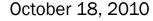


STORMWATER UTILITY FEASIBILITY STUDY



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EXECUTIVE SUMMARY

The objectives of this study were to assess the condition of the existing storm drainage infrastructure and stormwater management facilities, generally determine future needs, and evaluate the issues associated with creating a stormwater utility for the Town of Centreville. The study was geared toward providing a framework for utility development and establishing general feasibility. Resolving the numerous intricacies and actual implementation of a utility were not included and would need to be provided in a subsequent phase. Funding for the study was provided by Maryland Department of Natural Resources (DNR) through the Chesapeake & Coastal Program (CCP), Coastal Programs Initiative (CCI). Components of the study included field reconnaissance, GIS analyses, defining the existing program and identifying potential enhancements, developing a revenue collection framework, and preparing a final report.

The Town is generally responsible for the inspection, maintenance, rehabilitation, and construction of the storm drainage system within the Town limits comprising approximately 700 inlets and an unknown number of miles of storm sewer. Town Public Works uses a trailer-mounted Vac-tron and a Sweeper truck. Several issues are known to exist. For example, the Town is currently repairing a storm sewer located adjacent to a sludge drying bed at the Town's wastewater treatment plant that is badly eroded at the outfall. There are also plans to construct another two or three retrofit projects in the next 12 months using State 319 Funds and 2011 Trust Funds. The on-going maintenance of the existing stormwater retrofit projects, in addition to the proposed projects, will be the responsibility of the Town personnel.

Expenditures coinciding with the Existing Program were summarized into spreadsheet format and were projected out five years using an escalation factor of 2.5 percent to present more than just a "snapshot" of needs and approaches. Projected future costs coinciding with program improvements were derived by interviews with Town personnel, field work performed by URS, and review of provided documents. Three potential levels of service (LOS) were evaluated and are detailed in the spreadsheet in Appendix A:

Level of Service One or "Essential" includes the Existing Program as well as hardware and software costs that would be incurred should a stormwater utility be implemented, replacement of the Vac-tron and the street sweeper, payments into a capital recovery fund or bond payments to enable major capital projects to be undertaken, maintenance of retrofit projects previously undertaken by the Town, and preparation of a more detailed inventory of the drainage infrastructure (inlets, pipes, and outfalls).

Level of Service Two or "Enhanced" includes Level of Service One expenditures plus projects that begin moving the Town toward a more proactive approach to managing stormwater such as construction and subsequent maintenance of low impact stormwater management facilities as recommended in the LID Restoration Master Plan, compliance with TMDLs, and additional staff time.

Level of Service Three or "Optimal" includes Level of Service Two expenditures but more aggressively advances the proactive approach including a higher level of treatment per the LID Master Plan, maintenance of stormwater management basins and payments into a capital recovery fund or bond payments to enable retrofits should the Town decide to assume responsibility for basins currently privately-owned, compliance with the NPDES MS4 permit program, and additional staff time.

The impervious coverage associated with five land uses in Centreville (single family residential, multifamily residential, commercial/industrial, public/institutional, and roads) was estimated through GIS evaluations. These evaluations indicated that the amount of impervious surface for the average single-family detached residential property in Centreville is approximately 3,200 square feet. Therefore, this figure is used as the Equivalent Residential Unit (ERU). ERUs provide a common measure to compare residential and nonresidential properties. The number of ERUs for each of the land uses was determined by simply dividing the total calculated impervious coverage by the ERU figure of 3,200 square feet.

A framework for deriving revenues under this concept was developed and provided in Appendix B. Example Unit Rates show how much revenue would be collected from each land use category with an ERU rate of \$1.00. These unit values were extrapolated for other ERU rates (not shown) such that rates corresponding to each level of service could be estimated. Alternatives to this type of ERU approach exist including determining the impervious amount of cover on each and every residential parcel or for each residential zoning district. The framework spreadsheet is based on numerous assumptions and the rates shown are for example only and should not be used for any type of budgeting projection.

Since stormwater management practices employed on some properties may result in a lesser runoff contribution to the drainage system, various credit programs have been developed. For this study, a credit for the approximate 660 residential properties draining to a privately-maintained detention or retention basin was assumed. Also, placeholders for two commercial/industrial credits were included. assessment assumed that tax-exempt properties in Centreville would contribute to a stormwater utility in the same way that every other property would. (State and County buildings, while exempt from Town property tax, pay water and sewer fees based on usage.) The exception to this would be State and Town roadways which were assumed to be exempted.

One of the most difficult issues regarding surface water management in Maryland and throughout the country is the reliance on private entities for the maintenance of stormwater management structures. Assumption of maintenance responsibilities by the Town would be advantageous for a number of reasons. HOA officers would be relieved from the burden of maintaining their community's basins, total expenditures would be reduced if a single agency performed the maintenance work and/or oversaw contractors due to economies of scale, and water quality in the Town would be improved through enhanced maintenance. However, the costs associated with annual maintenance as well as the inevitable retrofits could significantly increase revenues needed to run the stormwater program. In the end, any such policy change would need to be fully vetted in the public arena with advantages and disadvantages fully explored.

The final phase of utility implementation would necessitate two broad actions by the Town to effectively resolve the issues described in these recommendations:

Create a Citizens Advisory Committee - The Committee, comprised of a diverse group of stakeholders, would better define the program and assure that it matches residents' and merchants' expectations and willingness-to-pay. The Committee could also hold public forums on utility development. A clear mission with overall time frame would be needed from the Town to assure the group stays focused.

Prepare a Business Plan – A utility cannot be created without a solid foundation. A Business Plan which would build upon, but better detail and fine tune, the expenditure and revenue estimates presented herein is essential. The Plan would also address various implementation details and resolve policy issues.

Some jurisdictions have conducted similar assessments only to decide that a utility is not appropriate for them at the current time or under existing conditions. In other words, there is nothing improper with evaluating the potential for utility development and then deciding to not pursue it further. However, proceeding without necessary due diligence and understanding of residents' expectations and then failing in the implementation could be very problematic.

This report was prepared by URS Corporation and Duffield Associates under award number NA09NOS4190170 from the Office of Ocean and Coastal Resource Management (OCRM), National Oceanic and Atmospheric Administration (NOAA), through the Maryland Department of Natural Resources Chesapeake and Coastal Program. The statements, findings, conclusions and recommendations are those of the author(s) and do not necessarily reflect the views of NOAA or the U.S. Department of Commerce.

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SECTION ONE. INTRODUCTION AND BACKGROUND

In February 2010, the Town of Centreville retained the services of URS Corporation to perform a Stormwater Utility Feasibility Study. Due to a change in personnel, URS subcontracted a portion of the work to Duffield Associates, Inc. The objectives of the study were to assess the condition of the existing storm drainage infrastructure and stormwater management facilities, generally determine future needs, and evaluate the issues associated with creating a stormwater utility for the Town. The study was geared toward providing a framework for utility development and establishing general feasibility. Resolving the numerous intricacies and actual implementation of a utility were not included and would need to be provided in a subsequent phase. Funding for the study was provided by Maryland Department of Natural Resources (DNR) through the Chesapeake & Coastal Program (CCP), Coastal Programs Initiative (CCI).

A stormwater utility would function similarly to a potable water or electric utility where revenues and expenditures associated with stormwater conveyance and management would be accounted for on an individual property basis and separately from other Town functions. Under the utility concept, businesses and residents are assessed a fee that is based on the amount of stormwater runoff produced by their property which in turn is a function of the amount of impervious surfaces such as roof tops and paving that are present on each site. Whereas usage of other utilities like water and electric can typically be quantified with a meter or similar device, rates of runoff cannot be measured as easily and therefore imperviousness is commonly relied upon as an approximation of the amount a user is contributing to the drainage system.

The number of stormwater utilities in the United States is growing each year. It has been estimated that there are currently about 1,000 nationwide. They vary significantly throughout the country and must be tailored to meet local needs and conditions but in general, involve restructuring existing municipal operations, developing a comprehensive stormwater program, and providing adequate, stable, and equitable funding for the program.

Stormwater utilities operate under the premise that those who contribute more runoff to the drainage infrastructure pay more for constructing and maintaining the system. Therefore, this is considered an equitable method of allocating costs. Centreville currently uses its general revenues, principally derived from property taxes, for its stormwater-related expenditures. In instances where larger, mostly impervious parcels are assessed a higher value than smaller or less developed parcels, equity may already exist. However, if there are cases when smaller lots with less impervious surfaces are assessed a higher value than larger, mostly developed lots, the current funding mechanism could be considered inequitable.

The Town's decision to analyze utility feasibility is timely. Throughout the State and across the country, concerns regarding stormwater management and conveyance are evolving from mostly an individual matter related to flooding concerns to one of more of a community level related to water quality. Regulatory programs such as Total Maximum Daily Loads (TMDLs) and the National Pollutant Discharge Elimination System (NPDES) municipal separate storm sewer system (MS4) permits are resulting in cities and counties evaluating methods by which surface water management programs can be funded.

It should be noted that the Chesapeake Bay TMDL's will be finalized in December 2010 and the Maryland Phase 1 Watershed Implementation Plan (WIP) is currently in a public review period. The Phase II WIP, which is scheduled to be adopted by November 2011, will add specificity to the Phase I WIP and could likely include additional requirements for non-point runoff.

If Centreville decides to implement a stormwater utility, it would most likely be one of the smaller cities in the country, from a population standpoint, to do so. Lewes, Delaware (population 3,200) recently enacted a stormwater "tariff" which is essentially a utility fee. Research found similar programs in cities as small as Bluffton, South Carolina (population 4,100); and Lancaster (population 4,070) and Vernon (population 7,230), both in Wisconsin. This is important as there are certain fixed costs associated with a utility and since Centreville is smaller than most cities that have adopted this approach, the lack of economies of scale could result in higher than average rates.

The scope of work for this Stormwater Utility Feasibility Study was as follows:

Field Reconnaissance

As part of the overall feasibility assessment, URS conducted a field inventory and assessment of stormwater infrastructure located within the Town limits. Field work was divided into two separate tasks as described below.

Best Management Practices (BMPs)

An inventory provided by the Queen Anne's County Department of Public Works (QACDPW) was used to identify the locations of BMPs throughout the Town. BMPs included wet ponds and dry ponds (33), infiltration practices (8), and sand filters (2) for a total of 43 structures. Each facility was surveyed using sub-meter accurate GPS equipment. The survey included the perimeter of the BMP, entry and discharge points as well as the location of any defects. The condition of each BMP was assessed and a series of digital photographs was collected to document the inspection and condition of the BMP. A representative from the QACDPW was present for some of the inspections.

In addition to the BMP's noted above, the Town has also recently constructed several stormwater retrofit projects including the Coastal Plain Outfall near Banjo Lane, the Wooded Wetland near the entrance to the Town's wastewater treatment plant and a Bioswale at the Police Station. Funds will need to be budgeted annually for the on-going maintenance of these facilities. The undertaking of additional retrofit projects as recommended in the LID Restoration Master Plan prepared by EcoSite, Inc. will exacerbate this funding situation.

Drainage Inlets

Each drainage inlet (i.e. catch basin) in the Town was located and surveyed using sub-meter accurate GPS equipment. A total of 687 drainage inlets were located, with approximately two thirds located in the Northbrook and Symphony Village developments. Following the GPS survey, the condition of a representative sample of the inlets (57 total) was assessed. Emphasis was placed on older inlets located in the center of the Town, with a smaller sampling of inlets from Northbrook and Symphony Village also included. Inlet walls, frames, grates and pipe connections were assessed and the presence of collected sediment and / or debris was noted. In addition, each of the sample inlets was opened and photographed.

In general, it was found that the storm drainage system in Centreville is in reasonable condition and other than minor maintenance such as removal of obstructions, no further work appeared to be needed in the near-term. However, as noted in Section Two, there may be some capacity issues the Town may need to address.

The location of the facilities described above can be found in Figures 1 and 2.

GIS Analyses

GIS information obtained from the County was used for the purposes of calculating impervious surface coverages for various land uses. This analysis is further described in Section Four.

Defining Existing Program and Identifying Potential Enhancements

Current efforts were determined mostly through interviews with appropriate Town personnel. Potential enhancements were also discussed during the interviews but were also identified by field work and review of documents provided by the Town. Costs associated with program improvements were estimated based on collective asset management experiences coupled with various distributed guidelines. Three potential levels of service were identified as described in Section Three.

Developing Revenue Collection Framework

Utilizing existing GIS data, the approximate amount of impervious cover corresponding to a variety of existing land uses was estimated. Impervious coverage of public roadways was included as these are often exempted from a utility fee. The equivalent residential unit (ERU), as defined in Section Four, was calculated and a framework for calculating corresponding square footage fees matching three potential levels of service was developed. Finally, subdivisions with their own stormwater management basins were identified as these may qualify for a credit.

Final Report and Recommendations

This report concludes the feasibility study and completes Phase I of the CCP, CCI grant. This assessment was based on very approximate expenditure estimates and restrictive GIS data. In-depth evaluations were not possible and also outside the scope of this evaluation. While a framework for potential fees is offered, this report is intended more to provide the Town with the tasks and policy decisions that would be needed should it decide to proceed with the second and final phase of utility implementation.

