

Clean Water and Flood Abatement Task Force

Wednesday, August 26, 2015

10:00a.m. – 12:00p.m.

Buena Vista

Meeting Attendance

Task Force Members:

Present:

Senator Bryan Townsend
 Representative Michael Mulrooney
 Senator Bryant Richardson
 Representative Ronald Gray
 Secretary Jennifer Cohan
 Secretary David Small
 Holly Porter
 Thom May
 Gerald Kaufman
 Howard Morrison
 George Haggerty
 Jeffrey Bross
 Harold Godwin
 Jen Adkins
 Gerard Esposito
 Paul Morrill
 Joseph Corrado
 William Lucks
 Michael Riemann
 Thomas Unruh
 Bruce Jones

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Absent:

Patty Cannon
 Fred Beaufait
 Brenna Goggin
 Roy Miller
 Robert Baldwin
 Christine Mason
 Dian Taylor
 Sam Lathem
 Kent County Administrator

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Staff:

Michelle Zdeb
 Rylene Harper

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Attendees:

Edward Hallock
 Heather Warren
 Chris Bason
 Brooks Cahall
 Terry Deputy
 Virgil Holmes
 Martha Narvaez
 Danielle Dick
 Richie Jones
 Kevin Donnelly
 Kristen Travers
 Stu Lindner
 Sari Rothrock
 Kash Srinivasan
 Ellen Kohler

Organization:

DHSS
 DHSS
 CIB
 DNREC
 DNREC
 DNREC
 UD-WRA
 Public
 The Nature Conservancy
 DACD
 DE Nature Society
 Artesian Water
 POE
 KSG
 TNC

The Task Force meeting was brought to order at 10:13 am.

Considerations of Meeting Minutes

Senator Bryan Townsend, Co-Chair, thanked everyone for attending again and announced the first item on the Agenda was consideration of the Meeting Minutes. He noted that there was a Memo in the members' folders, as there were two proposed changes that were brought to their attention by member Jerry Esposito. The first proposed change related to the organization Robert Baldwin represents as a member of the Task Force. The second proposed change related to Mr. Esposito's comments towards Sussex County and Ellendale in regards to bill payments. Senator Townsend then asked if any additional changes were proposed. Seeing none, he followed by asking for a motion to approve the Meeting Minutes as amended. (Please see attached Memo.)

Joseph Corrado, Delaware Contractors Association, moved to approve the Meeting Minutes.

Mr. Esposito, Delaware State Chamber of Commerce, seconded the motion.

The Meeting Minutes from July 28, 2015 were approved unanimously.

Senator Townsend thanked the members for their patience with formality. He reaffirmed the members that the Minutes will be turned around quickly and in detail after each meeting, as they will become part of the final report. The Senator noted that some readers might enjoy our fine conversations in such detail (some snickered).

Mr. Esposito affirmed that the Meeting Minutes were phenomenal (others verbally agreed) and he noted that the Minute Taker should put this praise in the notes (several chuckles).

Senator Townsend agreed that compliment would be reflected in the Minutes and pointed out that so are jokes and laughter (all laughed). He further noted the Minutes should also state that Ms. Zdeb is a phenomenal Legislative Assistant.

Ms. Zdeb thanked everyone for their kind words.

MEMO: SCR 30 Task Force
DATE: August 26, 2015
TO: Task Force Members
FROM: Michelle Zdeb, Legislative Assistant
RE: Task Force Meeting Minutes from July 28, 2015

Dear Task Force Members:

In the Meeting Minutes, our member Jerry Esposito pointed out two changes to the draft Meeting Minutes. We recommend the following changes in bold to the members, prior to posting the approved Meeting Minutes. We would like to make the following changes in the document:

Page 11:

We suggest changing: “Robert Baldwin, Delaware Association of Water Companies – Delaware Chapter,” to: “**Robert Baldwin, Delaware Association of Conservation Districts,**”.

Page 14:

We suggest changing Mr. Esposito comment from: “there are approximately 20 sewer districts and at least 20 to 40 percent of bills not being paid.” to: “**of Sussex County’s 20 or so sewer districts, Ellendale is the one with the highest % of unpaid bills.**”

Thank you for your time.

Sincerely,
Michelle Zdeb

Review Proposed Meeting Schedule

Senator Townsend stated he wanted to review the proposed meeting schedule, including dates and locations.

Ms. Zdeb noted that not all locations have been confirmed, as she is waiting on a few responses for confirmation.

Senator Townsend then decided to review the dates the chairs were proposing. He further explained that once locations and times of these dates have been confirmed, Ms. Zdeb would circulate them to the group. Proposed dates were:

- September 23, 2015
- October 15, 2015
- November 3, 2015
- November 19, 2015
- December 17, 2015

Senator Townsend noted that he wanted to start with Sussex and alternate the next few meetings between Sussex and Kent. He further noted that the chairs realize it will be hard to coordinate all Task Force members’ schedules, which is why the chairs are announcing these dates in advance.

Presentation on Issues regarding Drinking Water

Senator Townsend turned the floor over to Task Force member Thom May, DHSS (Delaware Health and Social Services).

Mr. May noted prior to starting his presentation that he was thankful to be able to address the Task Force on this information. He also noted that he brought representatives from the specific DHSS Drinking Water Programs, and he introduced them to the members: Office of Drinking Water (ODW) Edward Hallock, Drinking Water State Revolving Fund (DWSRF) Heather Warren, and the Private Drinking Water Well Program (KSG) Kash Srinivasan.

The presentation the Task Force members received is inserted below:

<p> Delaware Health and Social Services</p> <h3>Delaware</h3> <ul style="list-style-type: none"> • Population - 935,614 • Residents served by community water system (CWS) - 726,107 • Percentage of the population served by CWS - 77.6 percent • Public water systems - 485  <p><small>Delaware Health and Social Services</small></p>	<p> Delaware Health and Social Services</p> <h3>Authorization</h3> <ul style="list-style-type: none"> • The EPA granted Delaware authority to enforce the Safe Drinking Water Act in 1978 • 16 Delaware Code 122(3)(c) provides statutory authority to DHSS <p><small>Delaware Health and Social Services</small></p>
<p> Delaware Health and Social Services</p> <h3>DHSS Drinking Water Programs</h3>  <ul style="list-style-type: none"> • Office of Drinking Water (ODW) • Drinking Water State Revolving Fund (DWSRF) • Private Drinking Water Well Program <p><small>Delaware Health and Social Services</small></p>	<p> Delaware Health and Social Services</p> <h3>The Office of Drinking Water</h3> <ul style="list-style-type: none"> • Programs <ul style="list-style-type: none"> – Public Water Systems Supervision – Capacity Development – Operator Certification – Laboratory Certification  <p><small>Delaware Health and Social Services</small></p>
<p> Delaware Health and Social Services</p> <h3>Regulations Impacting Water Systems</h3> <ul style="list-style-type: none"> • Total Coliform Rule • Revised Total Coliform Rule • Phase II/IV Rule • Lead and Copper Rule • Groundwater Rule • Stage Disinfection Byproduct Rule • LT2 Surface Water Treatment Rule • Radiological Rule <p><small>Delaware Health and Social Services</small></p>	<p> Delaware Health and Social Services</p> <h3>Funding</h3> <ul style="list-style-type: none"> • Public Water System Supervision Program <ul style="list-style-type: none"> • \$510,000 per year awarded from the US EPA <ul style="list-style-type: none"> – 25 percent state match required • \$166,020 per year from the 10 percent DWSRF Set Aside <ul style="list-style-type: none"> – 1:1 state match required • \$291,655 per year from the 15 percent DWSRF Set Aside <ul style="list-style-type: none"> – No state match required <p><small>Delaware Health and Social Services</small></p>



