	SCD; Town Engineer	Yes	Town; Homeowners Association	Yes	Town Engineer
Henlopen Acres	Yes	Zoning Officer	Yes	Public Works Manager	Yes	Public Works Manager	Yes	Zoning Officer
Milford	Yes	SCD; KCD	Yes	SCD; KCD	No	Owner (if done)	Yes	City
Lewes	Yes	SCD	Yes	SCD	Yes	Public Works Department, Homeowners Association	Yes	Engineer, SCD
Millsboro	Yes	SCD	Yes	Engineers; SCD	No		Yes	Engineer, SCD
Millville	Yes	Engineer	Yes	SCD	Yes	Homeowners Association	Yes	SCD
Milton	Yes	Town Engineer	Yes	N/a	Yes		Yes	N/a
Ocean View	Yes	SCD	Yes	SCD	Yes	SCD	Yes	SCD
Rehoboth Beach	Yes	Consulting Engineers	Yes	City employees	Yes	City employees	No	N/a
Seaford	Yes	City Code Department; City Engineer	Yes	City Code and Public Works Department	Yes	Public Works Department; Contractors	Yes	City Code Department; City Engineer
Selbyville	Yes	Engineer	Yes	SCD	Yes	Homeowners Association	Yes	Engineer; SCD
Slaughter Beach	No		No	N/a	No	N/a	No	N/a
South Bethany	Yes	Code Enforcement Constable	Yes	Code Enforcement Constable	Yes	Maintenance Department	Yes	Code Enforcement Constable

APPENDIX F

**TAX DITCH QUESTIONNAIRE AND
SUMMARY TABLES**

**SUSSEX COUNTY SURFACE WATER MANAGEMENT LEVEL OF SERVICE STUDY
TAX DITCH ORGANIZATION QUESTIONNAIRE**

Tax Ditch Organization: _____

Your Name: _____ **Phone:** _____

Title: _____ **E-Mail:** _____

Today's Date: _____ **Fax:** _____

1. **FUNCTIONS:** Please indicate if the following operations were performed between January 1 and December 31, 2006. If yes, indicate if the function was performed by the Sussex Conservation District or private contractor and how often it is typically performed. If the function was not performed, please state why.

Function	Performed	By who? / How often / Why not performed
Mowing	YES / NO	_____
Weed Wiper Bar	YES / NO	_____
Herbicides Application	YES / NO	_____
Dip outs	YES / NO	_____
Erosion control	YES / NO	_____
Beaver dam removal	YES / NO	_____
Pipe replacements	YES / NO	_____
Other _____	YES / NO	_____
Other _____	YES / NO	_____
Other _____	YES / NO	_____

2. **ACTIVITIES:** Please indicate if the following activities were performed between January 1 and December 31, 2006. Provide additional detail if appropriate, particularly if the activity was not performed.

Activity	Performed	Additional Detail
Annual meeting	YES / NO	_____
Audit of financial records	YES / NO	_____
Inspection of ditch	YES / NO	_____

3. **OPERATIONS:** Please answer as appropriate regarding the following operational questions.

Question	Answer
Do you receive financial assistance from the Sussex Conservation District?	YES / NO
Are you familiar with the District's cost share program?	YES / NO
Do you receive technical assistance from the Sussex Conservation District?	YES / NO
Are your organization's responsibilities clearly known and understood?	YES / NO
Is your tax ditch organization bonded?	YES / NO
Are you aware of any work that is not being performed due to lack of funds?	YES / NO
Would you attend a workshop to learn how to better manage your organization?	YES / NO

4. **BUDGET:**

- a. What did you spend between January 1 and December 31, 2006? Is this amount typical for most years?

b. What is (are) the source(s) of that funding?

c. Do you have a long term (such as five years) budget? If yes, how much?

5. ISSUES:

a. What are the primary needs of your tax ditch? Are these needs currently being met? What will be your needs in five years?

b. Do you have adequate funding?

c. What issues are important to you now? What issues do you think will be important in five years?

d. Do you have problems with obstructions or invasive species?

6. DESIRES:

a. If budget was not a limitation, what would you want to do to really improve your tax ditch program and services?