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Figure 1

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Figure 2

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SECTION TWO. CURRENT FUNCTIONS AND EXPENDITURES

General Function and Responsibilities

The Town of Centreville is generally responsible for the inspection, maintenance, rehabilitation, and construction of the storm drainage system within the Town limits comprising approximately 700 inlets and an unknown number of miles of storm sewer. Though the Maryland State Highway Administration has maintenance responsibility for the drainage systems within State rights-of-way, the Town will often perform tasks at these locations such as removing debris from grates. Town employees mow and occasionally perform rudimentary work on open channels. Review of the stormwater management and erosion and sediment control portions of development plans, as well as inspections during construction, is handled by Queen Anne's County.

Town Public Works staff is proactive with their maintenance program by routinely inspecting and cleaning inlets particularly before major rain events. They use a trailer-mounted Vac-tron to vacuum sediment from inlets and clear debris from pipes with an attached jet washer. These tasks are usually performed annually in the center of Town and on an as-needed basis elsewhere. The Vac-tron equipment is used on an approximate half time basis for stormwater-related tasks, and is occasionally used by the Water Department as well. The Town also has a Sweeper truck which is used daily in the center of Town as well as weekly on pre-assigned routes in other areas.

Construction, when needed, is handled either by Town crews for smaller projects or under contract for larger projects. Several issues are known to exist. For example, the Town is currently repairing a storm sewer located adjacent to a sludge drying bed at the Town's wastewater treatment plant that is badly eroded at the outfall. There are also plans to construct another two or three retrofit projects in the next 12 months using State 319 Funds and 2011 Trust Funds. As mentioned earlier, the ongoing maintenance of the existing stormwater retrofit projects in addition to the proposed projects will be the responsibility of the Town personnel.

Expenditures

The Vac-tron was estimated by staff to cost approximately \$30,000. It requires a two person crew to operate and if used on a half-time basis, this equates to one full-time equivalent (FTE) position. Another FTE is needed for the Sweeper truck. Mowing of open channels necessitates a two person crew but at an estimated one quarter time. Miscellaneous maintenance work also necessitates a two person crew at an estimated one quarter time. Collectively, these tasks result in one FTE. The Public Works Superintendent spends approximately one quarter time on stormwater-related issues as does the Watershed Manager.

Current staffing is considered adequate but not excessive. Enhancing the stormwater program or assuming additional responsibilities as described below could result in the need for additional employees. Also, the Sweeper vehicle is approximately 10 years old and will need to be replaced in the not too distant future.

Needs and Priorities

Ponding in roads often occurs after heavy rains which can create nuisance issues of splashing water as well as safety concerns when ponded water freezes in the winter. In addition to obvious safety concerns, ponding water on roadways can also cause deterioration of paving, base courses and subgrade.

Conditions such as this can be caused by any number of factors such as lack of maintenance, undersized or insufficiently sloped pipes, inlets with insufficient openings, or a general lack of inlets. The Town's inspection and street sweeping program indicates that maintenance is not a likely cause. Major construction would be needed to remedy an undersized system. Although field reconnaissance indicated a generally sound system, portions of the drainage system in the older parts of Town may soon reach the end of their service life and could need rehabilitation in coming years.

The Town also lacks a comprehensive inventory of its drainage structures. URS identified and located just under 700 inlets using Global Positioning System (GPS) equipment during the preparation of this report. In order to complete the inventory, connectivity between these inlets is still needed as well as pipe size and materials. Ideally, information including the approximate age of inlets and pipes would be required in order to develop a more accurate asset management database. Such a management system would enable better tracking of maintenance tasks and allow for a more accurate projection of future restoration costs.

There are currently 43 stormwater management basins and other stormwater best management practices (BMPs) within Centreville. Most of these are privately owned and maintained. The advantages and disadvantages of the Town assuming a more active role in the maintenance of these facilities is discussed in Section Five.

There are two Federal programs each deriving from the Clean Water Act that the Town needs to consider. The first, Total Maximum Daily Loads (TMDLs) has already resulted in expenditures by the Town as noted in Section Two. The second is the National Pollutant Discharge Elimination System (NPDES) permitting program for Municipal Separate Storm Sewer Systems (MS4s).

In 1996, the Corsica River was identified by the State of Maryland's list of water quality limited stream segments impaired by nutrients. TMDLs for nitrogen and phosphorus were subsequently determined. The goal of these TMDLs is to reduce high chlorophyll-a concentrations and maintain dissolved oxygen standards at levels where the designated uses for the Corsica River will be met. Load allocations were established for both point and nonpoint sources. While low flow allocations are based on design flows at the Centreville wastewater treatment plant, which is covered by a discharge permit, average and high flow allocations need to be achieved through nonpoint source pollution reduction programs. Efforts to meet the nonpoint source aspects need to be implemented or continued. Specifically, the Town's actions are integral to the success of the Corsica River Watershed Restoration Action Strategy. TMDLs have also been established for the Corsica River for Fecal Coliform, and TMDLs are pending at EPA for Polychlorinated Biphenyls (PCBs). It is also noted that the County and Town's Water Resources Element of the Comprehensive Plan has recently been adopted by both the County Commissioners and Town Council.

Hundreds of cities and counties across the country have their stormwater discharges regulated under the NPDES MS4 program. This program essentially presumes that non-point source pollution will be reduced in jurisdictions with a comprehensive and successful program. Inclusion in the permitting program is based on population and density. Requirements and policies of this program are set by the U.S. Environmental Protection Agency (EPA) but it is administered in Maryland by the State Department of the Environment (MDE). As previously noted, EPA has indicated its intent to expand the program to more geographic areas as well as focus on jurisdictions within critical watersheds such as the Chesapeake Bay. Eventually, Centreville may be required to obtain and subsequently comply with the conditions of an NPDES stormwater permit. EPA is also using the NPDES program as a vehicle to implement TMDLs in other parts of the country and many of the projects recently undertaken by Centreville on a voluntary basis may some day become mandatory.

The NPDES Phase II program has six components:

- Public education and outreach
- Public participation and involvement
- Illicit discharge detection and elimination
- Construction site stormwater runoff control
- Post construction stormwater management in new development and redevelopments
- Pollution prevention and good housekeeping for municipal operations and maintenance

Costs on a per capita basis vary significantly across the country, but a moderate program could be funded for \$10 per person annually or about \$35,000 annually.

Other Agencies Performing Services in Centreville

While Town employees perform a majority of stormwater-related work in Centreville, there are other agencies that are also active. As previously noted, the Maryland State Highway Administration has responsibility for drainage system within State rights-of-way and Queen Anne's County performs reviews and inspections of stormwater management facilities related to new construction. MDE provides regulatory oversight for many of the water quality requirements such as stormwater management, erosion and sediment control, and TMDLs. Finally, the Maryland Department of Natural Resources (DNR) provided the funding for this Feasibility Study and also provided technical assistance with the preparation of the Corsica River Watershed Restoration Action Strategy (WRAS).

The Town of Centreville sponsored the WRAS that, according to DNR, makes the action strategies unique in Maryland. The actions recommended in the WRAS include urban stormwater retrofits, public education and outreach, and the implementation of low impact development strategies. Several recent Town projects including the wooded wetlands project adjacent to the wastewater treatment plant, the coastal plain outfall at the end of Banjo Lane, and the Low Impact Development (LID) Restoration Master Plan were all constructed or prepared as a result of the WRAS. Also, the nonprofit Corsica River Conservancy has multiple efforts aligned with the strategies. The Conservancy's four groups: Water Testing, Restoration, Education and Public Information, and Outreach are active throughout the watershed.

SECTION THREE. EXISTING PROGRAM AND PROJECTED FUTURE EXPENDITURES

Expenditures coinciding with the Existing Program activities, as detailed in Section Two, have been summarized into spreadsheet format provided in Appendix A. It is assumed that the development and implementation of a stormwater utility would likely take at least a year and therefore the expenditures are shown in Year 0. These expenditures were projected out five years using an escalation factor of 2.5 percent to present more than just a "snapshot" of needs and approaches.

Projected future costs coinciding with program improvements were derived by interviews with Town personnel, field work performed by URS, and review of provided documents. Three potential levels of service (LOS) were evaluated and are also shown on the spreadsheet entitled Estimates of Expenditures in Appendix A.

Level of Service One - "Essential"

Level of Service One includes the Existing Program as summarized in Section Two as well as hardware and software costs that would be incurred should a stormwater utility be implemented. These would include establishing a new accounting and billing process and an estimate of \$20,000 spread over two years has been assumed. A figure of \$33,000 was used for the replacement of the Vac-tron (to account for price increases in five years from the current estimate of \$30,000) and \$100,000 assumed for the street sweeper (spread out over three years to lessen the impact). Level of Service One also includes payments into a capital recovery fund or bond payments to enable major capital projects to be undertaken such as drainage inlet and pipe repair and replacement as well as funds for maintenance of retrofit projects previously undertaken by the Town. Finally, a more detailed inventory of the drainage infrastructure (inlets, pipes, and outfalls) is also included.

Level of Service Two – "Enhanced"

Level of Service Two includes Level of Service One expenditures plus projects that begin moving the Town towards a more proactive approach to managing stormwater. Principally among these is construction and subsequent maintenance of low impact stormwater management facilities as recommended in the LID Restoration Master Plan prepared by EcoSite, Inc. Level of Service Two also includes compliance with TMDLs and a placeholder of \$10,000 has been assigned until a program is better defined. These activities would necessitate additional staff time and, in addition, a 10 percent increase over current expenditures has been assumed.

Level of Service Three - "Optimal"

Level of Service Three includes Level of Service Two expenditures but more aggressively advances the proactive approach. It includes a higher level of treatment per the LID Master Plan. More significantly, it includes the maintenance of stormwater management basins as well as payments into a capital recovery fund or bond payments to enable retrofits should the Town decide to assume this responsibility. (Please refer to the policy discussion located in Section Five). Finally, Level of Service Three also includes compliance with the NPDES MS4 permit program. Though Centreville is not currently required to obtain a permit for its stormwater discharges, pending changes in the program by EPA could one day necessitate such coverage. A per capita cost of \$10 is being used which is a rough nationwide estimate of program costs. These activities would also necessitate additional staff time and a 20 percent increase over current expenditures has been assumed.

SECTION FOUR. REVENUE COLLECTION FRAMEWORK

There is a direct correlation between amount of impervious surface and the rate and volume of runoff resulting from storm events on any given property. Since this runoff is handled by a public storm conveyance system once it leaves the property, in a stormwater utility scenario, those contributing more flow should be responsible for contributing more revenue as well. Rates for water, sewer, and electric services are determined in a similar fashion. In the case of stormwater though, there is no way to place a meter to measure runoff so the use of Equivalent Residential Units (ERUs) was developed as a commonly accepted and equitable measure. ERUs are intended to represent the amount of imperviousness on an average residential parcel and provide a common measure to compare residential and nonresidential properties. For example, if an ERU of 2,500 square feet is assigned, a property with 10,000 square feet of impervious coverage would represent four ERUs. Other mechanisms do exist that are similar but this study principally followed the ERU concept.

If a stormwater utility is to be formed, the fee level associated with the program requirements would need to be established and the residents' and merchants' willingness to pay determined. It also needs to be determined how the State's and Town's roads will be handled and what sort of credits could be put into place to recognize those areas already providing stormwater management. Finally, other funds need to be accounted for such as grants which may be available to supplement the program.

Stormwater Utility Fees

The impervious coverage associated with five land uses in Centreville (single family residential, multifamily residential, commercial / industrial, public / institutional, and roads) was estimated through GIS evaluations. (See Figure 3.) These evaluations indicated that the amount of impervious surface for the average single-family detached residential property in Centreville is approximately 3,200 square feet. Therefore, this figure is used as the ERU. The number of ERUs for each of the land uses was determined by simply dividing the total calculated impervious coverage by the ERU figure of 3,200 square feet.

A framework for deriving revenues under this concept is shown in Appendix B. This spreadsheet includes the square footage of impervious coverage and the ensuing number of ERUs associated with the five principle land uses: single family residential, multi family residential, commercial / industrial, public / institutional, and roads.

Again referring to the Revenue Collection Framework spreadsheet, the column Existing Program (no SW utility) shows that revenues for current expenditures are derived solely from general fund transfers. Since the Existing Program as defined in Section Three represents staff time only, grants under this column are shown as zero even though Centreville has a demonstrated history of success in obtaining grants (such as the DNR grant used to fund this study).

The column Example Unit Rate shows how much revenue would be collected from each land use category with an ERU rate of \$1.00. These unit values were extrapolated for other ERU rates (not shown) such that rates corresponding to each level of service could be estimated. These are shown in columns Existing Program, Level of Service One, Level of Service Two, and Level of Service Three. Note that the latter Existing Program column differs from the former Existing Program (no SW utility) column in that it projects expenditures five years into the future, assumes that general fund transfers cease, and shows continued success obtaining grants to offset program costs.

Alternatives to this type of ERU approach exist. The impervious amount of cover on each and every residential parcel could be determined. This approach would likely result in a more accurate and equitable overall assessment but could be an administrative burden as there are over 1,300 single family residential properties in Centreville. Conversely, a rate could be determined for each residential zoning district by accounting for relative differences in lot sizes and building footprints among the zones.