Office of Drinking Water Partners

- Office of Engineering, DPH
- DWSRF, DPH
- Divisions of Water and Hazardous Waste, DNREC
- Office of Food Protection (to assist with water quality issues in miscellaneous public water systems), DPH
- Public Health Lab, DPH

Delaware Health and Social Services



Interagency Cooperation

- Delaware Rural Water Association to assist with small public water systems
- Delaware Technical Community College on training and licensing programs for water system operators
- South East Rural Community Assistance Project to assist small towns in complying with environmental regulations

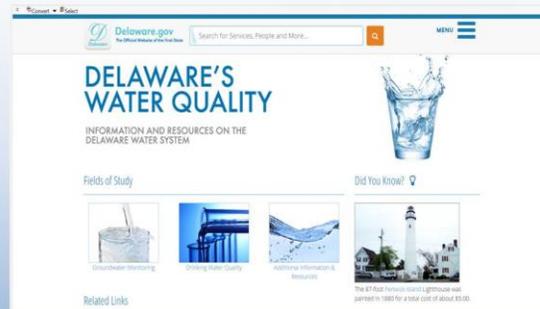
Delaware Health and Social Services



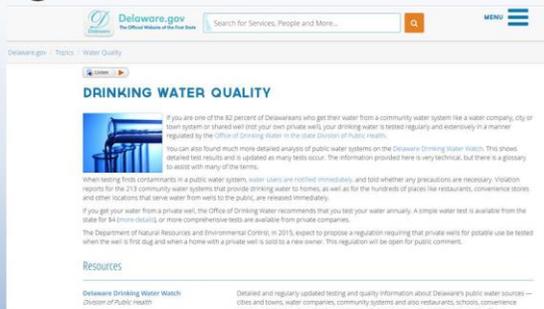
Accomplishments

- In 2014, 96.9 percent of residents served by community water systems received water that met all health-based standards
- In 2014, 92 percent of public water systems were in compliance with all health-based standards

Delaware Health and Social Services



Delaware Health and Social Services



Delaware Health and Social Services



Drinking Water State Revolving Fund

Delaware Health and Social Services



Background

- The Drinking Water State Revolving Fund, or DWSRF program, was initiated as part of the 1996 Amendments to the Safe Drinking Water Act
- The program is primarily a source of low-interest loans for public water systems needing to upgrade their infrastructure

Delaware Health and Social Services



In Delaware...

- Since the program's inception, DHSS has closed SRF loans totaling over \$170.6M
- 86 Delaware municipalities from Wilmington to Selbyville have received SRF loans

Delaware Health and Social Services



Delaware Health and Social Services

Funding Sources and Distribution

- DHSS receives about \$8.5M from EPA annually
- The State is required to provide a 20 percent match (approx. \$1.7) each grant year
- Most grant funds are loaned out through the revolving fund
- 31 percent of those funds support state programs
- Funds over 20 employees

Delaware Health and Social Services



Delaware Health and Social Services

Loans

- DWSRF funds can be loaned out for a variety of construction projects including:
 - Storage tanks
 - Distribution upgrades/replacements
 - Treatment plant renovations
 - Meter replacements



Delaware Health and Social Services



Delaware Health and Social Services

Loans (continued)

- DWSRF opportunities are available twice per year, usually in February and August
- Applications are collected, ranked according to public health needs and “readiness to proceed”
- Loans can consequently be closed after all municipal requirements such as referendums, public notifications, etc., are met

Delaware Health and Social Services



Delaware Health and Social Services

Interagency Cooperation

- The DWSRF program is far-reaching; partners include:
 - DNREC Underground Injection Control
 - DNREC Source Water Protection
 - DNREC Environmental Finance
 - Delaware Rural Water Association
 - Delaware Technical and Community College

Delaware Health and Social Services



Delaware Health and Social Services

Project Highlights

- **City of Wilmington**
 - \$8.9M solar panel installation for energy efficiency, with the City of Wilmington using ARRA funds
 - \$24M covering of the Cool Spring Reservoir (currently Cools Spring Park), that eliminated open-air finished water storage
 - \$21M Brandywine Membrane Plant upgrades provides state-of-the-art filtration for our largest city

Delaware Health and Social Services



Delaware Health and Social Services

Project Highlights

- **Kent County**
 - \$850,000 Town of Clayton arsenic removal project
 - \$2.4M City of Dover main replacement project to remedy brown water complaints
 - \$1.3M Tidewater Utilities MHC project—upgraded failing water systems in several manufactured housing communities

Delaware Health and Social Services



Delaware Health and Social Services

Project Highlights

- **Sussex County**
 - \$1.4M Town of Selbyville MTBE removal project; including new wells and treatment
 - \$1.1M Town of Laurel transite (asbestos) main replacement project
 - \$2.6M Town of Millsboro PCE removal project; including a new treatment plant

Delaware Health and Social Services



Delaware Health and Social Services

Grants

- There are a host of grant programs and funding available to encourage loan participation such as:
 - Asset Management
 - Drinking Water Matching Planning Grants
 - Innovation and Technology



Delaware Health and Social Services

<p> Delaware Health and Social Services</p> <h2 style="text-align: center;">Future Plans</h2> <ul style="list-style-type: none"> • Short term goals of the DWSRF program are: <ul style="list-style-type: none"> – Work with small and medium water systems to bridge the \$110M funding gap between infrastructure needs and funding – Develop strong municipal Asset Management plans to serve as framework for long-range planning – Establish state-wide strategies for over all improvement of drinking water infrastructure <p style="text-align: center;"><small>Delaware Health and Social Services</small></p>	<p> Delaware Health and Social Services</p> <h2 style="text-align: center;">Private Drinking Water Well Program</h2> <ul style="list-style-type: none"> • 209,507 residents • 22.4 percent of the population  <p style="text-align: center;"><small>Delaware Health and Social Services</small></p>
<p> Delaware Health and Social Services</p> <h2 style="text-align: center;">Private Well Program (cont.)</h2>  <ul style="list-style-type: none"> • Unlike public drinking water systems, these residents do not have experts regularly checking their drinking water's source quality before it is sent to the tap <p style="text-align: center;"><small>Delaware Health and Social Services</small></p>	<p> Delaware Health and Social Services</p> <h2 style="text-align: center;">Private Well Program (cont.)</h2> <ul style="list-style-type: none"> • Chemical and bacterial testing is made available by the Division of Public Health • Kits are available at three locations statewide for \$4 • http://www.dhss.delaware.gov/dph/lab/watertesting.html • Receive over \$150 of analytical services from the Public Health Lab <p style="text-align: center;"><small>Delaware Health and Social Services</small></p>
<p> Delaware Health and Social Services</p> <h2 style="text-align: center;">Websites</h2> <p>US EPA - www.epa.gov</p> <hr/> <p>Delaware</p> <p>http://dhss.delaware.gov/dhss/dph/hsp/odw.html</p> <p>https://drinkingwater.dhss.delaware.gov</p> <p>http://www.delaware.gov/topics/waterquality/index</p> <p>http://dhss.delaware.gov/dhss/dph/hsp/dwsrf.html</p> <p style="text-align: center;"><small>Delaware Health and Social Services</small></p>	

During the presentation the following questions were asked:

Senator Townsend asked Mr. May to confirm if the annual \$510,000 has largely been the same for the past 35 years or if it has increased over time.

[NOTE: per subsequent Task Force meeting, the appropriate annual amount was \$554,644.]

Mr. May answered that the amount has been static over the past 10 or so years.

[NOTE: per subsequent Task Force meeting, the amount has been static over past 11 years.]

Senator Townsend asked if Mr. May later could confirm the amount of funds per year beginning when the program first started.

Mr. Bross said he would try to dig that out.

Mr. May noted that doing so would involve many records that far precede all of us (laughter).