Tax Ditch Budgeting

Tax Ditch Organization	2006 Spending	Funding Source	Long Term Budget	Adequate Funding
Adamville		Ditch taxes and cost sharing	<input type="checkbox"/>	<input type="checkbox"/>
	\$1,400.00	Taxes	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Bacon and Kenney	\$0.00	Ditch tax on property tax assessment	<input type="checkbox"/>	<input type="checkbox"/>
Bear Hole	\$0.00	Taxes & Matching Funds	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Beaverdam	\$21,822.37	Tax collectiona and district cost share	<input type="checkbox"/>	<input type="checkbox"/>
Bee Branch	\$5,880.00	Taxes	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Black Savannah Tax Ditch	\$47.40	Real estate taxes and grant money for mowing of \$350.00	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Brasures Branch Tax Ditch #36	\$400.00	Taxes	<input type="checkbox"/>	<input type="checkbox"/>
Bridgeville Tax Ditch	\$11,311.00	Ditch Taxes	<input type="checkbox"/>	<input type="checkbox"/>
Brights Branch Tax Ditch	\$8,020.00	6% tax collected by Sussex County Treasury	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Bucks Branch Tax Ditch	\$7,300.00	Taxes paid through County taxes	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Bunting Tax Ditch	\$0.00	Tax Ditch and Cost share	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Carl Branch	\$4,000.00	Soil Conservation (Century 21); Tax Money	<input type="checkbox"/>	<input type="checkbox"/>
Deep hole Branch Tax Ditch		Taxes	<input type="checkbox"/>	<input type="checkbox"/>
Double Fork	\$0.00		<input type="checkbox"/>	<input type="checkbox"/>
Draper Bennett	\$198.75	Taxes and Cost share	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ellendale School House Tax Ditch	\$810.00	Sussex County School House Tax Ditch	<input type="checkbox"/>	<input type="checkbox"/>
Georgetown/ Vaughn Tax Ditch	\$3,000.00	Taxes	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Gordan Branch			<input type="checkbox"/>	<input type="checkbox"/>

Tax Ditch Organization 2006 Spending Funding Source Long Term Budget Adequate Funding

Grays Prong Tax Ditch	\$862.00	Tax money	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Green Branch	\$0.00	Taxes	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Horse Pound Swamp Ditch	\$1,200.00	Taxes	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hurley Drain	\$0.00	Tax, Interest, Cost Share	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Indian Drain	\$0.00	Ditch Tax Reserve	<input type="checkbox"/>	<input checked="" type="checkbox"/>
James Branch Tax Ditch	\$600.00	Taxes	<input type="checkbox"/>	<input checked="" type="checkbox"/>
L & T Ditch	\$250.00	None - Money already in account for years	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Lingo Tax Ditch	\$0.00		<input type="checkbox"/>	<input checked="" type="checkbox"/>
Maple Branch Tax Ditch	\$700.00	Ditch taxes	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Marshyhope Tax Ditch	\$4,400.00	Tax ditch tax	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Meadows Branch Tax Ditch		Ditch taxes and cost sharing through Sussex Conservation Dist	<input type="checkbox"/>	<input type="checkbox"/>
Middleford Tax Ditch	\$3,000.00	Tax funds	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mikey Branch	\$1,400.00	Ditch tax	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Millville Tax Ditch	\$0.00	N/A (Note item c. "Just what is collected by taxes"	<input type="checkbox"/>	<input type="checkbox"/>
Mt Zion Cool Branch			<input type="checkbox"/>	<input type="checkbox"/>
Nanticoke River	\$3,989.20	Ditch taxes	<input type="checkbox"/>	<input type="checkbox"/>
North Prong	\$2,000.00	Ditch tax	<input type="checkbox"/>	<input type="checkbox"/>
Oak Grove Tax Ditch	\$2,127.30	Yearly tax	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Perch Creek		Tax	<input type="checkbox"/>	<input type="checkbox"/>
Priestly Tax Ditch	\$20.00	Ditch tax	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Redden Tax Ditch	\$1,650.00	Taxes	<input type="checkbox"/>	<input checked="" type="checkbox"/>

APPENDIX G

PUBLIC MEETING HANDOUT AND COMMENTS

SUSSEX COUNTY SURFACE WATER MANAGEMENT LEVEL OF SERVICE ASSESSMENT

April 2008

Program Areas Assessed

- ~ Stormwater Program
- ~ General Drainage
- ~ Tax Ditch Assistance
- ~ Tax Ditch Management
- ~ Watershed Modeling for Quantity and Quality Management
- ~ Maintenance of and Improvements to Public Infrastructure
- ~ Maintenance of and Improvements to Private Infrastructure
- ~ Source Reduction Strategies
- ~ Flood Plain Protection and Improvement
- ~ Dam Safety
- ~ Public Outreach and Public Involvement
- ~ Planning and Regulatory Aspects