In order to provide an evaluation of options, the 2007 Stormwater Utility Survey prepared by Black and Veatch, which received responses from 70 utilities around the country, was reviewed in this context. It found that 39 percent of respondents determined rates on an individual parcel basis and another 16 percent use a multi-tiered or by-zoning district approach. The Survey also found that 45 percent use a single tier basis as was utilized in the study. Other variations include what some utilities refer to as a development intensity factor which is essentially a ratio of impervious cover to total lot area.

A single or tiered rate is far simpler and less costly to administer. This is important as Centreville is a small municipality and does not have the same administrative capacity as the larger cities that have implemented stormwater utilities. However, this approach does not provide an incentive to reduce impervious cover on single family parcels (unless structured as part of a credit program as described in following sections) which could be an important goal of the Town. If lot-specific rates were used instead of a single or district-wide rate, a mechanism would be needed to periodically update the impervious coverage for each lot. Commonly used methods include the tracking of building permits or new aerial photographs and subsequent re-assessment every few years.

Credits and Exemptions

Stormwater management practices employed on some properties may result in a lesser runoff contribution to the drainage system than comparable properties. Examples include detention / retention basins maintained by homeowners associations or disconnecting impervious areas (discharging roof downspouts onto green areas instead of paved areas), installing rain barrels, or placing porous pavement in lieu of concrete or asphalt by commercial or industrial property owners. Since these types of activities theoretically reduce the burden on the agency responsible for drainage, various credit programs have been developed. Less quantifiable, but still worthy of credits, are programs such as public education activities. Similarly, lot characteristics such as soil types or vegetation could be considered for credits as well but these are much more difficult to define.

For this study, a credit for the approximate 660 residential properties draining to privately-maintained detention or retention basins was assumed. Also, placeholders for two commercial / industrial credits were included. For demonstration purposes, these were shown as 25 percent. In other words, if the ERU rate was set at \$1.00, these residences and businesses would be assessed a rate of \$0.75.

A thorough assessment of credit programs nationwide was prepared by AMEC Earth and Environmental in 2007. They compiled data from 50 utilities in all areas of the country. When asked why certain types of credits were not employed, it was commonly answered that the combined cost to the utility to administer the credit as well as the applicant to apply for it often greatly exceeded the amount of the credit. Such a program would complicate a fee system that otherwise should be as simple as possible and would also necessitate audits to assure that the rationale for a credit, such as an on-site detention/retention basin, is functioning properly. Another approach would be to allow credits in non-residential situations only, but then use utility revenues to fund programs in residential areas such as rain barrel installations. Still, a system without credits provides little in the way of incentives for residents to reduce their contribution to the system and therefore should be considered if the Town Council opts to begin utility implementation. Finally, any credit program needs to be based on clear goals and objectives and not done in a piecemeal fashion.

Tax exempt properties, such as State and County lands, churches, or not-for-profit enterprises, create another, often difficult situation. On one hand, they are exempt from property taxes and a stormwater utility fee is essentially a property-based fee. On the other hand, the impervious surfaces on these properties and the resulting runoff must be managed as with any other property. Though the legalities of such fee assessments vary from state to state, courts have typically ruled that assessing a stormwater utility fee on tax-exempt properties is legitimate. This assessment assumed that tax-exempt properties in Centreville would contribute to a stormwater utility in the same way that every other property would. (State and County buildings, while exempt from Town property tax, pay water and sewer fees based on usage.)

The exception to this would be public roadways as these are most often owned by the jurisdiction proposing the utility. For this study it was assumed that roadways, both State and Town, would be exempted. As shown in the Revenue Collection Framework spreadsheet, these make up about a third of the impervious cover in Centreville. If this exemption were not included, the overall rates would decrease accordingly but would also result in the Town essentially paying a fee to itself. However, the decision could be made to exempt Town roads but not those roads owned by the State. Such a decision could have other ramifications. For comparison, the Black and Veatch survey found that 61 percent of utilities exempt roadways.

Assessment

The Revenue Collection Framework spreadsheet provided in Appendix B is intended to demonstrate how revenues would be collected. It is based on numerous assumptions and the rates shown are for example only and should not be used for any type of budgeting projection. In addition to fine-tuning the impervious cover calculations, decisions regarding transfer amounts from the general fund, inclusion or exclusion of grants, and appropriateness and magnitude of credits and exemptions would need to be made before deriving any accurate assessment. These would be the focus of the second phase.

The Black and Veatch Survey also inquired as to the adequacy of program funding. It found that only 8 percent are able to meet all needs, 39 percent meet most needs, and 40 percent meet most urgent needs. Conversely, 13 percent stated available funds are not adequate to meet urgent needs. This indicates that utilities by and large are somewhat underfunded, but this is not a situation unique to stormwater utilities.

Figure 3

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SECTION FIVE. RECOMMENDATIONS

Overview

This Study sought to provide a framework for a stormwater utility and establish its feasibility. The creation of a stormwater utility in Centreville, with its own revenue based on impervious cover, would result in a stable, equitable, and dedicated funding source. It is recommended that the Town proceed with the second phase to resolve the issues highlighted below.

Assuming a second phase is initiated, the Town should anticipate that there will be multiple perspectives to be balanced and concerns to be considered. However, the Town and its residents should keep in mind that the "no action" alternative is not desirable. At the very least, it is recommended that internal changes be implemented such that costs and expenditures related to stormwater are more apparent. If Centreville becomes permitted under mandates such as the NPDES program, accurate accounting could make it easier to demonstrate compliance.

Since Centreville derives a substantial portion of its revenues from property taxes, the Town should be aware that if a utility funding mechanism is not adopted, a somewhat inequitable system will continue to exist. Property taxes are based on assessed value but a large, mostly impervious parcel may pay less in property taxes than a smaller parcel with less impervious surfaces.

It is recommended that the Town create a citizen advisory committee to assure that stakeholders such as business organizations, residential groups, churches, other governmental organizations, etc., are adequately represented in the utility development process. This will better assure that the program developed matches resident's needs and expectations. Furthermore, having community leaders involved in the decision-making process could help with community buy-in. If utility development does proceed, at least one, if not more, public meetings would be advisable to better determine residents' and merchants' willingness-to-pay.

Utility Rates

If a utility is implemented, the basis for the fee will need to be decided. This study was based on the assumption that all residential properties pay the same ERU rate regardless of their size. From an administrative approach, this is certainly the most expedient method, but could result in lots with lesser amounts of impervious coverage subsidizing lots with greater amounts. The Town has the option of determining the impervious coverage either on each and every lot or by zoning district. The parcel-by-parcel approach could provide an incentive for homeowners to reduce the impervious cover on their lot but needs to be weighed against the increased costs to determine the degree of imperviousness. The zoning district average approach, more or less, balances administrative efficiency with equity. A variation to these approaches would be to use a development intensity factor which is a ratio of impervious cover to total lot area.

Some jurisdictions have found it advantageous to enact a low fee initially and then increase it gradually over time. This has the benefit of segueing to a new revenue collection method and softening the impact of the new fee. However, proceeding in this manner could prove unwise if the initial rate is set too low. Once residents begin paying a fee, they will expect to see some results and if the program is underfunded, public support could waiver. It may be better to set the fee based on a five year projection of program expenditures.

Whatever rate is determined and allowances or credits offered, the overall collection program will need to be equitable in that those contributing greater loads to the drainage system pay a proportionally greater amount than those contributing lesser loads. There will also need to be a clear relationship between the stormwater expenditures and the collected revenues. If a utility fee is implemented, it cannot be used for non-stormwater purposes or placed in the general coffers for other uses.

Expenditures and Revenue Estimates

Another recommendation relates to the spreadsheet assessment shown in Appendix A. The expenditure portion of this was based on a combination of field reconnaissance and interviews with Town personnel. These estimates would need to be refined. If a utility is implemented and then legally challenged, the Town will need to clearly show that the basis for the fee and the anticipated expenditures are reasonably accurate. If it is found that revenues significantly in excess of needs are being collected, the justification for the utility could be compromised.

The revenue collection portion of the spreadsheet is based on an approximation of impervious coverage (from 2008 aerial photography) using GIS shape files. It is likely that more recent aerial photography with a more exacting calculation of impervious surfaces would be needed prior to the enactment of a stormwater utility. It is noted that the limited scope of work for this Study did not allow for field verification of imperviousness calculations.

A mechanism will also be needed to update the impervious calculations. Assuming Centreville utilizes the ERU concept, either Town-wide or by zoning district, impervious calculations would not be needed in residential areas. However, a tracking mechanism would be needed if a parcel-by-parcel approach was used as well as for non-residential properties such that building additions or parking lot expansions are included in fee calculations. Aerial photographs are periodically taken, but years could go by between flights and revenue could be lost if not up-to-date. A better process may be to track additions and expansions through the building permit process and manually update the billing records of the affected properties. Finally, an appeals mechanism will also be needed for parcels that may be erroneously calculated.

Credits and Exemptions

As noted in Section Four, the use of credits and exemptions needs to be carefully evaluated.

There are 43 stormwater management structures in Centreville of which 41 are privately owned and maintained. If these will remain in private hands, a credit may need to be established for their residents as discussed herein. Alternatively, the Town could seek to assume the maintenance responsibilities in which case a credit would not be appropriate (please see below). In fact, the increased costs accordingly would need to be accounted for. Some jurisdictions are taking over the maintenance of private basins under the premise that these entities often lack the financial and technical resources to do so and that public maintenance may eventually be required by the regulatory agencies. Credits could also be established for residents but the administrative burden of managing this aspect of the program may be prohibitive.

Another approach would be to allow credits in non-residential situations only, but then use utility revenues to fund grant programs in residential areas such as rain barrel installations. Similarly, a business could seek a reduction if it underwrites a public education effort or stream clean up. Since the number of businesses is much smaller than the number of residences, administrative costs would be comparatively less. Any credit program would need to be as simplistic as possible and enacted with clear goals and objectives and not piecemeal.

Policy Implications

One of the most difficult issues regarding surface water management in Maryland and throughout the country is the reliance on private entities for the maintenance of stormwater management structures.

The problem is twofold. First, while homeowner associations (HOAs), in general, perform minimum upkeep like grass cutting, other tasks such as the control of invasive plants, repair of eroded banks, or removal of obstructions from outlets often are not performed which can increase future major maintenance costs. This situation will be compounded as stormwater practices shift away from centralized basins to more dispersed BMPs since the number of structures or facilities needing maintenance will grow more quickly and expertise to address these environmentally complex structures more difficult to obtain. (It should be noted that the Maryland Stormwater Act of 2007 and the ensuing Regulations generally required multiple BMPs and only allow centralized facilities as a last resort.)

Second, even if minor maintenance activities are adequately performed, it is doubtful that many HOAs are setting money aside for major maintenance such as reconstruction which can cost upwards of \$50,000 and, in certain cases much more, depending on size and location of the facility.

Assumption of maintenance responsibilities by the Town would be advantageous for a number of reasons. HOA officers, who are often lay people, would be relieved from the burden of maintaining their community's basins and BMPs better assuring the public at-large that this critical aspect of the overall drainage system is functioning properly. Total expenditures would be reduced if a single agency performed the maintenance work and / or oversaw contractors due to economies of scale. Most importantly, water quality in the Town would be improved through enhanced maintenance.

There are, of course, potential downsides that need to be considered as well. The costs associated with annual maintenance as well as the inevitable retrofits could significantly increase revenues needed to run the stormwater program. The Town could seek upfront payments from HOAs in exchange for relieving them of their responsibilities; however, agreeing to a reasonable amount could be problematic. If underestimated, increased revenues would be needed from other portions of the Town potentially raising fairness issues. However, HOA residents could counter-argue that their subdivisions have stormwater controls whereas many parts of Centreville do not and they could therefore claim that residents in other parts of Town are the ones being subsidized.

In the end, any such policy change would need to be fully vetted in the public arena with advantages and disadvantages fully explored.

Legal Issues

The legal consequences of enacting a stormwater utility in Centreville need to be evaluated in concert with the Town's Attorney. The Black and Veatch survey indicated that nearly one quarter of utilities are legally challenged. As noted, it is extremely important that a fee be established that is proportional to users' contributions to the system and is directly related to the amount of stormwater expenditures needed and reasonably anticipated. It is vitally important that the Town have the legal authority to enact such a fee.

Conclusion

The final phase of utility implementation would necessitate two broad actions by the Town to effectively resolve the issues described in these recommendations:

Create a Citizens Advisory Committee – The Committee, comprised of a diverse group of stakeholders, would better define the program and assure that it matches residents' and merchants' expectations and willingness-to-pay. The Committee could also hold public forums on utility development. A clear mission with overall time frame would be needed from the Town to assure the group stays focused.

Prepare a Business Plan – A utility cannot be created without a solid foundation. A Business Plan which would build upon, but better detail and fine tune, the expenditure and revenue estimates presented herein is essential. The Plan would also address various implementation details and resolve policy issues.

This completes the Stormwater Utility Feasibility Study for the Town of Centreville. Some jurisdictions have conducted similar assessments only to decide that a utility is not appropriate for them at the current time or under existing conditions. In other words, there is nothing improper with evaluating the potential for utility development and then deciding to not pursue it further. However, proceeding without necessary due diligence and understanding of residents' expectations and then failing in the implementation could be very problematic. This study is intended to provide the guidance necessary if a consensus is reached that a stormwater utility is best for Centreville.