Senator Townsend stated that if it is difficult to obtain the records, there is no need to worry about tracking down the information for him. The Senator was more curious what the program was initially founded to do and how much funding was provided then versus what is actually provided today.

Upon finishing the presentation Mr. May opened the floor back up for final questions:

William Luck, Delaware Association of Realtors, noted one of Mr. May's slides talked about interagency cooperation. Mr. Luck questioned the DNREC source water protection. How strong are those standards in regards to protecting the source water, and does Mr. May believe they needed to be enhanced?

Mr. May felt that was a question to be directed to DNREC and Secretary Small, and noted that he felt on behalf of Secretary Small that they run the program and would say they have the best available information. Mr. May then looked to the Secretary for approval of his comment.

Secretary Small agreed with Mr. May's statement. He then gave a quick summary of the program. Early on DNREC had worked with Gerald Kaufman, a member of the Task Force, and the Water Resources Agency. Legislation had passed that charged the Department with developing a menu of best practices that could be conveyed to local governments, that they could try and protect source water areas, exceptional recharge areas, and well vetted areas. Along with those best practices the Department developed a series of maps that were able to be shared with local governments, the idea being to strengthen the ordinances so as to ensure the appropriate land uses were occurring in and around those areas and so as to better protect the ground water and surface water. The Secretary stated that he can get Mr. Luck more information on this, as this is just a summary.

Senator Townsend noted that he had a few questions but feels they are not for that moment. There should be comparative data from other states; based off of information we heard today, that he would be interested in seeing. With some of the water providers in the room, he is curious whether they believe we can achieve health gains more efficiently than we are currently doing. The Senator feels that the purpose of this meeting is trying to get an overview of all the different areas and then we'll dig more into them over the course of the next few months.

Mr. May agreed and thanked the chairs for his time.

Presentation on Issues regarding Waste Water

Senator Townsend turned the floor over to Task Force member Jeffery Bross, Water Infrastructure Advisory Council.

The presentation the Task Force members received is inserted below:

Clean Water and Flooding Abatement Task Force

Delaware's Wastewater Infrastructure, Funding Programs, and Dedicated Financial Support Needs

August 26, 2015

Jeffrey Bross, P.E., FACEC
Chairman
Water Infrastructure Advisory Council

August 26, 2015 1

Clean Water and Flooding Abatement Task Force

Delaware Wastewater Infrastructure, Funding Programs, and Dedicated Financial Support Needs

- Water Infrastructure Advisory Council (WIAC) is legislatively tasked with:
 - Advisory oversight of wastewater, drinking water, and surface water infrastructure needs throughout the State; and
 - Recommending funding for projects in the form of loans, grants, and other incentives to facilitate long-term operational viability of environmental and public health infrastructure assets at a reasonable cost.
- This presentation will exclusively focus on Delaware's Wastewater Infrastructure, Funding Programs, and Dedicated Financial Support Needs.
- Statewide Assessment of public and privately-owned wastewater facilities was completed in May 2012 that covered a six year period 2011 to 2016. The estimated municipal wastewater capital needs portion of the Assessment were recently updated for 2014 through 2017. This presentation is based on the original Assessment and Update.

August 26, 2015 2

Clean Water and Flooding Abatement Task Force

Delaware Wastewater Infrastructure, Funding Programs, and Dedicated Financial Support Needs

Delaware's Wastewater Infrastructure:

- 32 publicly-owned wastewater systems; 22 include a treatment plant; and 10 are collection and conveyance systems only
- 15 of the 22 treatment plants have surface water discharge permits, and 9 facilities have groundwater discharge permits
- 12 privately-owned wastewater systems and two proposed
- The 22 public and 12 private wastewater treatment plants (WWTPs) provide centralized collection and treatment to nearly 800,000 residents
- About 60 percent of those centralized collection are served by the Wilmington WWTP, which provides secondary treatment for average flow of 75 million gallons per day (MGD) before discharge

August 26, 2015 3

Clean Water and Flooding Abatement Task Force

Delaware Wastewater Infrastructure, Funding Programs, and Dedicated Financial Support Needs

Delaware's Wastewater Infrastructure:

- 32,000 individuals are served by treatment plants in New Castle County with a total average daily flow of 2 MGD
- About 35 percent of those with centralized collection are served by public treatment plants in Kent and Sussex County with average daily flows of 23.3 MGD
- In addition to the Wilmington WWTP, 15 treatment plants (serving 225,000 residents) discharge to surface waters
- 7 of these 15 treatment plants provide nitrogen removal and all but one of these plants also provides phosphorus removal
- About two-thirds of the WWTPs already have nitrogen and/or phosphorus limits and two will likely have phosphorus and nitrogen limits within the next five years; 5 WWTPs do not anticipate nutrient limits.

August 26, 2015 4

Clean Water and Flooding Abatement Task Force

Delaware Wastewater Infrastructure, Funding Programs, and Dedicated Financial Support Needs

Delaware's Wastewater Infrastructure:

- 7 public and 11 private WWTPs (serving 11.5% of those with centralized collection) discharge to groundwater, and 17 of these WWTPs have nitrogen limits and 7 have, or expect to have, phosphorus limits
- 2030 projections of population growth and WWTP expansion are modest for New Castle and Kent Counties; several public facilities in Sussex County identified substantial potential increases in population served

August 26, 2015 5

Clean Water and Flooding Abatement Task Force

Delaware Wastewater Infrastructure, Funding Programs, and Dedicated Financial Support Needs

Estimated Wastewater System Needs:

- Statewide projected capital costs for wastewater facilities over the six-year (2011-2016) assessment period ranged from \$654 million to \$700 million as follows:
 - New Castle County: \$289M
 - Kent County: \$96M
 - Sussex County: \$269M
 - Private systems: \$9 million
- Three-fourths of the projected costs were for collection and conveyance system needs; balance was related to wastewater treatment system needs
- Two wastewater systems did not report projected capital costs for 2011- 2016; and numerous systems did not report information for 2015 and 2016. Extrapolating average annual capital project costs to the un-reported years suggests potential under reporting of approximately \$45.6 million (7 percent).

August 26, 2015 6

**Clean Water and Flooding Abatement Task Force
Delaware Wastewater Infrastructure,
Funding Programs, and Dedicated Financial Support Needs**

Estimated Wastewater System Needs:

- Reported financing of estimated capital costs:
 - \$338 million - issuance of bonds;
 - \$79 million - requests to the WIAC;
 - \$149 million - variety of sources including USDA \$50 million; and
 - \$86 million - municipal sinking funds/replacement costs
 - \$88 million - no reported funding source.
- Updated municipal capital needs (included in the original assessment) for 2014-2017 were estimated at:
 - \$305 million - Castle County (original estimate \$289 million);
 - \$63 million - Kent County (original estimate \$96 million); and
 - \$141 million - Sussex County (original estimate \$269 million)
- Updated wastewater capital projections do not include those not reported or under reported

August 26, 2015 7

**Clean Water and Flooding Abatement Task Force
Delaware Wastewater Infrastructure,
Funding Programs, and Dedicated Financial Support Needs**

Estimated Residential Wastewater User Rates:

- Average reported annual household rates for public wastewater utilities in (at the system level);
 - New Castle: \$185 - \$350 (system level);
 - Kent County: \$303 - \$571 (system level); and
 - Sussex Count: \$179 - \$1,452 (district level)
- Average annual household rates for private systems ranged from \$850 to \$1,254
- Rate differences due in part to different structures for residents inside versus outside municipal limits, as well as sewer district size
- WIAC working with DNREC has established a sewer user rate affordability standard of 1.5 percent of median household income (MHI). If a proposed project increases sewer user rates for a community above 1.5 percent of MHI, available subsidies are recommended to make the project affordable.