Alternative Governance Structures

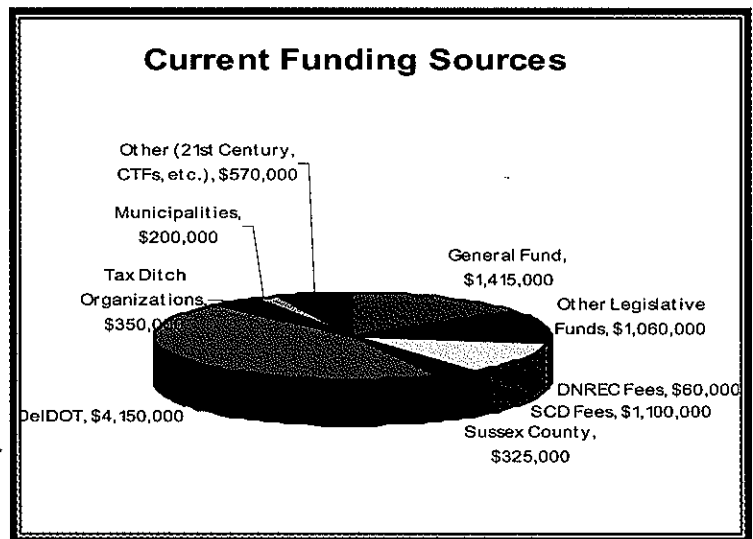
- Shared Governance 2
- Existing Framework 3
- Regional Approach 4

This analysis began in June of 2007 and was funded equally by the Delaware Department of Natural Resources and Environmental Control (DNREC) Division of Soil and Water Conservation, the Sussex Conservation District, and Sussex County. The purposes of the project were to determine the current level and costs of surface water management offered in Sussex County and to identify the levels and costs needed to adequately meet the needs of current residents and the rapidly expanding population within the County.

This project builds on previous efforts such as the Stormwater Facility Maintenance Needs Assessment for Sussex County (2004), Governor Minner's Task Force on Surface Water Management (2005), and the Delaware Public Policy Institute Dialogue on Financing Wastewater and Stormwater Infrastructure (2006).

In addition to the sponsoring agencies, meetings were held with numerous other government entities and stakeholders including DeIDOT, Tax Ditch Managers, municipal representatives, the Center for the Inland Bays, the Low Impact Development Roundtable and University of Delaware Sea Grant Marine Advisory Program, and the Positive Growth Alliance.

Information obtained through interviews and document research was used to 1) categorize programs and responsibilities, 2) determine current expenditures, 3) identify issues of concern, 4) project future funding needs, and 5) develop alternative governance structures to provide services. The benefits and drawbacks of the governance structures are being presented for public comment such that final recommendations can be made.



The analysis identified over \$9 million is spent on surface water management projects and programs in Sussex County in a typical year. The State contributes a majority of these funds but other sources include Sussex County, municipalities, and private entities. Two possible levels of service were assessed. The Minimum Additional Needs level was found to be about \$10 million for total expenditures of \$19 million. The Optimum Program was estimated at \$18 million for total expenditures of \$27 million.

GOVERNANCE STRUCTURE #1: SHARED GOVERNANCE

Organization

Shared Governance keeps the current framework but formalizes responsibilities. It would allow for a reassessment of resources and needs and an increase in financial support to better address future funding shortfalls.

Under Shared Governance, the roles of each agency would be better defined and Memoranda of Understanding would be signed clarifying these roles. Agencies could assume new or different roles and each determine their own funding needs. Agreements could also be made between public bodies and private organizations.

Some larger cities and towns in the County are capable of assuming a larger role such as plan reviews and project inspections keeping these at the local level. Sussex County could develop a Drainage Code specifying lot grading and drainage requirements. Tax ditch organizations could be given more information about their rights-of-way and could take advantage of their abilities to increase warrants. Finally, homeowner associations could be better assisted or overseen with their maintenance responsibilities. A more structured gathering of agencies and stakeholders involved or interested in surface water management could be held monthly or quarterly.



Benefits

- ~ Formal agreements would provide better visibility to the public as agency roles would be clearly defined. Multi-jurisdictional projects would be easier to manage and there would be less opportunity for a problem to "fall through the cracks".
- ~ Agreements could be more efficient. Cities and towns assuming greater responsibility could establish more accurate fees and assessments. Equipment could be shared among jurisdictions.
- ~ Approach would provide an opening to develop arrangements with private entities to address potential funding and responsibility issues described under the Existing Framework.