APPENDIX A

CENTREVILLE, MARYLAND STORMWATER UTILITY FEASIBILITY STUDY

ESTIMATES OF EXPENDITURES

Escalation Factor						
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Existing Program Vac-tron (2 person crew @ 1/2 time) Sweeper truck (one employee @ full time) Mowing and miscellaneous maintenance (equiv. to one person full time) Public Works Superintendant (1/4 time) Watershed Manager (1/4 time)	\$50,000 \$50,000 \$50,000 \$20,000 \$25,000	\$51,300 \$51,300 \$51,300 \$20,500 \$25,600	\$52,600 \$52,600 \$52,600 \$21,000 \$26,200	\$53,900 \$53,900 \$53,900 \$21,500 \$26,900	\$55,200 \$55,200 \$55,200 \$22,000 \$27,600	\$56,600 \$56,600 \$56,600 \$22,600 \$28,300
Existing Program	\$195,000	\$200,000	\$205,000	\$210,100	\$215,200	\$220,700
Level of Service One - Essential Utility Set Up Costs Capital Recovery Fund or Bond Payments for Capital Projects Replacement of Vac-tron Replacement of Street Sweeper Maintenance of Previously Completed Retrofit Projects Preparation of Drainage Inventory		\$10,000 \$25,000 \$0 \$0 \$5,000 \$10,000	\$10,000 \$25,625 \$0 \$33,000 \$5,125 \$0	\$26,266 \$26,266 \$33,000 \$5,253	\$26,922 \$26,922 \$33,000 \$5,384 \$0	\$0 \$27,595 \$33,000 \$0 \$5,519 \$0
Level of Service One Subtotal (incl. Existing Program)		\$250,000	\$278,750	\$274,619	\$280,507	\$286,814
Level of Service Two - Enhanced Additional staff time (10 percent increase over existing program) LID Restoration Projects (control of 1 inch storm event) LID Projects Maintenance Nonpoint Source Reduction Programs (TMDLs) *		\$20,000 \$89,000 \$12,500 \$10,000	\$20,500 \$91,225 \$12,813 \$10,250	\$21,010 \$93,506 \$13,133 \$10,506	\$21,520 \$95,843 \$13,461 \$10,769	\$22,070 \$98,239 \$13,798 \$11,038
Level of Service Two Subtotal (incl. Exist. Prog. and LOS One)		\$381,500	\$413,538	\$412,773	\$422,100	\$431,960
Level of Service Three - Optimal Additional staff time (20 percent increase over existing program) LID Restoration Projects (higher level of control) Stormwater Management Basin Maintenance (\$2,000 each x 50 facilities) Capital Recovery Fund or Bond Payments for Basin Retrofits Permitting Compliance (NPDES) * Level of Service Three Subtotal (incl. Exist. Program and LOS One and Two)	es) d Two)	\$40,000 \$77,000 \$100,000 \$50,000 \$35,000	\$41,000 \$78,925 \$102,500 \$51,250 \$35,875 \$723,088	\$42,020 \$80,898 \$105,063 \$52,531 \$36,772	\$43,040 \$82,921 \$107,689 \$53,845 \$37,691 \$747,285	\$44,140 \$84,994 \$110,381 \$55,191 \$38,633

^{* =} regulatory programs

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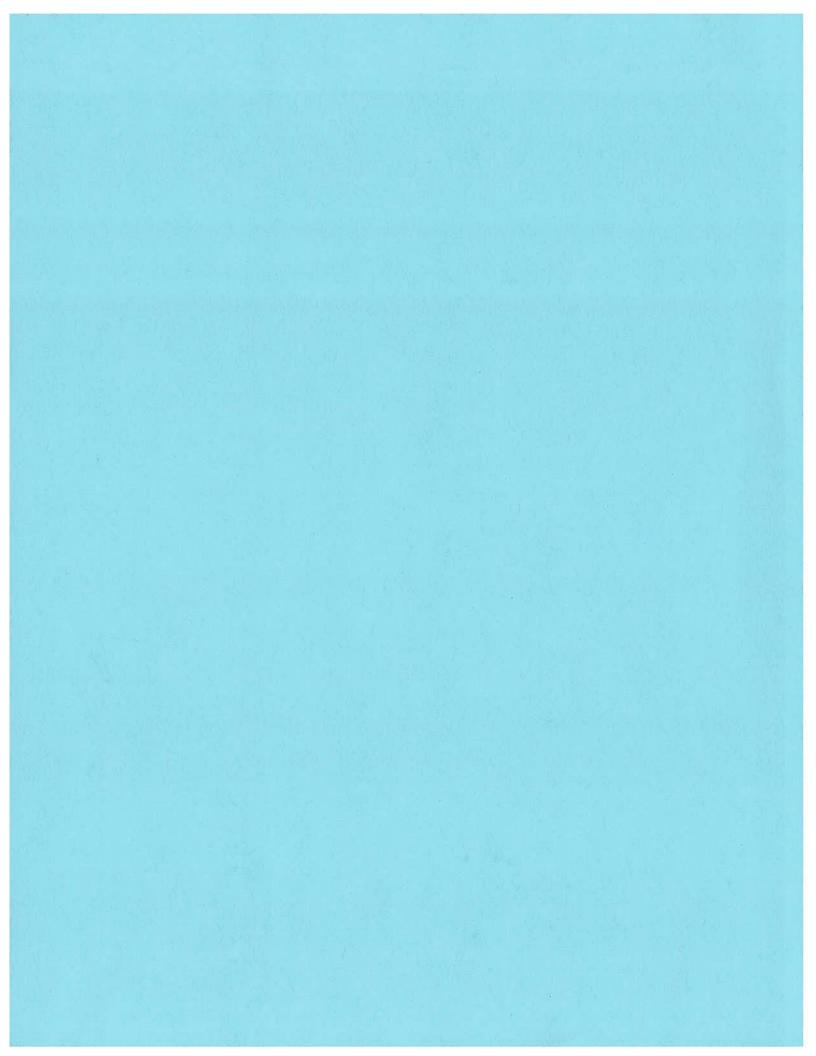
APPENDIX B

CENTREVILLE, MARYLAND STORMWATER UTILITY FEASIBILITY STUDY

REVENUE COLLECTION FRAMEWORK

ERU size	3,200 square feet	uare feet	Existing Program (no SW utility)	Example Unit Rate	Existing Program	Level of Service One	Level of Service Two	Level of Service Three
Unit Rate per ERU/Month Unit Rate per 1,000 sq. ft./month			\$0.00	\$1.00 \$0.31	\$5.87 \$1.83	\$8.15 \$2.55	\$13.14	\$24.61 \$7.69
Utility Revenue Single Family Residential	ft² 4,267,138	ERU's 1,333	\$	\$16,002	\$93,959	\$130,350	\$210,243	\$393,724
Multi Family Residential Commercial / Industrial Public / Institutional Roads	162,043 2,691,137 1,400,018 3,957,426	51 841 438 1,237	0,000	\$608 \$10,092 \$5,250 \$14,840	\$3,568 \$59,257 \$30,827 \$87,139	\$4,950 \$82,207 \$42,767 \$120,889	\$7,984 \$132,593 \$68,979 \$194,983	\$14,952 \$248,308 \$129,178 \$365,147
Utility Revenue Subtotal			0\$	\$46,792	\$274,750	\$381,164	\$614,782	\$1,151,308
Other Revenue Transfer from General Fund Grants			\$195,000 \$0	\$50,000	\$000,02\$	\$00,000	\$50,000	\$00,000 \$50,000
Utility and Other Revenue Subtotal			\$195,000	\$96,792	\$324,750	\$431,164	\$664,782	\$1,201,308
Credits Credit Amount	25.00	ERU's	\$0.00	\$0.25	\$1.47	\$2.04	\$3.28	\$6.15
Residences with SWM basins Commercial Credit 1 (for example) Commercial Credit 2 (for example)		660 200 100	099	(\$1,980) (\$600) (\$300)	(\$11,626) (\$3,523) (\$1,762)	(\$16,129) (\$4,888) (\$2,444)	(\$26,015) (\$7,883) (\$3,942)	(\$48,718) (\$14,763) (\$7,382)
Credits Subtotal			0\$	(\$2,880)	(\$16,911)	(\$23,460)	(\$37,840)	(\$70,862)
Exemptions Exemption Amount	8	ERU's	\$0.00	\$1.00	\$5.87	\$8.15	\$13.14	\$24.61
Roads	3,957,426	1,237	0\$	(\$14,840)	(\$87,139)	(\$120,889)	(\$194,983)	(\$365,147)
Exemptions Subtotal			0\$	(\$14,840)	(\$87,139)	(\$120,889)	(\$194,983)	(\$365,147)
Credits and Exemptions Subtotal			0\$	(\$17,720)	(\$104,050)	(\$144,350)	(\$232,823)	(\$436,009)
Revenues minus Credits and Exemptions	<u>s</u>		\$195,000	\$79,071	\$220,700	\$286,814	\$431,960	\$765,299

10/18/2010



ATTACHMENT 1

Structure Part Numb	oer Structure	• •	cture Description A J (Double)	Location street	Material Brick
Inspection Date In 5/19/2010	aspection Time 3:00	Weather Overcast			
Development A	ddress Prefix	Street Kidwell		ess_suffix st of Tilghman Ave	
Frame Frame_mat Cast Iron	Frame_surf con/asp	Frame Condi	ition Frame Defe	ct Description	
Grate Type Grantlel Bar	ate Condition 0	Grate Defec	t Description		
Inlet Inlet Condit	ion Inlet Del	fect Description	ı		
Riser Riser Ring Ring Material	Riser Ring Condition	Riser Ring I Number	Riser Ring Defect D	escription	
Step Step Material ✓	Step Numner	Step Conditi	ion Step Defect Do	•	
Wall Wall Material Brick	Wall Conditi	ion Wall De	efect Descrition		

Condition Key: 0 = Good 3 = Fair 5 = Poor

Structure Part 5039		re Type Stru let	cture Description Double A J	Location street	Material Brick
Inspection Date 5/19/2010	Inspection Time	Weather Overcast			
Development	Address Prefix 208	Street Kidwell Avenue		ess_suffix of	
Frame Frame Cast	_	Frame Cond	ition Frame Defe	ect Description	
Grate Type Parallel Bar	Grate Condition	Grate Defec	t Description		
Inlet C	ondition Inlet Do	efect Description	a		
Riser Riser l Ring Mate	0	Riser Ring Number	Riser Ring Defect D	escription	
Conc	rete 0	1			
Step Step Mat	erial Step Numner 0	Step Condit	ion Step Defect De	escription	
Wall Wall Ma ☑ Brid		tion Wall D	efect Descrition		

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Structure Part Nu	ımber Structu	re Type Structure	e Description	Location	Material
5060	Inl	et	В	street	Brick
Inspection Date 5/19/2010	Inspection Time	Weather Overcast			
Development	Address Prefix 319	Street Little Kidwell Drive	addre	ss_suffix f	
Frame Frame_n Cast Iro	_	Frame Condition 0	Frame Defec	ct Description	
Grate Type Parallel Bar	Grate Condition	Grate Defect Des	scription		
Inlet Inlet Con		fect Description			
Riser Riser Ring Materia	0	Riser Ring Riser Number	Ring Defect De	scription	
Step Step Materi	ial Step Numner 0	Step Condition 0	Step Defect De	scription	
Wall Wall Mater	rial Wall Condit	tion Wall Defect	Descrition		

Structure Part Numb	er Structur		ucture Description Double "B"	Location street	Material Brick
_	spection Time	Weathe			
5/19/2010	1:00	Overcast			
Development A	ddress Prefix	Street Little Kidwell		ess_suffix	
32		Little Klawen	Direc		
Frame Frame_mat	Frame_surf	Frame Con	dition Frame Defe	ct Description	
✓ Cast Iron	concrete	0			
a . m					
Grate Type Gra	ote Condition	Grate Defe	ect Description		
	v				
Inlet Inlet Conditi	on Inlet De	fect Descripti	on		
② 0					
Riser Riser Ring Ring Material	Riser Ring Condition	Riser Ring Number	Riser Ring Defect De	escription	
П	0	0			
_					
Step Step Material	Step Numner	Step Cond	ition Step Defect De	escription	
	0	0			
Wall Wall Material	Wall Condit	ion Well l	Defect Descrition		
Brick	wan Condit 0	ion aani	refect Descrition		

Structure Part Nu 5071	mber Structui		ructure Description 2 X B	Location street	Material Brick
Inspection Date 5/19/2010	Inspection Time 2:00	Weath Overcas			
Development	Address Prefix	Street Brown Street		ess_suffix te building	
Frame Frame_m Cast Iron	_	Frame Con		ect Description	
Grate Type Parallel Bar	Grate Condition 0	Grate Del	fect Description		
Inlet Inlet Conc	dition Inlet De	fect Descript	ion		
Riser Riser Rin Ring Materia		Riser Ring Number	Riser Ring Defect De	escription	
Step Step Materia PVC	al Step Numner	Step Cond	lition Step Defect De	escription	
Wall Wall Mater ☑ Brick	rial Wall Condit	tion Wall	Defect Descrition		