August 26, 2015 8

**Clean Water and Flooding Abatement Task Force
Delaware Wastewater Infrastructure,
Funding Programs, and Dedicated Financial Support Needs**

Delaware Water Pollution Control Revolving Fund

- In 1990, the Delaware Water Pollution Control Revolving Fund (commonly known as the CWSRF) was created. Annual federal capitalization grants and required 20% state matching funds seed the program. Since program inception a total of \$267 million has been provided from federal \$226 million, and state \$41 million sources, respectively
- 76 loans have been closed for municipal wastewater projects as of June 30th for approximately \$300 million, at average interest rate of 2.248%, and average loan term of 20 years. Approximately \$11 million in loan principal has been forgiven to make projects affordable for residential users
- Loans are made to assist low-income homeowners with the replacement of failed septic systems; to poultry and dairy farmers to implement best management practices for the control and management of animal waste; and to help remediate leaking underground storage tanks for gasoline station owners.
- 1,268 loans have been provided for Non-Point Source projects as of June 30th totaling approximately \$15 million

August 26, 2015 9

**Clean Water and Flooding Abatement Task Force
Delaware Wastewater Infrastructure,
Funding Programs, and Dedicated Financial Support Needs**

Delaware Water Pollution Control Revolving Fund

- 2% interest rate loans are currently offered for CWSRF under an Interim Interest Rate Policy that is scheduled to sunset on December 31st; the normal interest rate is based on 90% of the Municipal Bond Yield for AA Rated Municipal Bonds currently around 3.40%
- Twice per year (January and August) project Notices-of-Intent (NOIs) are jointly solicited for wastewater projects
- Wastewater NOIs are ranked and scored to prepare CWSRF Project Priority Lists (PPLs)
- Projects are selected from the PPLs for funding assistance based on "Readiness to Proceed"; and funded based on a program cash flow model
- Eligible Borrowers: Municipalities, Private Business, Land Owners, and Organizations that have a Dedicated Source(s) for Loan Repayment

August 26, 2015 10

**Clean Water and Flooding Abatement Task Force
Delaware Wastewater Infrastructure,
Funding Programs, and Dedicated Financial Support Needs**

CWSRF Non-Federal Administrative Account (NFAA)

- One half of the loan interest received from municipal loan is considered a fee and is deposited into the NFAA
- NFAA was originally designed to be used as a supplemental source of funds for administering the CWSRF programs; and to finance future program administrative expenses when the federal annual capitalization grants end
- NFAA has been used or is currently used to fund the following:
 - CWSRF Program Administration (Supplement)
 - 20% Required State Match Fund for Federal Capitalization Grants
 - DNREC Salaried Positions due to lack of environmental fee increases
 - Statewide Wastewater Assessment Studies
 - Wastewater and Surface Water Matching Planning Grants
 - Project Planning Advances
 - Asset Management Plan Development Incentives

August 26, 2015 11

**Clean Water and Flooding Abatement Task Force
Delaware Wastewater Infrastructure,
Funding Programs, and Dedicated Financial Support Needs**

Dedicated Financial Support Needs

- \$57.7 million appropriated from the 21st Century Fund, has been utilized by the WIAC for investment in wastewater utility planning projects totaling \$1.1 million, and for wastewater grants of \$56.6 million to make high priority wastewater projects affordable for communities. 21st Century Funds for wastewater planning and affordability grants are nearly exhausted
- A dedicated source of funding to support wastewater infrastructure planning and project implementation is needed for:
 - 20% Required Match for CWSRF Annual Federal Capitalization Grants
 - To help ensure timely Environmental Permit Compliance for Wastewater Facilities
 - To incentivize the Development and Long-Term Implementation of Asset Management Plans for Wastewater Facilities
 - To help make Projects Affordable for Small Communities
 - To help Low-Income Homeowners upgrade to Water Efficient Water Fixtures, and Replace Failed Septic System with Best Available Technology

August 26, 2015 12

During the presentation the following questions were asked:

Mr. Bross clarified an earlier question Senator Townsend brought up in regards to drinking water. Our federal funding has been stable but overall still in decline and does have the potential to become zero.

Senator Townsend followed up to confirm that Mr. Bross is speaking about a different fund than what Mr. May spoke about, though both are administered similarly.

Mr. Bross stated yes.

Senator Townsend asked if there is a cap for matching purposes. Do federal officials determine how much they can give overall, and then if we are willing to match at 20% we can access that amount?

Mr. Bross stated yes, that is correct.

Senator Townsend noted he will not get into all of his questions at this time but did want to know whether we have conducted a unified analysis of the choices the General Assembly could make in regards to matching funds across different funds that are available to us, so as to try and maximize the overall impact we can have on water quality.

Mr. Bross responded that a 5 to 1 leveraging is pretty good.

Senator Townsend agreed but further expressed that if we have limited dollars we want to leverage in one fund verse another fund, what kind of outcomes are we talking about overall?

Mr. Bross replied that WIAC has the ability to transfer money between the Drinking Water Fund and the Waste Water Fund. He further noted that flexibility has been given to WIAC quite recently so that it could utilize unspent drinking water money for a waste water project. Mr. Bross wanted to give credit of that to the Environmental Finance group, who used to be called the Financial Assistance Branch. They are a very good trustee and WIAC works very closely with them.

Senator Townsend asked Mr. Bross to clarify which executive department Environmental Finances was a part of.

Mr. Bross stated that it is DNREC and noted that Terry Deputy runs that program and was in attendance.

Upon finishing the presentation Mr. Bross opened the floor back up for final questions:

Paul Morrill, Committee of 100, asked a question around the capital needs assessments for the collection systems and wanted clarification if that would include septic elimination or expansion of districts to get rid of septics. This seems to be a missing piece.

Mr. Bross stated it was a good question. It anticipates some septic elimination of projects, especially for Sussex County and Kent County vs. New Castle County. If they anticipate doing septic elimination then the county will put it in their capital program and WIAC will capture it. But the ones and twos, if you will, are funded at a flat level based on WIAC's experience. Mr.

Bross then asked Mr. Deputy to clarify, as he thought that septic elimination was not factored into the needs during the study.

Terry Deputy, DNREC's Environmental Finance Administrator, clarified that septic elimination actually was included in the study, specifically for Sussex County, as they have a number of areas. Environmental Finance completed projections and the Council was able to use 21st Century Funds as training dollars to do regional studies to identify uncertain areas. Part of the estimate in the original studies included septic elimination.

Mr. Morrill noted that he doesn't want the group to lose sight of this as we're counting up dollars here. He also asked Mr. Bross about WIAC's project priority listings and if the Task Force could see the criteria, as the Task Force needs a strong system of prioritization.

Mr. Bross was eager to share the information with the group in a future meeting and noted that WIAC has a priority list and criteria for Waste Water and Surface Water. The Council has been diligent in establishing and tweaking the criteria over time to be responsive to both our borrowers' needs and how we optimize our money spent.

Mr. Morrill asked if the criteria could be adapted for Storm Water potential projects, Wet Land Restoration projects, etc.

Mr. Bross confirmed they could. He further noted that sharing the list is not a problem, as it is a public document.

Chris Bason, on behalf of Roy Miller for the Delaware Center for the Inland Bays, stated he was trying to understand the funding gap between the first presentation and the second presentation. Would you say the \$88 million that is listed as no reported funding source is a comparable funding gap for the public water needs?

Mr. Bross turned the floor back to Mr. May or Mr. Deputy to address Mr. Bason's question.

Mr. May stated that DHSS did a needs assessment and asked the Private Drinking Water Well Program (KSG) Kash Srinivasan, if it was a list over several years or just immediate needs.

Mr. Srinivasan stated the needs assessment that was done for water systems was based on developing and understanding the replacement value of the assets currently in place and utilizing a factor of 1.5% as a replacement need based on useful lives of those assets.