Drawbacks

- ~ A shared governance concept structured with Memoranda of Understanding could introduce rigidity into a system that currently functions in a less formal setting. Barriers to communication could result.
- ~ Each and every possible scenario or situation cannot be anticipated and agreements therefore would need to be periodically revised or updated.
- ~ Fee increases are seldom popular and approach presupposes that each agency or government body will want to change existing process and structure.

Stakeholder Observations

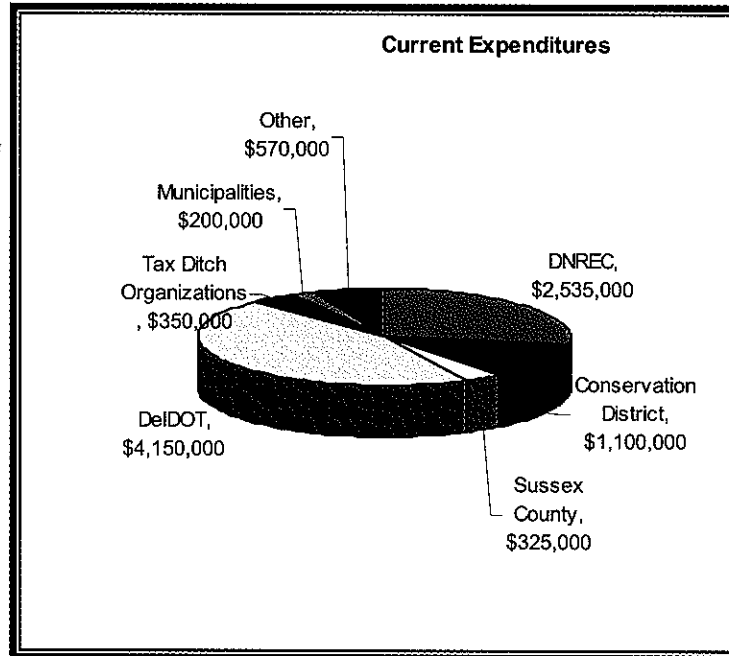
- ~ A standard agreement between DelDOT and municipalities could be crafted to replace the numerous agreements which currently exist.
- ~ DNREC could establish a pool of Certified Construction Reviewers (CCRs) that developers would pay into with CCRs assigned on a rotating basis to eliminate conflicts of interest.
- ~ A public/private partnership could be developed where a small group of contractors be granted a franchise of sorts and perform maintenance on privately owned stormwater facilities County-wide but collectively funded by HOAs. Or developers could pay into a special fund and a public entity could assume the maintenance responsibilities.

GOVERNANCE STRUCTURE #2: EXISTING FRAMEWORK

Organization

The Existing Framework would keep programs as they are structured today. The Sussex Conservation District continues to be the delegated agency for implementation of the State's Sediment and Stormwater Program and DNREC is responsible for addressing miscellaneous drainage problems as they arise. Both would support tax ditch organizations. Sussex County's role remains comparatively minor and municipalities continue to be somewhat dependant on assistance from others. Private organizations such as tax ditches and homeowner associations (HOAs) maintain their responsibilities.

Current methods of delivering services appear to meet most immediate stormwater needs but are more reactive than proactive. Projects can be done only when sufficient funds become available which can sometimes take years. However, longer term desires such as dam safety do not have a dedicated source of funds. It also leaves questions of private facility maintenance unanswered.



Existing Framework makes no substantive changes to current responsibilities. It is the least expensive and easiest governance structure to implement but does not improve efficiencies or address current or potential future funding shortfalls.

Benefits

- ~ Ease of implementation as nothing would change from the current process.
- ~ There would be no increases in fees or taxes.
- ~ Some may embrace the argument that if the system is not broken it should not be changed.

Drawbacks

- ~ Agency duties can become blurred without clearly defined responsibilities. There are no guarantees that the cooperation occurring today will exist in the future.
- ~ Pollution Control Strategies being developed coupled with aging infrastructure repair needs will likely result in greater future expenditures.
- ~ Continuing to rely on private entities for maintaining parts of the overall system could have severe consequences in future years unless tax ditch organizations and homeowner associations make adequate plans.

Stakeholder Observations

Since little comprehensive planning is being done on a watershed-wide level, projects are not assessed on a larger scale. For example, DelDOT's policy of forbidding new drainage into their rights-of-way could in some instances be counter-productive. The agency could seek off-site drainage improvements as it does for adjacent roadways and intersections.

GOVERNANCE STRUCTURE #3: REGIONAL APPROACH

Organization

This approach involves the creation of a new regional or watershed based organizational structure. Existing agencies would coordinate and possibly expand their responsibilities. This sort of organization would be similar to a



stormwater utility which was recommended by the Sussex County Stormwater Facility Maintenance Needs Assessment (2004), and other reports.