Structure Part Nu			ructure Description	Location	Material
5076	Inl	et	В	street	Brick
Inspection Date	Inspection Time	Weathe	r		
5/19/2010	2:00	Overcas	t		
Development	Address Prefix	Street Brown St	addre	ess_suffix	
	110	prown 20	front c	01	
Frame Frame_ma	_	Frame Con	dition Frame Defe	ct Description	
Grate Type Parallel Bar	Grate Condition	Grate Def	ect Description		
Inlet Inlet Cond	ition Inlet De	fect Descripti	on		
Riser Riser Ring Ring Material	,	Riser Ring Number	Riser Ring Defect De	escription	
	0	0			
Step Step Materia	l Step Numner	Step Cond	ition Step Defect De	escription	
Wall Wall Materi	al Wall Condi	tion Wall	Defect Descrition		

Structure Part Num	nber Structu		cture Description	Location Street	Material Brick
Inspection Date 5/14/2010	Inspection Time	Weather Overcast			
Development	Address Prefix 120	Street Hope Road (Rt 3		ess_suffix of	
Frame Frame_ma	t Frame_surf Asphalt	Frame Condi	ition Frame Defe	ect Description	
Grate Type G	rate Condition	Grate Defec	t Description		
Inlet Cond ✓ 3	ition Inlet De	fect Description	1		
Riser Riser Ring Ring Material	, ,	Riser Ring 1 Number	Riser Ring Defect De	escription	
Step Step Materia	l Step Numner	Step Conditi	on Step Defect De	escription	
Wall Wall Materi	al Wall Condit	tion Wall De	efect Descrition		

Condition Key: 0 = Good 3 = Fair 5 = Poor

Struct	ture Part Numb			ructure Description	Location	Material
	5112	Inl	et	AJ	street	Brick
-		spection Time	Weathe	er		
5/	14/2010	1:00	Sunny			
Develo		ddress Prefix 04	Street Hope Road		ess_suffix front of	
Frame	e Frame_mat Cast Iron	Frame_surf con/asphalt	Frame Cor	ndition Frame Defe	ct Description	
Grate Reticul		ate Condition 0	Grate Def	ect Description		
Inlet	Inlet Condit	ion Inlet De	fect Descripti	ion		
Riser Ring	Riser Ring Material	Riser Ring Condition	Riser Ring Number	Riser Ring Defect De	escription	
		0	0			
Step	Step Material	Step Numner	Step Cond	lition Step Defect De	escription	
Wall ✓	Wall Material Brick	Wall Condit	ion Wall	Defect Descrition		

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Condition Key: 0 = Good 3 = Fair 5 = Poor

Structure Part Nu	ımber Structuı Inl		ucture Description	Location street	Material Brick
Inspection Date 5/14/2010	Inspection Time	Weathe Sunny	r		
Development	Address Prefix 213	Street Hope Rd		ess_suffix front of	
Frame Frame_m Cast Iro	_	Frame Con	dition Frame Defe	ct Description	
Grate Type Reticuline	Grate Condition	Grate Defe	ect Description		
Inlet Inlet Con		fect Descripti	on		
Riser Riser Ring Materia		Riser Ring Number	Riser Ring Defect De	escription	
Step Step Materi	al Step Numner	Step Cond	ition Step Defect De	escription	
Wall Wall Mater ✓ Brick	rial Wall Condit	tion Wall l	Defect Descrition		

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Structure Part No.	umber Structui		ructure Description	Location street	Material Brick
Inspection Date 5/14/2010	Inspection Time 2:00	Weathe Sunny	er		
Development	Address Prefix	Street Kings Ct	addre front o	ess_suffix of	
Frame Frame_n Cast Iro	· · · · · · · · · · · · · · · · · · ·	Frame Con	ndition Frame Defe	ct Description	
Grate Type Reticuline	Grate Condition	Grate Def	ect Description		
Inlet Inlet Cor		fect Descripti	ion		
Riser Riser Riser Ring Materia	0	Riser Ring Number	Riser Ring Defect De	escription	
Step Step Mater	ial Step Numner 0		lition Step Defect De	escription	
Wall Wall Mate ✓ Brick	rial Wall Condit	tion Wall	Defect Descrition		

Structure Part Nu	ı mber Structu ı Inl		ucture Description	Location street	Material Brick
Inspection Date 5/14/2010	Inspection Time 2:00	Weather Sunny	•		
Development	Address Prefix	Street Kings Ct	addre	ess_suffix of	
Frame Frame_m Cast Iro		Frame Cone	dition Frame Defe	ct Description	
Grate Type Reticuline	Grate Condition 0	Grate Defe	ct Description		
Inlet Inlet Con		fect Descriptio	on		
Riser Riser Ring Materia		Riser Ring Number	Riser Ring Defect De	escription	
Step Step Materi	al Step Numner	Step Condi	tion Step Defect De	escription	
Wall Wall Mater ✓ Brick	rial Wall Condit	ion Wall I	Defect Descrition		

Structure Part Nu 5123	mber Structur		ucture Description	Location street	Material Brick
Inspection Date 5/14/2010	Inspection Time 2:00	Weathe Sunny	r		
Development	Address Prefix 138	Street Kings Ct	addre front c	ess_suffix of	
Frame Frame_m Cast Iron	_	Frame Con	dition Frame Defe	ct Description	
Grate Type Reticuline	Grate Condition 0	Grate Defe	ect Description		
Inlet Inlet Con		fect Description	on		
Riser Riser Rin Ring Materia		Riser Ring Number	Riser Ring Defect De	escription	
Step Step Materi	al Step Numner 0	Step Condi	ition Step Defect De	escription	
Wall Wall Mater ✓ Brick	rial Wall Condit	ion Wall l	Defect Descrition		

Structure Part		tructure Type		Description	Location	Material
5124		Inlet	COG		street	Pre Cast
Inspection Dat	e Inspection	Time W	eather			
5/14/2010	12:00) S	unny			
Development	Address I	Prefix Street Heritage	Way	addre side of	ss_suffix	
	233	Tientage	· way	Side of		
Frame Frame	T	e_surf Frame crete	e Condition 0	Frame Defe	ct Description	
Grate Type Solid	Grate Cond	lition Grate	e Defect Desc	ription		
Inlet Inlet (Condition I	nlet Defect Desc	cription			
Riser Riser Ring Mat	Ring Riser lerial Cond	•		Ring Defect De	escription	
✓ Bri	ick 0	2				
Step Step Ma	•	umner Step (2	C ondition 0	Step Defect De	escription	
Wall Wall M		Condition V	Wall Defect I	Descrition		

Condition Key: 0 = Good 3 = Fair 5 = Poor

Structure Part		ture Type St	tructure Description	Location street	Material Pre Cast
Inspection Date 5/14/2010	te Inspection Tin	ne Weath Sunny			
Development	Address Prefix 235	K Street Heritage Wa		ess_suffix of	
Frame Frame	e_mat Frame_su t Iron concrete	rf Frame Co		ect Description	
Grate Type Solid	Grate Condition	Grate De	fect Description		
Inlet Inlet	Condition Inlet	Defect Descript	ion		
Riser Riser Ring Mat	Ring Riser Ring erial Condition		Riser Ring Defect D	escription	
✓ Br	ick 0	2			
Step Step Ma	-	er Step Cone	dition Step Defect De	escription	
Wall Wall M	aterial Wall Con 0	dition Wall	Defect Descrition		

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Structi	ure Part Numb			ructure Description	Location	Material
	5128	Inle	et	COG	street	Pre Cast
_		spection Time	Weathe	er		
5/1	4/2010	12:00	Sunny			
Develo	pment A	ddress Prefix 86	Street Heritage Way		ess_suffix d, at pond	
Frame	Frame_mat Cast Iron	Frame_surf concrete	Frame Con	ndition Frame Defe	ect Description	
Grate '	Type Gra	te Condition	Grate Def	ect Description		
Solid	-	0		•		
Inlet 🗹	Inlet Conditi	on Inlet De	fect Descripti	ion		
Riser Ring	Riser Ring Material	Riser Ring Condition	Riser Ring Number	Riser Ring Defect D	escription	
\checkmark	Brick	0	1			
Step S	Step Material	Step Numner 0	Step Cond 0	lition Step Defect De	escription	
Wall ✓	Wall Material Pre Cast	Wall Condit	ion Wall	Defect Descrition		

Struct	ure Part Numb		• •	ructure Description	Location	Material
	5131	Inle	et	COG	street	Pre Cast
-	tion Date In	spection Time	Weath Sunny	er		
Develo	pment A	ddress Prefix	Street Heritage Way		ess_suffix f retention Pond at fence	
Frame	Frame_mat Cast Iron	Frame_surf concrete	Frame Con	ndition Frame Defe	ect Description	
Grate '	Type Gra	ote Condition	Grate Def	ect Description		
Inlet	Inlet Conditi 0	on Inlet De	fect Descript	ion		
Riser Ring	Riser Ring Material	Riser Ring Condition	Riser Ring Number	Riser Ring Defect D	escription	
✓	Brick	0	2			
Step S	Step Material	Step Numner	Step Cond	lition Step Defect Do	escription	
Wall	Wall Material Pre Cast	Wall Condit	ion Wall	Defect Descrition		

Structure Part	Number Structu	ıre Type St	ructure Description	Location	Material
5133	Ir.	nlet	COG	street	Pre Cast
Inspection Dat	•		er		
5/14/2010	1:00	Sunny			
Development	Address Prefix 148	Street Autumn Lane		ess_suffix of	
Frame Frame Cas	e_mat Frame_surf t Iron concrete	Frame Con	ndition Frame Def	ect Description	
Grate Type Solid	Grate Condition 0	Grate Def	ect Description		
Inlet Inlet	Condition Inlet D	efect Descript	ion		
Riser Riser Ring Mat	Ring Riser Ring erial Condition	Riser Ring Number	Riser Ring Defect D	escription	
✓ Br	ick 0	2			
Step Step Ma	terial Step Numne	r Step Cond	lition Step Defect D	escription	
Wall Wall M	aterial Wall Cond Cast 0	ition Wall	Defect Descrition		

Struct	ure Part Numb			ructure Description	Location	Material
	5135	Inle	et	COG	street	Pre Cast
-		spection Time	Weath			
5/1	4/2010	1:00	Sunny	,		
Develo	E	ddress Prefix 35	Street Autumn Land		ess_suffix of	
Frame	Frame_mat Cast Iron	Frame_surf concrete	Frame Co		ect Description	
Grate '	Type Gra	ate Condition 0	Grate Def	fect Description		
Inlet	Inlet Conditi 0	ion Inlet De	fect Descript	ion		
Riser Ring	Riser Ring Material	Riser Ring Condition	Riser Ring Number	Riser Ring Defect D	escription	
\checkmark	Brick	0	1			
Step S	Step Material	Step Numner	Step Cond	lition Step Defect De	escription	
Wall	Wall Material Pre Cast	Wall Condit	ion Wall	Defect Descrition		

Struct	ure Part Numb	oer Structui	• •	tructure Description	Location	Material
	5139	Ini	et	COG	street	Pre Cast
-		spection Time	Weath			
5/1	4/2010	2:00	Sunn	1		
Develo	pment A	ddress Prefix	Street	addre	ss_suffix	
	2	19	Autumn Lan	e front o	of	
Frame	Frame_mat Cast Iron	Frame_surf	Frame Co		ct Description	
Grate '	Type Gr	ate Condition 0	Grate De	fect Description		
Inlet	Inlet Conditi 0	ion Inlet De	fect Descrip	tion		
Riser Ring	Riser Ring Material	Riser Ring Condition	Riser Ring Number	Riser Ring Defect De	escription	
~	Brick	0	2			
	Step Material	Step Numner	Step Con	dition Step Defect De	escription	
Wall ✓	Wall Material Pre Cast	Wall Condit	ion Wall	Defect Descrition		

Condition Key: 0 = Good 3 = Fair 5 = Poor

Structure Part Numb	er Structure T	ype Structu	re Description	Location	Material
5140	Iniet		COG	street	Pre Cast
Inspection Date In	spection Time	Weather			
5/14/2010	2:00	Sunny			
Development A	ddress Prefix St	treet	addre	ss_suffix	
22	25 Au	utumn Lane	Front o	f	
Frame Frame_mat	Frame_surf F	rame Condition	n Frame Defe	ct Description	
Cast Iron	concrete	0			
		Grate Defect D	escription		
Solid	0				
T-1-4 T-1-4 C 3'4'	Inled Defeat	• D ! _ 4!			
Inlet Inlet Conditi	on Inlet Defect	t Description			
·					
Riser Riser Ring	nini	n' n'-	D' D 6 4 D		
Riser Riser Ring Ring Material		ser Ring Rise Number	er Ring Defect De	scripuon	
✓ Brick	0	2			
€					
Step Step Material	Step Numner S	Step Condition	Step Defect De	scription	
	0	0	•	•	
Wall Wall Material	Wall Condition	Wall Defec	t Descrition		
✓ Pre Cast	0				