Mr. Bross wanted to be a little more direct with Mr. Bason's question. The drinking water needs assessment was one the Council recommended implementing, as they are using standard criteria that are fairly reliable for project needs. This was as opposed to the waste water criteria where they actually asked the potential borrowers what the borrowers projected their needs to be. One is a projection based on best available data and the other based on the people who theoretically know what they need. Both have a little softness to them, and clearly we have under reporting and over reporting sometimes, but frankly Delaware needs to be proud that they have taken the time and effort to establish these plans and assessments to look at what our funding needs are.

Mr. Bason, asked Mr. Bross for clarification if he interpreted correctly the \$88 million as the funding gap.

Mr. Bross stated no, that is not the funding gap. The funding gap is pushing \$800 million.

Mr. Deputy asked if he could finish clarifying Mr. Mason's questions, then stated that those funding needs are for waste water funding only. They do not include the assessment that was done with the drinking water needs.

Mr. Bross noted that this was a five-year projected need. If you want to have a rolling five-year assessment, you would need to be prepared to add on to this total. The goal would be to have a snapshot without going through a whole new assessment, as they are expensive and time consuming for those in the field.

Mr. May pointed out the issue of affordability at the local levels for those communities who would have to take out a loan. Just because a program is there doesn't mean that it is affordable, which is a major obstruction sometimes for local communities

Senator Townsend agreed with Mr. May's comments and pointed out this topic was brought up in the first meeting. The Senator then wanted clarification from Mr. Bross on the \$800 million funding need. He noted that slide 7 refers to where funding would come from: bond and other sources. \$800 million is the assessment needs but we don't have a dedicated source. It seems a good percent of that \$800 million would be funded but the remainder would not, because the 21st Century Funds are running out of funds. The CAP grants might not be there forever. So doing the math, the Senator wanted confirmation that we would be close to \$200 million or possibly more of a gap.

Mr. Bross confirmed that was a number the Senator could extrapolate.

Senator Townsend asked is there any data that you have readily available on return-on-investment on these projects? Such data could help to justify large projects.

Mr. Bross stated the problem is the group is trying to equate water quality and environmental compliance with money spent. So when you talk about ROI, the beneficiary of the return is a clean water environment for Delaware and compliance with state regulations and federal regulations. WIAC tries to spend the money wisely, and the ranking looks at the impact the dollars are going to have. When you talk about ROI, the Council tries to fund the most impactful projects. The Secretary may have an order against somebody, because they're discharging untreated waste water, so we look at that and try to fund those type of projects while needing to keep in mind public health, safety, and water quality.

Senator Townsend noted he would be happy to use other terminology rather than ROI if it is an amorphous term, difficult to measure, or is a sensitive matter or trigger point. The Senator clarified that he is wondering if the more issues we have with waste water that we don't take care of the more problems we will have with drinking water.

Mr. Bross stated that Senator Townsend was correct.

Senator Townsend then asked if this kind of avoidance cost could be a form of ROI, in a way. For example, if we don't fix this issue for \$100 million dollars then we'll have another issue that will cost \$200 million dollars.

Mr. Bross said that goes to the Asset Management Program, which is something new. We just developed it in the last year to incentive individuals to maintain their assets, a lot of which WIAC had loaned money for them to build. So far, they feel it is a good program with significant interest in the program, to the point where we put about \$500,000 in seed money and it's gone. So we just funded an additional \$500,000 discretionary money out of our nonfederal administrative account. The funding of the match by the State is what allowed us to do this, by the way.

Mr. Bross further explained that to do this they had to pull funds from other accounts they had, from other programs as WIAC had to make some choices. Confirming this is why they feel that Asset Management is a good investment and encourages people to come back and borrow money from us, which replenishes the nonfederal administrative account because we have a revolving fund. To the extent we get revolving funds back we continue to stay in business.

Senator Townsend asked for clarification that the asset management is more specific in terms of municipalities.

Mr. Bross clarified it is anyone who operates a collection of treatment systems, so yes, governmental agencies.

Bruce Jones, American Council of Engineering Companies – Delaware, wanted to expound on the Senator's question. He noted that there was a report that was recently published by the Water Environment Research Foundation, which is part of the Water Environment Foundation. The report links the return on investment for water and waste water infrastructure to job creation and economic benefits. So as the Task Force moves forward it might be a document that we can make, in addition to all the benefits of water quality and improving the environment.

Mr. Bross agreed that is important. Quality of life goes to economic development; economic development goes to drinking water and waste water availability and affordability. This can affect a company's decision to invest in a facility here in Delaware. Much like the electric rates are a deterrent, low-cost and clean drinking water and affordable waste water are a consideration.

Holly Porter, Department of Agriculture, stated that Mr. Bross mention that with the loans one half of the interest goes into the AA and questioned where the other half of the interest goes.

Mr. Bross informed her that the other half goes into the revolving fund.

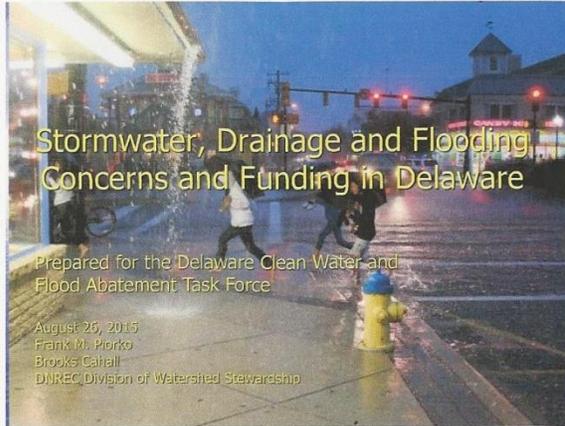
Senator Townsend noted that over the next several months we will be revisiting these topics.

Presentation on Issues regarding Storm Water, Drainage & Flooding

Senator Townsend turned the floor over to Frank Piorko with the DNREC Division of Watershed Stewardship.

Mr. Piorko stated he knows most of those in the room but understand if there are some who choose not to remember him (chuckles). He noted that he would be combining the Storm Water, Drainage and Flooding all into his presentation to the Task Force members.

The presentation the Task Force members received is inserted below:



Stormwater, Drainage and Flooding Concerns and Funding in Delaware

Prepared for the Delaware Clean Water and Flood Abatement Task Force

August 26, 2015
 Frank M. Piorko
 Brooks Cahall
 DNREC Division of Watershed Stewardship

Delaware Drainage History

- Legislative actions authorizing public drainage facilities date back to 1793.
- A history of drainage activities undertaken by the federal and state government in Delaware is well documented.
- In the 1930's some of this work was undertaken by the "CCC"
- "Ditch Companies" were prevalent prior to 1951.



Delaware Drainage History

- "...drainage of lands and wetlands was encouraged by governments and society so farmers could farm every possible acre to feed the armies and war ravaged countries, for medical reasons, to support timber harvesting and because keeping land dry, rich and clean seemed like the right thing to do".




Delaware Drainage History

- In 1951, the current Tax Ditch Law created Tax Ditch Organizations and mandated that the DSWC and Conservation Districts would assist in the administration, planning, construction and maintenance of these organizations.




Tax Ditch Law

- Title 7, Chapter 41 of the Delaware Code passed in 1951 last revised in 2008
 - "Drainage of Lands and Management of Waters; Tax Ditches"
 - Online @: <http://www.delcode.state.de.us>
- Law Declared:
 - "... that the drainage and the prevention of flooding of lands and the management of water for resource conservation shall be considered a public benefit and conducive to the public health, safety and welfare."