Current funding streams would be restructured and dispersed by the organization and new revenue streams such as a user fee or development impact fees potentially created. Whereas the current system is based mostly on general tax

revenues, a user fee arrangement, if enacted, would account for revenues and expenditures on an individual property basis with residences and businesses assessed a charge based on the amount of runoff generated on their property. An equitable, stable, and dedicated source of funds would supplement or perhaps replace the disparate current sources.

The Regional Approach restructures service delivery through a new organization with greater funding. It is the most expensive governance concept but also the most proactive and comprehensive.

Benefits

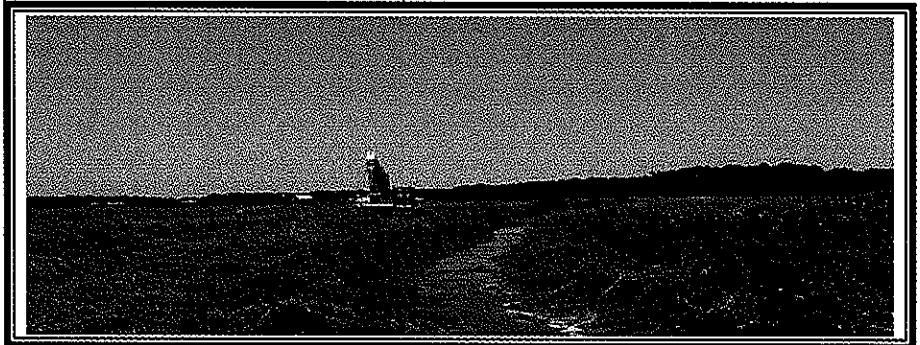
- ~ A regional or watershed based approach would result in a more comprehensive water management program. As with Shared Governance, it would be more visible and facilitate multi-jurisdictional efforts.
- ~ A single entity could better leverage the funding and work of multiple groups and provide a more unified approach. There would be more opportunity for a public agency to assume the maintenance responsibilities of private organizations.
- ~ Creation of new revenue streams would lessen reliance on general funds.

Drawbacks

- ~ Oversight of various programs being performed by several government organizations could be substantial.
- ~ Fee increases are seldom popular and agencies may not want to be subject to direction or decisions by a higher body.
- ~ Newer, more innovative methods to collect revenues would necessitate significant public outreach.

Stakeholder Observations

- ~ One of the Governor's Task Force's recommendations was that tax ditch organizations should be considered for inclusion into a county or municipal stormwater utility.
- ~ One of the recommendations of the DPPI Dialogue was that "Counties and municipalities should review their current impact fees related to development of growth-related wastewater and stormwater infrastructure."



SUSSEX COUNTY LEVEL OF SERVICE ANALYSIS

FOR SURFACE WATER MANAGEMENT NEEDS

SUMMARY OF COMMENTS RECEIVED AT APRIL 29, 2008 PUBLIC MEETING

Structure 1 – Shared Governance

New fees could result in better equity and fairness
Does not allow private enterprise to get involved
Who is involved regarding enforcement?
Many things would fall through the cracks

Structure 2 – Existing Framework

Present responsibilities are not clear
Education is needed as many are not aware of their responsibilities
Spending increases will be needed
Money is needed for inventories
Private control
Lack of big picture focus
Framework is good but may need tweaking at edges
Tax ditch issues such as easements need to be addressed

Structure 3 – Regional Approach

Where would money come from?
Opportunity for sharing equipment and more cooperation
Regional planning would be good

Final Group Discussion

\$9 million in spending – strong support (5.0 on the McGowan count)
\$18 million in spending – moderate support (2.85 on the McGowan count)
\$27 million in spending – little support

New ideas never heard before

Difficulties of tax ditch organizations
Private companies maintain stormwater management basins
Stronger connection to fixing problems closer to home
Different responses would be obtained in wetter years
Homeowner associations not knowing responsibilities
Stormwater as a utility

Issues that can be agreed upon

Education needed

The burden should fall on those creating problems

How to make public/private partnerships equitable – larger communities have more resources

Lack of comfort with State regulations, fees, requirements

Get right people together on watershed level and reach agreements

Notify homeowner associations about their responsibilities

General ideas

Discussions should be framed in problems that will be solved and not how much it will cost – benefits

Existing system is good with some tweaks – special tax districts, more privatization

Private enterprise has profit motive to bring down costs

Tragedy of the Common is one end of spectrum and Regional approach is other

Option 2a is best – existing program with modifications