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Struc	ture Part Numb	er Structur		ructure Description	Location street	Material Brick
_	ction Date In	spection Time	Weath e Sunny	500		
Devel	opment A	ddress Prefix 05	Street Inter Walnut		ess_suffix	
Fram	e Frame_mat Cast Iron	Frame_surf con/asp	Frame Con	ndition Frame Defe	ect Description	
Grate Reticu	V 4	ate Condition	Grate Def	ect Description		
Inlet	Inlet Conditi 0	on Inlet De	fect Descript	ion		
Riser Ring	Riser Ring Material	Riser Ring Condition	Riser Ring Number	Riser Ring Defect De	escription	
Step	Step Material	Step Numner	Step Cond	lition Step Defect De	escription	
Wall	Wall Material Brick	Wall Condit	ion Wall	Defect Descrition		

Structure Part Num	-		ucture Description	Location	Material
5142	Inle	et	AJ	street	Brick
-	nspection Time	Weathe	r		
5/14/2010	12:00	Sunny			
	Address Prefix 305	Street Inter of Walnu	addre t St & Hope Rd	ess_suffix	
Frame Frame_mat Cast Iron	Frame_surf	Frame Con	dition Frame Defe	ct Description	
Grate Type Grate Control Grate Type Grate Type	rate Condition 0	Grate Defe	ect Description		
Inlet Inlet Condi ✓ 0	tion Inlet De	fect Description	on		
Riser Riser Ring Ring Material	Riser Ring Condition	Riser Ring Number	Riser Ring Defect De	escription	
	0	0			
Step Step Material	Step Numner 0	Step Condi	tion Step Defect De	escription	
Wall Wall Materia ☑ Brick	l Wall Condit	ion Wall I	Defect Descrition		

Structure Part N			ucture Description	Location	Material
5143	Inl	et	COG	street	Pre Cast
Inspection Date 5/14/2010	Inspection Time	Weather Sunny	•		
		Sullily			
Development	Address Prefix 138	Street Cypress Ct	addro Front	ess_suffix of	
Frame Frame_i Cast Ir	_	Frame Cone	dition Frame Defe	ect Description	
Grate Type	Grate Condition	Grate Defe	ct Description		
Solid	0				
Inlet Con	ndition Inlet De	fect Description	on.		
Riser Riser Ri Ring Materi		Riser Ring Number	Riser Ring Defect D	escription	
Brick	0	19			
Step Step Mater ✓ PVC	rial Step Numner	Step Condi	tion Step Defect De	escription	
Wall Wall Mate		tion Wall I	Defect Descrition		

Structure Part Nu	mber Structui		ructure Description COG	Location street	Material Pre Cast
Inspection Date 5/14/2010	Inspection Time	Weath			
Development	Address Prefix	Street Cypress Ct.	addre	ess_suffix of pond	
Frame Frame_ma	_	Frame Co		ect Description	
Grate Type Solid	Grate Condition	Grate De	fect Description		
Inlet Inlet Cond ✓ 0	lition Inlet De	efect Descript	ion		
Riser Riser Ring		Riser Ring Number	Riser Ring Defect De	escription	
⊘ Brick	0	1			
Step Step Materia PVC	al Step Numner	Step Cone	lition Step Defect De	escription	
Wall Wall Mater	ial Wall Condi	tion Wall	Defect Descrition		

Structure Part Nu	ımber Structui	re Type St	ructure Description	Location	Material
5146	Inl	et	AJ	Street	Brick
Inspection Date 5/14/2010	Inspection Time	Weathe Sunny	er		
Development	Address Prefix	Street Pine St & Ho		ess_suffix	
Frame Frame_n Cast Iro		Frame Cor	ndition Frame Defe	ct Description	
Grate Type Reticuline	Grate Condition 0	Grate Def	ect Description		
Inlet Inlet Con ✓		fect Descripti	ion		
Riser Riser Rin Ring Materia		Riser Ring Number	Riser Ring Defect De	escription	
Step Step Materi	ial Step Numner 0	Step Cond	lition Step Defect De	escription	
Wall Wall Mater Brick	rial Wall Condit	ion Wall	Defect Descrition		

Condition Key: 0 = Good 3 = Fair 5 = Poor

Inspection Date Inspection Time Weather 5/14/2010 11:00 Sunny Development Address Prefix Street address_suffix Pine Street & Hope Road Frame Frame_mat Frame_surf Frame Condition Frame Defect Description Cast Iron Asphalt/con 0 Grate Type Grate Condition Grate Defect Description Reticuline 0 Inlet Inlet Condition Inlet Defect Description O Riser Riser Ring Riser Ring Riser Ring Riser Ring Defect Description Number 0 0	Structu	ure Part Numb		• •	ructure Description		Material
Development Address Prefix Street address_suffix Pine Street & Hope Road Frame Frame_mat Cast Iron Asphalt/con 0 Grate Type Grate Condition Reticuline 0 Inlet Inlet Condition 0 Riser Riser Ring Material Condition Number 0 0 Sunny Street address_suffix Pine Street & Hope Road Frame Defect Description Grate Defect Description Grate Defect Description Riser Ring Riser Ring Riser Ring Number 0 0 Riser Ring Defect Description O 0		5147	inie	E	AJ	street	Brick
Development Address Prefix Street address_suffix Frame Frame_mat Frame_surf Frame Condition Frame Defect Description Cast Iron Asphalt/con 0 Grate Type Grate Condition Grate Defect Description Reticuline 0 Inlet Inlet Condition Inlet Defect Description ✓ 0 Riser Ring Material Riser Ring Riser Ring Number 0 0	•		-		r		
✓ Cast Iron Asphalt/con 0 Grate Type Grate Condition Reticuline 0 Inlet Inlet Condition Inlet Defect Description ✓ 0 Riser Riser Ring Riser Ring Riser Ring Riser Ring Defect Description Ring Material Condition Number 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Develo	pment A	ddress Prefix	Street		lress_suffix	
Inlet Inlet Condition Inlet Defect Description □ 0 Riser Riser Ring Riser Ring Riser Ring Riser Ring Defect Description Ring Material Condition Number □ 0 0			_		ndition Frame De	efect Description	
Riser Riser Ring Riser Ring Riser Ring Defect Description Ring Material Condition Number 0 0				Grate Def	ect Description		
Ring Material Condition Number 0 0			on Inlet Def	ect Descripti	on		
			Condition	Number	Riser Ring Defect	Description	
	Step S	Step Material	Step Numner	Step Cond	ition Step Defect	Description	
Wall Wall Material Wall Condition Wall Defect Descrition Concrete 0			Wall Conditi		Defect Descrition		

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Structure l				ructure Description	Location	Material
:	5159	Inle	et	cog		Pre Cast
Inspection		spection Time	Weathe	r		
5/14/20	10	9:00	Overcas	t		
Developme	ent A	ddress Prefix 4	Street Edenderry Av		ress_suffix at of	
Frame Fr	rame_mat Cast Iron	Frame_surf Concrete	Frame Cor	ndition Frame De	fect Description	
Grate Type Solid	e Gra	te Condition	Grate Def	ect Description		
Inlet In	let Conditi	on Inlet De	fect Descripti	on		
	iser Ring Material	Riser Ring Condition	Riser Ring Number	Riser Ring Defect	Description	
\checkmark	Brick	0	2			
Step Step	Material	Step Numner	Step Cond	ition Step Defect l	Description	
	l l Material Pre Cast	Wall Condit	ion Wall	Defect Descrition		

Structure Part Nu	umber Structur		cture Description	Location street	Material Pre Cast
Inspection Date 5/14/2010	Inspection Time 10:00	Weather Overcast			
Development	Address Prefix 108	Street Gronard Ave	addre Front (ess_suffix of	
Frame Frame_m Cast Iron	_	Frame Cond	lition Frame Defe	ect Description	
Grate Type Solid	Grate Condition	Grate Defe	ct Description		
Inlet Inlet Con		fect Descriptio	n		
Riser Riser Ring Materia		Riser Ring Number	Riser Ring Defect De	escription	
Step Step Materi	al Step Numner	Step Condit	tion Step Defect De	escription	
Wall Wall Mater Pre Cast		tion Wall D	efect Descrition		

Structure Part Nu		• •	ructure Description	Location	Material
5192	Inl	let	COG	Street	Pre Cast
Inspection Date 5/14/2010	Inspection Time 9:00	Weath Overca			
Development	Address Prefix	Street Banbridge A	addr	ess_suffix	
Frame Frame_m Cast Iron		Frame Co		ect Description	
Grate Type Solid	Grate Condition 0	Grate De	fect Description		
Inlet Inlet Cone ✓ 0	dition Inlet De	efect Descript	tion		
Riser Riser Rin Ring Materia		Riser Ring Number	Riser Ring Defect D	escription	
Brick	0	0			
Step Step Materia	al Step Numner 0	Step Cone	dition Step Defect D	escription	
Wali Wall Mater ✓ Pre Cast	ial Wall Condit	tion Wall	Defect Descrition		

Condition Key: 0 = Good 3 = Fair 5 = Poor

Structure Pa		Structure Type Junction Box	Structure I	-	Location street	Material Pre Cast
Inspection D	•		eather			
Developmen	t Addro	ess Prefix Street			s_suffix FieldCroft Way and	Brook Run Lane
	me_mat Fi	rame_surf Fram Ssphalt	e Condition	Frame Defect	Description	
Grate Type Solid		Condition Grat	e Defect Descr	iption		
Inlet Inle	t Condition 0	Inlet Defect Des	scription			
	Ų	ser Ring Riser I ondition Num 0 0		Ring Defect Des	cription	
Step Step M	Iaterial Ste	p Numner Step	Condition S	Step Defect Des	cription	
	Material V e Cast	Vall Condition	Wall Defect D	escrition		

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	Part Numb				Description	Location	Material
	5247	Inle	et	C	OG	Street	Pre Cast
Inspection		spection Time	Wea				
5/14/20)10	10:00	Over	cast			
Developme	ent A 24	ddress Prefix 6	Street Northfield	Way	addre Front	ess_suffix of	
Frame F	rame_mat Cast Iron	Frame_surf Concrete	Frame (Condition 0	Frame Defe	ct Description	
Grate Typ Solid	e Gra	te Condition	Grate I	Defect Desc	cription		
Inlet In	olet Conditi o	on Inlet De	fect Descri	iption			
	liser Ring Material	Riser Ring Condition	Riser Rin Number	0	Ring Defect De	escription	
		0	0				
Step Step	Material	Step Numner	-	ondition 0	Step Defect De	escription	
Wall Wa	ll Material Pre Cast	Wall Condit	ion Wa	all Defect I	Descrition		

Condition Key: 0 = Good 3 = Fair 5 = Poor

Structure Part N			tructure Description	Location	Material
5285	In	let	COG	Street	Pre Cast
Inspection Date	Inspection Time	Weatl	ier		
5/14/2010	10:00	Overc	ast		
Development	Address Prefix 607	Street Brookfield I		ess_suffix of	
Frame Frame_ Cast I	_		ondition Frame Defe	ct Description	
Grate Type	Grate Condition	Grate De	efect Description		
Solid	0		•		
Inlet Inlet Co ✓	ndition Inlet Do	efect Descrip	tion		
Riser Riser R Ring Mater	0	Riser Ring Number	Riser Ring Defect De	escription	
✓ Brick	0	1			
Step Step Mate	rial Step Numner 0	Step Cor	dition Step Defect De	escription	
Wall Wall Mat ✓ Pre Ca		tion Wal	l Defect Descrition		

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Structure Part No	umber Structui	re Type Str	ucture Description	Location	Material
5309	Inl	et	COG	street	Pre Cast
Inspection Date 5/14/2010	Inspection Time	Weathe Overcast			
Development	Address Prefix 109	Street East Meadow		ss_suffix of	
Frame Frame_n Cast Iro		Frame Con	dition Frame Defe	ct Description	
Grate Type Solid	Grate Condition	Grate Defe	ect Description		
Inlet Inlet Con		fect Descripti	on		
Riser Riser Ring Materia	0	Riser Ring Number	Riser Ring Defect De	escription	
Step Step Mater	ial Step Numner 0	Step Condi	ition Step Defect De	scription	
Wall Wall Mate Pre Cas		tion Wall I	Defect Descrition		

Structure Part Num	ber Structur		ucture Description	Location street	Material Concrete
Inspection Date 5/14/2010	Inspection Time 2:00	Weathe Sunny	r		
Development	Address Prefix	Street Inter of Winds	addre or Ave & Newm	ess_suffix	
Frame Frame_mate Cast Iron	Frame_surf	Frame Con	dition Frame Defe	ct Description	
Grate Type Grependicular	rate Condition		ect Description (seized grate)		
Inlet Inlet Condi	tion Inlet De	fect Description	on		
Riser Riser Ring Ring Material	Riser Ring Condition	Riser Ring Number	Riser Ring Defect De	escription	
Step Step Material		Step Condi	tion Step Defect De	escription	
Wall Wall Materia Concrete	l Wall Condit	ion Wall I	Defect Descrition		

Structure Part No.	ımber Structuı Inl		are Description	Location street	Material Brick
Inspection Date 5/14/2010	Inspection Time 2:00	Weather Sunny			
Development	Address Prefix 205	Street Glandale Ave	addre across	ss_suffix from	
Frame Frame_r Cast Ire	_	Frame Condition 3	on Frame Defe	ct Description	
Grate Type Parallel Bar	Grate Condition 0	Grate Defect I	Description		
Inlet Inlet Con		fect Description			
Riser Riser Ri Ring Materi	6	Riser Ring Ris Number	ser Ring Defect De	scription	
Step Step Mater	ial Step Numner 0	Step Condition	1 Step Defect De	scription	
Wall Wall Mate ✓ Brick	rial Wall Condi	tion Wall Defe	ct Descrition		