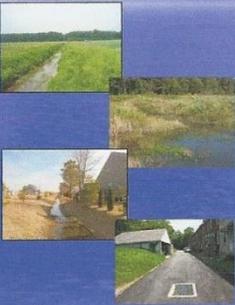
Statewide Tax Ditch Facts

- 233 Tax Ditch Organizations providing benefit to over 37,662 land parcels (over 1/3 of all Delaware lands)
- 15,000+ parcels have a TD ROW
- 56,000 acre Marshyhope Creek
- 2 acre Alban Park
- Over 2000 miles of ditch system
- Tax Ditch provide benefits to almost one-half of state maintained roads



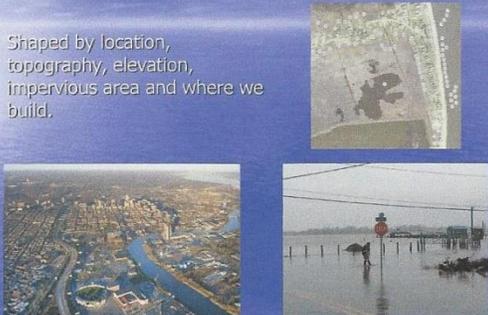
How a Tax Ditch Organization is Formed

- Petition
- Planning Order
- Commissioner's Report
- Hearing & Referendum or 100% Agreement
- Final Order
- Modify Final Order through Court Order Change Process



Present Community Landscape

- Shaped by location, topography, elevation, impervious area and where we build.



Surface Water Management Terminology

- Flood Management and Mitigation –
Flooding and **f**looding



Flood Control vs flood Control or Drainage Solutions (\$500K+)



flood Control or Drainage Solutions vs Flood Control (-\$500K)



Stormwater Management

A system of vegetative, structural, and other measures that controls the volume and rate of stormwater runoff and adverse effects on water quality, which may be caused by land disturbing activities upon the land.



392,589 Tons of Sediment has been kept from Delaware's waterways by implementation of stormwater practices during construction.

Municipal or Community Drainage and Stormwater Systems

- It's about providing safe conveyance and an outlet for water to flow from the land.
- Managing Expectations – What do we mean by that?
- First – Know what type of drainage or stormwater system there is!
 - Public/Private
 - Tidal or Non-Tidal
 - Part of Road ROW?
 - Pre-1991 – Post 2014 Stormwater Regulations?
 - Open system (ditches, swales)
 - Closed system (pipes and culverts)
 - No drainage at all?
 - Where is the outlet?



DeDOT and Municipal Public Drainage Systems

- Often confined to road ROW.
- Gets more complicated from North to South.
- Often involve subdivision and municipal maintenance agreements
- Private road, off road ROW – landowner issues




Coastal Community Challenges

- Marsh Ditches
- Tidal Outlet
- No Outlet





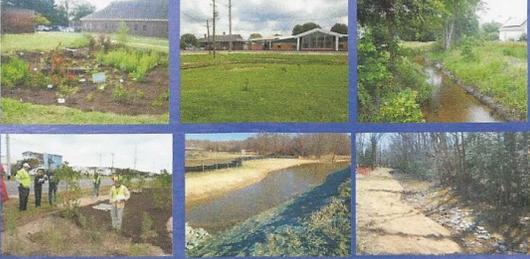
Current Coastal Projects

- Bay Beach Engineering Study
- Oak Orchard Engineering Study
- Continued project interest in Delaware City, Bowers Beach, Lewes, ocean coastal towns, back bay areas – Long Neck





Better Integration of Surface Water Management Green Technology Solutions



Drainage and Stormwater Public Contacts Database

- Statewide Single Point of Contact and tracking database a result of Gov. Minner's Surface Water Task Force.
- System was launched in early 2007
- Only Tracks concerns from DNREC and partners like NCCD, KCD, SCD




Sussex County Drainage Concerns

Category	Percentage
Pet. Drainage Concern	52%
Sediment & Stormwater	16%
Tax Ditch	13%
Other	8%
Null	1%
Legislative Request	1%
Out of Compliance	2%
Technical Assistance	4%

- 1,007 Drainage Concerns From Jan. 2007 - 2012
- 1 Drainage Concern for 122 Housing Units

Who is Doing/Funding Work in Delaware?

- DelDOT
- DNREC
- Conservation Districts
- Counties and Municipalities
- Legislators
- Federal Agencies/WIAC
- Tax Ditch Organizations
- Private Communities

- Flood Studies and Engineering
- Construction
- Maintenance and Re-construction
- Retro-fits and Restoration
- Regulatory Programs
- Technical Assistance
- Tax Ditch Work

How is Work Funded?

(not very well...)

- Federal and state funding through the capital improvement program and state bond and general fund appropriations.
- 3921 funds, CTF funds, 21st Century funds
- Counties and municipalities with local funds for capital improvements, maintenance and regulatory obligations.
- Stormwater fees
- Federal agencies/WIAC
- Tax Ditch revenue
- Private community cost-share

- Flood Studies and Engineering
- Construction
- Maintenance and Re-construction
- Retro-fits and Restoration
- Regulatory Programs
- Technical Assistance
- Tax Ditch Work

Delaware's 21st Century Drainage Fund

- Governor Carper and Legislature created the fund in 1994, through Senate Bill No. 288 of the 137th General Assembly.
- Fund was outlined in the FY96 Bond and Capital Improvements Act (Senate Bill No.260, 138th General Assembly).
- Resource Conservation and Development (RC&D) was targeted for funds to *...enhance the health of communities by ameliorating watershed and drainage issues statewide.*

Delaware's 21st Century Drainage Fund

- As payments from the five-year settlement period ended, any additional or continued funding for RC&D relies on State General Funds.
- In the initial years beginning with FY95 and FY 97, funds were allocated to cover the total amount of requested project funds. In fact, the original legislative language stated that *... upon approval of a list of projects by the Joint Legislative Committee on Capital Improvement Programs ... funds shall be allocated sufficient to fund the State share of such projects.* That was only the case in the first two years.
- Initially the match was to be provided by non-state funds. That was changed to allow state funds to be provided for match. The match requirements have were modified in the FY13 Bond Bill to 10% in an effort to move projects forward.

Match Sources

- Traditionally there has been a heavy reliance on Community Transportation Funds for these projects
- Large Project cost and limited 21st Century & CTF funds have lead to new funding partners:
 - Federal
 - US Army Corps of Engineers
 - FEMA
 - EPA 319 Non Point Source Funds
 - USDA/NRCS - RCPP program
 - Water Infrastructure Advisory Council
 - State Revolving Loans
 - Surface Water Matching Planning Grants
 - Community Water Quality Improvement Grants
 - Direct Bond Bill Appropriations
 - Tax Ditch Organization Funds
 - Private Landowners

General Overview

- During a period beginning in FY 1996 through FY 2008, the Joint Committee on Capitol Improvement has allocated \$62.4M to the RC&D (21st Century) Fund
- Almost **\$58M** has been expended and nearly **1,600** projects have been completed.
- **\$3M** was appropriated in FY2016. This is the first funding allocation since FY2009 which was later reverted.



Project Spot Light Little Mill - Lower Reach



- Flood Mitigation of small commercial business off Maryland Avenue between Newport and Wilmington
- Partnership between DNREC, NCCD, New Castle County, USACOE
- 65% Federal / 35% Local funding split
- Costs expected to be \$4.2 million
- Corps of Engineers contractor started construction in Spring 2014
- Contaminated soils removed July-September 2014
- 1st phases completed December 2014

Project Spot Light: Woodside / Burke Drainage Improvements



- Originally added to RC&D 21st Century fund project list in FY1998
- Storm Drain project providing outfall for the South East corner of the Walnut Shade Rd / Rt. 13 Intersection
- Kent Conservation District provided Planning, Engineering, and Construction Oversight
- Estimated Cost of \$380,000
- Teal Construction was awarded contract
- Construction Started in October of 2014 and was completed in Spring of 2015.

Project Spot Light Hudson Road Tax Ditch



- Planning and Design initiated in 2011
- Court Ordered as a Tax Ditch on December 31st, 2013
- Construction commenced November 2014, installing a downstream pilot channel.
- Construction is substantially complete with planting to be completed in fall of 2015.
- Constructed by Sussex Conservation District and George and Lynch.
- \$650,000 construction cost for the entire system funded through RC&D 21st Century, Community Transportation Funds, and Non-Point Source funds for plantings.

Funding Summary Table

	Active Projects Est. Cost	FY16 New Projects Est. Cost	Est. Cost All Projects	21 st Century Funds Required	21 st Century Funds Unexpended	21 st Fund Deficit
New Castle	\$37,411,056	\$2,280,002	\$39,691,058	\$35,721,952	\$2,073,595	\$33,648,357
Sussex	\$35,215,069	\$695,000	\$35,910,069	\$32,319,062	\$1,413,697	\$30,905,365
Kent	\$11,854,322	\$717,000	\$12,571,322	\$11,314,190	\$1,228,727	\$10,085,463
Total	\$84,480,447	\$3,692,002	\$88,172,449	\$79,355,204	\$4,716,019	\$74,639,185

What are the Funding Needs/Gaps?

- Governor Minner's Surface Water Task Force (2005)
 - Capital Needs - \$41M/yr.
 - Maintenance Needs - \$13.7M/yr.

Delaware Public Policy Institute Dialogue (2006)

The dialogue estimated existing, current capital funding annually from the 21st Century Fund, miscellaneous funding, and current local funding, at \$11 million. The funding gap is estimated at between \$13.5 million to \$30.5 million annualized (2006).

Dialogue on Financing Wastewater and Stormwater Infrastructure

STATE OF DELAWARE
Sponsored by:
Delaware Public Policy Institute (DPPI)
Office of the Governor
Office of the Lt. Governor
Department of Natural Resources and Environmental Control
Wastewater and Stormwater Facilities Council

ITEM	ANNUAL FUNDING NEEDED (\$Million of \$)	POSSIBLE ANNUAL FUNDING PROVIDED (\$Million of \$)
Estimated Annualized Stormwater Infrastructure Funding Gap	\$18.80	
Estimated Annualized Stormwater Funding Gap*	\$23.70	
Leverage Existing SWSDF Revenue Sources (\$500 million allocated over 5 years)	\$6.80	
Allocated Properties Monies	\$5.74	
Produce CDFDF (\$1 million over 5 years)	\$1.80	
Statewide Clean Water Fee	\$9.80	
Statewide Risker's Permit	\$7.80	
TOTALS	(\$40.50)	\$28.74

*Please see that estimated annual dollar from private funding sources are shown in parentheses only.

Sussex and Kent County Level of Service Analysis (2008/2009) and NCC Stormwater Utility Study 2011

- Further Studies refined financial needs in all three counties

Kent and Sussex Levels of Service Analysis

Twelve program areas were developed as follows:

- 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

Kent and Sussex Levels of Service Analysis

Funding Needs

Kent County

Current Spending \$9,400,000
Moderate Meet Standards Program +\$8,250,000=\$17,650,000
Optimal Program = \$25,000,000

Sussex County

Current Spending \$9,930,000
Moderate Meet Standards Program +\$10,260,000=\$20,190,000
Optimal Program = \$28,095,000

New Castle County Stormwater Utility Study Results

- Estimates in 2007 \$\$\$ projected out in a five year plan.
- Current Spending (County Only 2011) \$6,600,000
- Moderate Meet Standards Program +\$11,675,000=\$18,275,000
- Optimal Program + 17,800,000 = \$24,400,000

SWU revenue estimates for

- Moderate program - \$4.60/mo. ERU or \$55.20 annually
- Optimal Program - \$5.90/mo. ERU or \$70.80 annually (does not include the non-residential ratepayer calculation)

Surface Water Management Final Takeaway Recommendations

- Update the LOS 2008/2009 reports and NCC SW Utility needs assessment. \$
- Continue efforts through the WIAC to fund loan and grant packages to leverage other funding sources.
- Advocate for the level funding of \$3M minimum for the 21st Century Drainage Fund.
- Consider other Surface Water Program Fee Funding for statewide program needs.
- Better develop the charge to the WIAC to complete the Fee Funding Options analysis (bullet 1 and 4).

During the presentation the following questions were asked:

(While discussing the slides on page 17, in these Meeting Minutes, Mr. Piorko wanted the following noted.)

Mr. Piorko asked Brooks Cahall with DNREC to tell him and the members what the total tally was of the estimated cost for DNREC's costal engineer study that was approved and funded through the Bond Bill last year.

Mr. Cahall confirmed in was about \$5 million.

Mr. Piorko returned to the presentation.

Mr. Piorko then asked Mr. Bross if he was going to tell him that he had too many slides (laughter). He wanted it on the record that he still had a few minutes left (more laughter).

Upon finishing the presentation Mr. Piorko opened the floor back up for final questions:

Michael Riemann, Delaware Homebuilders Association, asked if the \$88 million number of estimated cost of all projects was a static number statewide of projects that have been currently identified.

Mr. Piorko confirmed yes. These are the projects that are currently on the 21st Century Fund list of projects that have been approved by the Bond Bill Committee for DNREC to move forward on.

Mr. Riemann questioned if Mr. Piorko thought that was the full list of everything that's needed.

Mr. Piorko affirmed no, there are some placeholders on there as well. Those projects are in the small to medium levels, which would be considered the little "f" projects, as stated in the PowerPoint slide examples. (This can be found on page 16 of these Meeting Minutes.) Mr. Piorko gave an example of 3 or 4 homes in a community needing a drainage solution that would be less than the \$500,000 category.

Mr. Riemann sought confirmation that the list was last updated in 2008 and that since then no money has been added to the 21st Century Fund.

Mr. Piorko stated no, and confirmed that the 21st Century Fund received \$3 million this year. So the \$4.1 million we currently have includes the \$3 million that was appropriated this year.

Mr. Riemann clarified his question. Has the project list been kept up-to-date?

Mr. Piorko confirmed it has. We have been working on these efforts since 2008 even though we were not receiving funds, which is why the funds are becoming depleted. He noted that Representative Mulrooney was a part of helping with funding this year along with other legislators, and he is appreciative that they found 21st Century Fund funding in a very tight year.

Mr. Bross asked Mr. Piorko if he could touch on regulatory drivers relating to storm water.

Mr. Piorko noted that this topic could be a separate presentation itself. Between \$15 and \$20 million annually is necessary to meet their obligations, mainly federal (though some state)

programs that are being managed at the local level. He then gave an example of New Castle County, which spends about \$4-5 million dollars a year on their MS4 (Municipal Separate Storm Sewer System). This is considered a municipality storm sewer system permit. That figure does not include DelDOT's portion of that permit. In total it costs roughly \$7 million annually to meet New Castle County's permit obligations under their MS4. We have a handful of small MS4 municipalities, and there are efforts ongoing to create a general permit for 15 small municipalities that EPA has mandated we include under this MS4 umbrella. He noted that Mr. Bross asked a great question.

Mr. Morrill touched on another element from the preceding flooding and drainage task force: the identification of mapping needs and watershed studies. It would be helpful if we could complete water quality and storm water quality studies in advance. Right now we essentially prioritizing the project level and we are not getting the overall job done. It might not be huge dollars but it's an important piece.

Mr. Piorko agreed it is. He then informed the group that recently with the FEMA map changes DNREC had to localize flood map studies. In one watershed in particular in New Castle County we revised the flood maps and received approval from FEMA. We were able to take 75% of the homes in the floodplains out of the floodplains with more accurate mapping. There were a couple that got into the floodplains by that mapping but which had not wanted to be included. The bottom line is that by investing in those floodplain studies we are getting the most accurate information. This way homes that need to be included in the category of needing flood insurance are included, and those that can come can come out. Currently we are operating off of our last \$500,000.