Structure Part Numb	er Structur		ucture Description	Location street	Material Concrete
Inspection Date In	spection Time 3:00	Weather Sunny	r		
Development A	ddress Prefix	Street	addre	ess_suffix	
Frame Frame_mat Cast Iron	Frame_surf concrete	Frame Con	dition Frame Defe	ct Description	
Grate Type Gra	nte Condition 0	Grate Defe	ect Description		
Inlet Inlet Conditi	on Inlet Dei	fect Descripti	DN		
Riser Riser Ring Ring Material	Riser Ring Condition	Riser Ring Number	Riser Ring Defect De	escription	
	0	0			
Step Step Material	Step Numner 0	Step Condi	ition Step Defect De	escription	
Wall Material Concrete	Wall Conditi 0	ion Wall I	Defect Descrition		

Condition Key: 0 = Good 3 = Fair 5 = Poor

Structure Pa		Structure		ructure Descrip		Material
53	89	Inlet		AJ	street	
Inspection D 5/19/2010	•	ction Time	Weathe	r		
Developmen	t Addr		Street S. Liberty Stre	eet	address_suffix Front of Millstream Park on	
	me_mat F	rame_surf asphalt	Frame Con		ne Defect Description sinking around asphalt	
Grate Type Reticuline		C ondition 0	Grate Def	ect Description		
Inlet Inle	t Condition 5		ect Descripti ced from struc			
		iser Ring l	Riser Ring Number	Riser Ring De	fect Description	
		0	0			
Step Step M	Iaterial Ste	ep Numner 0	Step Cond	ition Step De	fect Description	
	Material V Brick	Vall Condition	on Wall I	Defect Descritio	n	

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Struc	ture Part Numb			ucture Description	Location	Material
	5395	Inle	et	cog/retic	street	Concrete
-	ction Date In	nspection Time	Weathe	r		
3/	19/2010	1:00	Sunny			
Devel		Address Prefix 15	Street S. Commerce		ess_suffix outh, front of	
Fram	e Frame_mat Cast Iron	Frame_surf asphalt/concrete	Frame Con	dition Frame Defe	ect Description	
Grate Reticul		ate Condition 0	Grate Def	ect Description		
Inlet 🗸	Inlet Conditi 0	ion Inlet Def	fect Descripti	on		
Riser Ring	Riser Ring Material	Riser Ring Condition	Riser Ring Number	Riser Ring Defect D	escription	
\checkmark	Concrete	0	1			
Step •	Step Material Aluminum	Step Numner	Step Cond	ition Step Defect De	escription	
Wali	Wall Material Concrete	Wall Conditi	ion Wall	Defect Descrition		

Structure Part Num	iber Structur	e Type St	ructure Description	Location	Material
5399	Inle	et	cog	street	Pre Cast
Inspection Date 5/19/2010	Inspection Time	Weath			
Development	Address Prefix	Street Ridgeview A		ess_suffix	
Frame Frame_man	t Frame_surf	Frame Con		ct Description	
Grate Type G	rate Condition	Grate Del	fect Description		
Inlet Inlet Condi	tion Inlet De	fect Descript	ion		
Riser Riser Ring Ring Material	Riser Ring Condition	Riser Ring Number	Riser Ring Defect De	escription	
Step Step Material	Step Numner	Step Cond	lition Step Defect De	escription	
Wall Wall Materia	al Wall Condit	ion Wall	Defect Descrition		

Condition Key: 0 = Good 3 = Fair 5 = Poor

Structure Part No.	umber Structui	• •	acture Description Reticuline	Location street	Material Pre Cast
Inspection Date 5/19/2010	Inspection Time	Weather Overcast			
Development	Address Prefix	Street Frederick Drive		ess_suffix ele	
Frame Frame_n Cast Iro		Frame Cond	lition Frame Defe	ect Description	
Grate Type Reticuline	Grate Condition 0	Grate Defe	ct Description		
Inlet Inlet Cor		fect Descriptio	n		
Riser Riser Ring Materia	0 0	Riser Ring Number	Riser Ring Defect De	escription	
Step Step Mater	-		tion Step Defect De	escription	
Wall Wall Mate ✓ Pre Cas		tion Wall D	efect Descrition		

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Structi	ure Part Numb	er Structur	• •	ructure Description COG	Location street	Material
-	tion Date In	aspection Time	Weathe Overcas			
Develo	_	ddress Prefix	Street Fredrick Drive		ess_suffix of at circle	
Frame	Frame_mat Cast Iron	Frame_surf concrete	Frame Con	dition Frame Defe	ct Description	
Grate 7	Гуре Gra	ate Condition	Grate Def	ect Description		
Inlet 🗸	Inlet Conditi	ion Inlet De	fect Descripti	on		
Riser Ring	Riser Ring Material	Riser Ring Condition	Riser Ring Number	Riser Ring Defect De	escription	
Step S	Brick Step Material	0 Step Numner 0	4 Step Cond 0	ition Step Defect De	escription	
Wall ✓	Wall Material Pre Cast	Wall Condit	ion Wall	Defect Descrition		

Condition Key: 0 = Good 3 = Fair 5 = Poor

Structı	ure Part Numb	er Structur	• •	ructure Description	Location	Material Pre Cast
	J424	Ши	51	cog	street	Pre Cast
Inspect	tion Date In	spection Time	Weath	er		
5/1	9/2010	12:00	Overcas	st		
Develo		ddress Prefix 25	Street Comet Drive		ess_suffix of	
Frame	Frame_mat Cast Iron	Frame_surf concrete	Frame Con		ect Description	
Grate 7	Гуре Gra	ate Condition	Grate Def	fect Description		
Inlet	Inlet Conditi	on Inlet De	fect Descript	ion		
Riser Ring	Riser Ring Material	Riser Ring Condition	Riser Ring Number	Riser Ring Defect D	escription	
\checkmark	Brick	0	2			
Step S	Step Material	Step Numner	Step Cond	lition Step Defect De	escription	
Wall	Wall Material Pre Cast	Wall Condit	ion Wall	Defect Descrition		

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Structure Pa	art Number	Structure		e Structure Description		Location street	Material Pre Cast
Inspection I 5/19/201	_	pection Time	Weath Overca				
Developmen	125	lress Prefix	Street Comet Drive	e	address_s across from		
Frame Fra	me_mat Cast Iron	Frame_surf	Frame Co	ondition Fra	ame Defect D	escription	
Grate Type Solid	Grate	Condition	Grate De	efect Description	on		
Inlet Inle	et Condition	n Inlet Def	ect Descrip	tion			
Ring M	[aterial]	Condition	Riser Ring Number	Riser Ring	Defect Descri	iption	
	Brick Material S	0 Step Numner	2 Step Con	dition Step l	Defect Descri	ption	
Wall Wall	Material	0 Wall Conditi	0 ion Wal	l Defect Descri	tion		
P	re Cast	0					

Structure Part	Number Structu	re Type S	tructure Description	Location	Material
5432	In	let	cog	street	Pre Cast
Inspection Date	Inspection Time	. Weatl			
Development	Address Prefix	Street Comet Dr		ess_suffix of	
Frame Frame Cast			ondition Frame Defe	ect Description	
Grate Type Solid	Grate Condition 0	Grate De	efect Description		
Inlet Inlet C	ondition Inlet D	efect Descrip	tion		
Riser Riser I		Riser Ring Number	Riser Ring Defect D	escription	
✓ Brie	ck 0	2			
Step Step Mat	erial Step Numner	r Step Cor	dition Step Defect D	escription	
Wall Wall Ma ✓ Pre C		ition Wal	Defect Descrition		

Structur	e Part Numb	er Structur	e Type St	tructure D	escription	Location	Material
	5433	Inle	et	co	g	street	Pre Cast
Inspection 5/19/		aspection Time 12:00	Weath Overca				
Developi	ment A	ddress Prefix	Street Comet Drive			ess_suffix circle across from 255	
Frame	Frame_mat Cast Iron	Frame_surf concrete	Frame Co		Frame Defe	ct Description	
Grate Ty Solid	ype Gra	ate Condition 0	Grate De	fect Descr	iption		
Inlet 🗸	Inlet Conditi 0	ion Inlet De	fect Descript	tion			
Riser Ring	Riser Ring Material	Riser Ring Condition	Riser Ring Number	Riser R	ing Defect De	escription	
$\overline{\checkmark}$	Concrete	0	1				
Step Ste	ep Material	Step Numner	Step Cone	dition S	tep Defect De	escription	
Wall W	all Material	Wall Condit	ion Wall	Defect De	escrition		

Structure Part Num		• •	ucture Description	Location	Material
5455	Inle	et	cog	street	Pre Cast
Inspection Date In 5/19/2010	nspection Time	Weathe Overcasi			
Development A	Address Prefix	Street Taylor Mill Ro		ess_suffix ds W of Symphony Blvd	
Frame Frame_mat Cast Iron	Frame_surf concrete	Frame Con	dition Frame Defe	ect Description	
Grate Type Gr	rate Condition	Grate Defe	ect Description		
Inlet Inlet Condit ✓ 0	ion Inlet De	fect Descripti	on		
Riser Riser Ring Ring Material	Riser Ring Condition	Riser Ring Number	Riser Ring Defect D	escription	
	0	0			
Step Step Material	Step Numner	Step Cond	ition Step Defect D	escription	
Wall Wall Material Pre Cast	Wall Condit	ion Wall l	Defect Descrition		

Condition Key: 0 = Good 3 = Fair 5 = Poor

Structure Part Nu	mber Structur	• •	cture Description	Location street	Material Pre Cast
Inspection Date 5/19/2010	Inspection Time 10:00	Weather Overcast			
Development	Address Prefix 631	Street Harmony Way	addre front o	ess_suffix of	
Frame Frame_m Cast Iro	_	Frame Cond	ition Frame Defe	ct Description	
Grate Type Solid	Grate Condition 0	Grate Defec	t Description		
Inlet Inlet Con		fect Description	1		
Riser Riser Ring Materia Brick	0 0	Riser Ring Number	Riser Ring Defect Do	escription	
Step Step Materi	al Step Numner	Step Conditi	ion Step Defect De	escription	
Wall Wall Mater Pre Cast		tion Wall De	efect Descrition		

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Condition Key: 0 = Good 3 = Fair 5 = Poor

Structu	re Part Numb	er Structui		tructure Description	Location	Material
	3331	ши	EL	COG	street	Pre Cast
Inspecti	on Date In	spection Time	Weatl	ner		
5/19/	/2010	10:00	Overc	ast		
Develop	ment A	ddress Prefix	Street	addre	ess_suffix	
	12	22	Encore Ct	front o	of	
Frame	Frame_mat Cast Iron	Frame_surf	Frame Co	ondition Frame Defe	ct Description	
Grate T	ype Gra	te Condition	Grate De	efect Description		
Solid		0				
Inlet	Inlet Conditi 0	on Inlet De	fect Descrip	tion		
Riser Ring	Riser Ring Material	Riser Ring Condition	Riser Ring Number	Riser Ring Defect De	escription	
\checkmark	Brick	0	1			
Step St	ep Material	Step Numner	Step Cor	dition Step Defect De	escription	
Wall V	Vall Material Pre Cast	Wall Condit	ion Wal	l Defect Descrition		