Secretary Small wanted to give a quick note to Mr. Morrill's comments, as he raised very important issues that we have not talked a lot about. The notion of assessment is incredibly important with regard to all the different issues we heard today during the presentations, so as to be able to measure progress, know conditions, and identify where we need to target investments. It is a big number; we spend hundreds of thousands of dollars annually to collect that data and analyze it. Separate and apart from permitting or the infrastructure piece on the backend we need to get to the investments to make the enhancements in all of these systems. This gets to the return-on-spending question: what does our water quality, ground water and surface water look like? Are we moving the needle? Progress is very, very slow.

Senator Townsend asked the Secretary to clarify whether progress is slow in moving that needle or in even making assessments.

Secretary Small clarified progress is slow in moving the needle. As a state we perform favorably in comparison to other states, but we can always do better and it is an incremental change. He provided an example: the amount of fish has changed that we recommend people consume from various waters, because they are contaminated with toxics. DNREC is planning on making some changes this year that hopefully will increase the recommended allowances from one fish to two fish. Although this progress is small, it is an example of how we need to see the needle moving in the right direction. In other areas the needle is not moving: nutrients, toxics, and bacteria (to some extent with regard to recreation purposes), and there are areas of concern with drinking water, surface water and ground water.

Mr. Bross wanted to add to Secretary Small's list: pharmaceuticals in waste water, which is emerging as the new toxin.

Mr. Esposito was curious to hear the Secretary's response to the blessing and the curse that we have in Delaware because we know so much. Other states don't know as much as we do about the issues facing us, given how great job we do with assessment. The curse is because we are so small, additional things that would otherwise get overlooked in other states are on the top of our lists here in Delaware.

Secretary Small agreed that is a true statement. He thinks to its credit the EPA has been pushing states that have not been making these kinds of investments to measure. In focus areas like the Chesapeake Bay, for example, we would be finding that all the watersheds in the state are starting to quickly catch up, in part because the EPA has helped provision of funds to develop that information. The Secretary reemphasized that Mr. Esposito's thoughts are correct. Knowing this data drives us to seek solutions. The sad part of it is, with our screening reaching more than 90% of all Delaware watersheds, 30 some watersheds do not meet water quality standards. And that is the indicator map of where we need to make change. These maps have not been changed in almost a decade. The colors haven't moved a whole lot and those standards are based on what the screening is used for (such as drinking water, recreational contact, etc.). The Secretary noted these are the drivers for DNREC, and the challenge for the group at the table is to focus on the dollars, which is where he feels we should be.

Mr. Bason had a question about the contact database. He felt it was fantastic data and is wondering if Mr. Piorko knows whether over time there have been changes in tidal flooding vs. non-tidal flooding.

Mr. Piorko turned the floor to Mr. Bross but noted that they could frame that data any way they would want.

Mr. Bross wanted to clarify that Mr. Bason was asking about the sea-level rise, which affects drainage projects, flooding, waste water and drinking water issues. That is kind of the elephant in the room. But there are individuals who are looking at it, but at this time there are not funds to vigorously look at it.

Open Discussion by Task Force

Senator Townsend invited any other Task Force members that may have questions or comments that they would like to address

George Haggerty, New Castle County Executive office, felt that the group is hearing a lot of tough information and tough conversation here, but feels that we are taking great strides going forward. Yes, there are things that have happened in the past but we need to focus on moving forward from here. These will not be problems they will be having 20 years from now. As the Secretary stated, the needle hasn't moved, so how do we move forward now, especially given that we had been doing a good job of that before.

Senator Townsend noted he wanted to move to public comment soon, as it is part of the Agenda.

Secretary Small stated there's a segment that we have not talked about. The work that's been done and the needs that still exist in the conservation and agriculture community deserve some conversations as well. He feels that they have an equal number of program investments from the state level and more notably at the federal level for things like conservation cost-shares, best practices, and cover crops. He noted Mr. Unruh, Ms. Holly, and Kevin Donnelly were in the room and that this is the world they are in daily. He felt this could be a topic at a future meeting with similar information being shared. The Secretary further remarked about revenue streams. DNREC is very fortunate, in that the General Assembly in 1999 established the Hazardous Substance Cleanup Act and Associated Fund which generates funds of \$12 to \$15 million annually, allowing us to clean up contaminated sites. To Mr. Haggerty's point about legacy, this has been a great revenue source and we have been able to leverage those dollars. DNREC has been engaged in pretty creative cleanup in regards to toxics and our waterways. So this is a fund that we are trying to leverage as best as we can while trying to work with the private sector on making investments in brownfields. He noted to the chairs these were just a couple thoughts.

Senator Townsend reminded the members of the scheduled meeting dates and possible locations being looked at, as was discussed in the beginning of the meeting. He noted that he wants to be able to reach out to the local communities to see what the group is doing so that the legislature can see the real needs. To Secretary Small's point, the Senator wants these topics looked at the local level. Different communities have different appetites for their own local needs. We all understand and appreciate different groups and different sources for funds. When we come back north in November we will look at toxics. It is all connected, and we need to determine how to really measure progress and take action.

Stu Lindner, on behalf of Dian Taylor for the Delaware Business Roundtable, stated Ms. Taylor wanted the group to know that Artesian has done some work in Cold Water Creek. This is due to the first meeting when Task Force members were asked for real success stories. It is a large farming community they are serving, and it involves nitrates. They have been successful in removing the nitrates from the water by taking the water back and running it through the treatment plant and have it come out cleaner than it came out of the ground. Ms. Taylor wanted the group to know, they do tours and they would be happy to host the Task Force for a tour and show them the process.

Senator Townsend was happy Mr. Lindner mentioned field trips. The guidance we have gotten back in regards to field trips is that we can do them, not subject to the same guidelines as public meeting laws, and those who are comfortable can attend. No fieldtrips are being made for decision-making action, but rather to make sure that the legislature and public see how we are looking at all levels of this area. He noted that it could be a last-minute call after a heavy rain – perhaps on last-minute notice Representative Mulrooney driving with the Senator riding shotgun and with whoever can fit in the back. (Laughter.) Information will be circulated to the members as we find out.

Mr. Esposito wanted to remind the chairs from the first meeting that it was brought up about collection of various problem lists for the different water areas, and he thought that would be helpful to be on one of our agendas coming up.

Senator Townsend agreed and thanked Mr. Esposito for the reminder. The Senator asked several members what would be the best way to assemble those lists. Does one particular group have the list or would it be multiple groups sharing their lists? Would it be via email?

Secretary Small noted that obviously DNREC would have our 21st Century Funds drainage projects list and a less formal list with homeowners and government. He believes Mr. May would have a similar list from the drinking water standpoint. Secretary Small stated he could even pull some at the agricultural level, so he is going to have DNREC start pulling some lists together.

Senator Townsend asked if that would be including DelDOT's roadway trouble spots.

Mr. Piorko said he could get that from DelDOT.

Representative Mulrooney, co-chair, stated what we are really looking for are problem areas in each legislative district. This is going to be an uphill push, so we need to personalize it. This is what their constituents are going through on a daily basis. He informed the members that they are doing a fabulous job and at the end of the day it's up to the legislators to sell it and fund it. These presentations are phenomenal, and he never really appreciated our water situation until now, even after having served on Bond Bill for a number of years. (All Laughed). It's wrong that we are funding other projects that are not as important, so we need to change our priorities.

Senator Townsend noted that Senator Richardson had a family situation so he could not make it today.

Mr. Morrill wanted to know or point out that maybe the issues with the Chesapeake Bay should be on a list as well.

Public Comment

Senator Townsend opened the floor to public comment. Seeing none he thanked everyone for traveling near and far to come out to the meeting.

The Task Force meeting was adjourned at 12:10 pm.