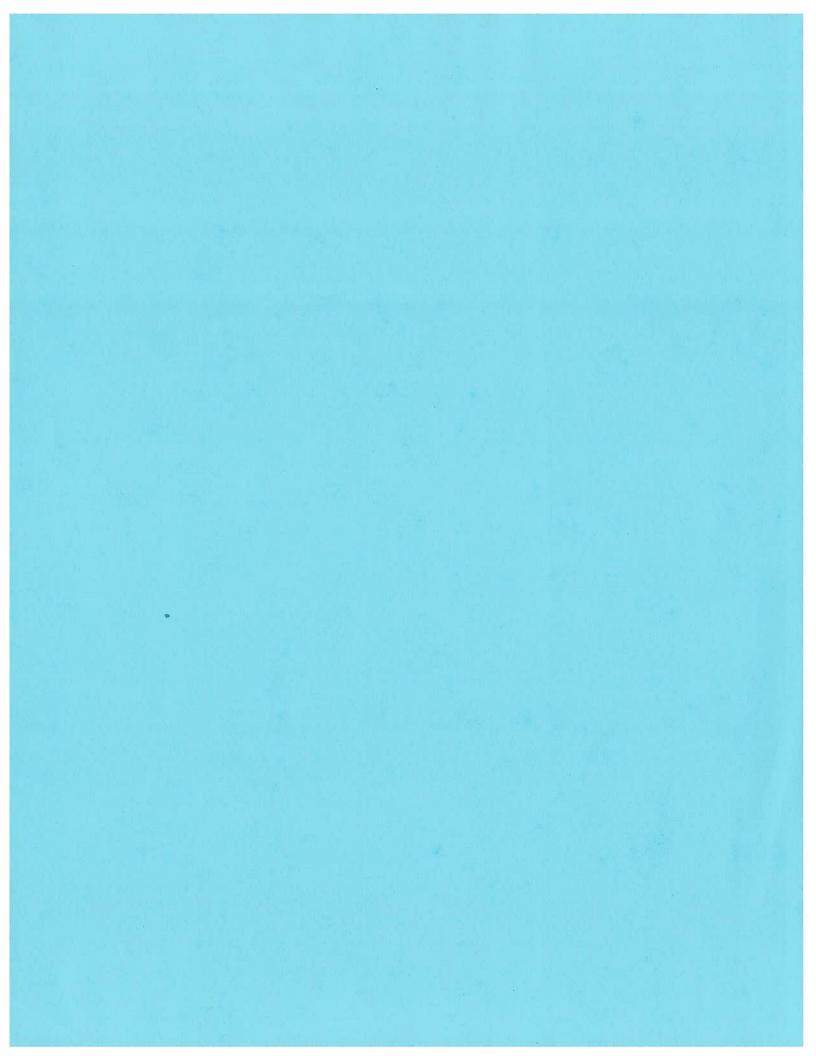
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Structure Part Nu	mber Structui	re Type Structure	Description	Location	Material
5574	Inle	et C	COG	street	Pre Cast
Inspection Date 5/19/2010	Inspection Time 10:00	Weather Overcast			
Development	Address Prefix 227	Street Orchestra Pace	addre Front o	ss_suffix f	
Frame Frame_m Cast Iron	-	Frame Condition	Frame Defec	ct Description	
Grate Type Solid	Grate Condition 0	Grate Defect Des	cription		
Inlet Inlet Con		fect Description			
Riser Riser Rin Ring Materia		Riser Ring Riser Number	Ring Defect De	scription	
Step Step Materia	al Step Numner 0	Step Condition 0	Step Defect De	scription	
Wall Wall Mater ✓ Pre Cast		ion Wall Defect	Descrition		

Structure Part Numb	per Structui	• •	ructure Description	Location street	Material Pre Cast
				54051	110 Cast
Inspection Date In	spection Time	Weath	er		
5/19/2010	9:00	Overca	st		
Development A	ddress Prefix	Street	addre	ss_suffix	
2	23	Concerto Wa	y Front o	of	
Frame Frame_mat	Frame_surf			ct Description	
Cast Iron	concrete	0			
Grate Type Gr	ate Condition	Create De	Foot Degenieties		
Solid		Grate De	fect Description		
Inlet Inlet Condit	ion Inlet De	fect Descript	ion		
② 0					
Riser Riser Ring Ring Material	Riser Ring Condition	Riser Ring Number	Riser Ring Defect De	escription	
✓ Brick	0	I			
Step Step Material	•	•	dition Step Defect De	escription	
	0	0			
Wall Wall Material Pre Cast	Wall Condit	ion Wall	Defect Descrition		

Structure Part Nu	ımber Structuı	re Type Str	ructure Description	Location	Material
5598	Inle	et	cog	street	Pre Cast
Inspection Date 5/19/2010	Inspection Time 10:00	Weathe Overcasi			
Development	Address Prefix 133	Street Sonata Way	addre front o	ss_suffix f	
Frame Frame_n Cast Iro	_	Frame Con	ndition Frame Defe	ct Description	
Grate Type Solid	Grate Condition 0	Grate Defe	ect Description		
Inlet Inlet Con		fect Descripti	on		
Riser Riser Ring Materia		Riser Ring Number	Riser Ring Defect De	escription	
Step Step Materi	ial Step Numner	Step Cond	ition Step Defect De	scription	
Wall Wall Mater Pre Cast		ion Wall l	Defect Descrition		

Structu	re Part Numb	er Structur	• •	tructure I	Description	Location street	Material Pre Cast
Inspecti	on Date In	spection Time	Weath		•	0.000	110 0401
5/19	/2010	10:00	Overca	st			
Develop	ment A	ddress Prefix	Street Taylor Hill F	Road		ess_suffix is from Symphony Blvd	
Frame	Frame_mat Cast Iron	Frame_surf concrete	Frame Co		Frame Defe	ct Description	
Grate T	ype Gra	ate Condition	Grate De	fect Desci	ription		
Inlet	Inlet Conditi 0	on Inlet De	fect Descrip	tion			
Riser Ring	Riser Ring Material	Riser Ring Condition	Riser Ring Number	Riser I	Ring Defect De	escription	
\checkmark	Brick	0	2				
Step St	tep Material	Step Numner	Step Con	dition S	Step Defect De	escription	
Wall V	Vall Material Pre Cast	Wall Condit	ion Wall	Defect D	escrition		



Facility No 100	County	Queen	Anne's	District	8988
Inspection Date 0	6-May-10 Inspection	n Time	12:10:00 PM	Overall Condition	
Pond Type We	t Pond Embank	ment Pond		As-Builts Available	
BMP Location	At the centerlink &	Courseval	Dr, Front o	f MD 213	
Setting					
Erosion Issues			Sec	limentation Issues	
Component	Condition	MWO	C	omponent	Condition MWO
Emergency Spillway	Good		Inl	et Structures or Channels	Good
Inlet Structure or Char	nnels Good		Ou	tlet Structures or Channels	Good
Outlet Channel	Good		Po	nd Bottom	Good
Side Slope and Buffer			Sid	le Slope and Buffers	Good
Top of Slope	Good			•	
RipRap Issues			Ris	er and Trash Rack Issu	es
Component	Condition	MWO			
Inlet Channel	Good				
Outlet Channel	Good				
			_		
Debris Issues			Tra	sh Issues	
Unwanted_Vegetati	on Issues				
Туре	Location	MWO	Comment		
Canada Thistle	Surrounding Pond				
Other	Within Pond		Cattails		
Phragmites	Surrounding Pond				
Phragmites	Within Pond				
Bike Trails and Ani	mal Burrows		Em	bankment Pond Issues	
Problem	MWO				
Animal Burrows					
Other Issues					

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Facility No 101	County	District
Inspection Date 14-May-10	Inspection Time	1:03:00 PM Overall Condition
Pond Type Wet Pond	Embankment Pond	✓ As-Builts Available
BMP Location MD Rte 2	13 at Food Lion	
Setting		
Erosion Issues Component Component Inlet Structure or Channels Side Slope and Buffer Top of Slope	Good Good Good	Sedimentation Issues Component Condition MWO Inlet Structures or Channels Good Pond Bottom Good Side Slope and Buffers Good
RipRap Issues Component Inlet Channel Outlet Channel	Good Good	Riser and Trash Rack Issues
Principal Spillway Barrel Issu	ies	Inadequate Vegetative Cover Issues
Debris Issues		Trash Issues
Unwanted_Vegetation Issues		
Bike Trails and Animal Burro	ws	Embankment Pond Issues
Other Issues		

Facility No 102	County Queen Ann	e's District	
Inspection Date 06-May-10	Inspection Time 11:10	0:00 AM Overall Condition	
Pond Type Wet Pond	Embankment Pond	As-Builts Available	
BMP Location Rear of	Food Lion on Rt 213, Off	Coursevall Drive, 300-400 y	rds
Setting			
Erosion Issues		Sedimentation Issues	
Component	Condition MWO	Component	Condition MWO
Inlet Structure or Channels	Good	Inlet Structures or Channels	Good
Outlet Channel	Good 📙	Outlet Structures or Channe	els Good 🗌
Side Slope and Buffer	Good	Pond Bottom	Good
Top of Slope	Good	Side Slope and Buffers	Good
RipRap Issues		Riser and Trash Rack Is	ssues
Component	Condition MWO	Material Problem	n Debris on trash rack
Inlet Channel	Fair \Box	Concrete Exposed F	Reinforce
Outlet Channel	Fair \square	Concrete Spalling	
Principal Spillway Barrel I Material Problem Concrete Exposed Rein Concrete Spalling	Joint Problem MWO	Inadequate Vegetative C	Cover Issues
Debris Issues		Trash Issues	
Unwanted_Vegetation Issu			
Type Locat Canada Thistle Surrous		nment	
	nding Pond		
Phragmites Surrour	nding Pond		
Bike Trails and Animal Bu	rrows	Embankment Pond Issue	es
Problem	MWO		
Animal Burrows			
Other Issues			

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Facility No 13	County	Queen Anne's	District		******	
Inspection Date	11-May-10 Inspection	n Time 11:45:00	AM Overall C	Condition Go	ood	
_	-	nent Pond 🗹		Available -		
- -						
BMP Location	Off Route 305 in Cer	iter Village, Side	of 129 Kings (Court		
Setting						
Erosion Issues Component Side Slope and Buffe Top of Slope	Condition I or Good Good	MWO	Sedimentation Component Pond Bottom Side Slope and	i (C ondition Fair Good	MWO
RipRap Issues			Riser and Tra Material Metal	ash Rack Issues Problem None		s on trash rack
Principal Spillway Material Pr Metal Non	oblem Joint Pro	blem MWO	Inadequate V	egetative Cove	r Issues	
Debris Issues Debris Present	Comment Moderate to Hea	avy	Trash Issues Trash Prese	minor	ıt	
				Minor		
Unwanted_Vegetat	tion Issues					
Туре	Location	MWO Comm	ent			
Canada Thistle	Surrounding Pond					
Canada Thistle	Within Pond					
Other	Within Pond	Cattails				
Phragmites	Surrounding Pond					
Trees	Surrounding Pond					
Trees	Within Pond					
Bike Trails and An	imal Burrows		Embankment	Pond Issues		
Problem	MWO					
Animal Burrows						
Other Issues						
Problem					MV	WO
Large amount of Vege	etation, Brush and Trees as	ound pond.				

Facility No 14		County	Queen	Anne's	District
Inspection Date	11-May-10	Inspection	Time	12:35:00 PM	Overall Condition
Pond Type W	et Pond	Embankm	ent Pond		As-Builts Available
BMP Location	Off Route 3	305 in Cent	reville \	/illage, ear o	of 138 and 134 Kings Court
Setting	Could not I	Find or Loc	ate, app	ears to be a	Marsh
Erosion Issues		N 900 5005		Se	dimentation Issues
RipRap Issues				Ris	ser and Trash Rack Issues
Principal Spillway	y Barrel Issue	es		Ina	ndequate Vegetative Cover Issues
	•				
Debris Issues				Tra	ash Issues
Unwanted_Vegeta	ition Issues				
- Carrier Carrier					
				_	
Bike Trails and A	nimal Burrov	vs		En	bankment Pond Issues
Other Issues					
Outer issues					

Facility No 1	57	County	Queen	Anne's	Distric	t		
Inspection Date	11-May-10	Inspection '	Time	11:00:00	AM Overall	Condition	Good	
Pond Type	Wet Pond	Embankme	nt Pond		As-Buil	ts Available		
BMP Location	Off Route 3	305 in Herit	age Sub	divsion,	Side od 225	Autumn Cou	ert	
Setting								
Erosion Issues Component Inlet Structure or Coutlet Channel Side Slope and Bu Top of Slope	Channels	ndition M Good Good Good Good	WO			nt res or Channels ures or Channels	Condition Good Good Good Good	MWO
RipRap Issues					Riser and T	rash Rack Issi	1es	
					Material Concrete	Problem None	Debris	on trash rack
	-	es Joint Prob	lem M	IWO	Inadequate	Vegetative Co	ver Issues	
Debris Issues					Trash Issues	s		
Unwanted_Vege	tation Issues							
Туре	Location		MWO	Commo	ent			
Canada Thistle	Surrounding	g Pond						
Other	Within Pone			Cattails				
Phragmites Phragmites	Surrounding Within Pond							
Bike Trails and A	Animal Burroy	vs.			Embankmen	nt Pond Issues		
Problem	MW							
Animal Burrows								
Other Issues								
Problem		cn i					MV	VO
Minor erosion on S	outh west area o	I Pond.					_	J

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Facility No 158	County Qu	een Anne's	District			
Inspection Date 11-May	y-10 Inspection Tin	e 10:15:00 AM	Overall Cond	lition	Good	
Pond Type Wet Por	nd Embankment	ond 🗹	As-Builts Ava	ailable		
BMP Location Off F	Route 305 in Heritage	Subdivision, Ba	ck of Heritage	e Court.	Side of 236	Heritage C
Setting		,		,		
Erosion Issues		Sed	imentation Iss	sues		
Component	Condition MW	Co	mponent		Condition	MWO
Inlet Structure or Channels	Good 📙	Inle	et Structures or C	Channels	Good	
Outlet Channel	Good \square	Ou	tlet Structures or	Channels	Good	
Side Slope and Buffer Top of Slope	Good \square		nd Bottom		Good	
Top of Slope	Good	Sid	e Slope and Buff	fers	Good	
RipRap Issues		Ris	er and Trash l	Rack Issu	ies	
		M	aterial P	roblem	Debris	s on trash racl
		Cor	ncrete No	one		
Debris Issues			sh Issues ash Present	Comm		
				very min	or	
Unwanted_Vegetation Is	sues					
Type Lo	cation M'	WO Comment				
Canada Thistle Surr	rounding Pond]				
Phragmites Sur	rounding Pond]				
Phragmites Wit	hin Pond					
Bike Trails and Animal 1	Burrows	Eml	bankment Pon	d Issues		
Problem	MWO					
Animal Burrows						
Other Issues						

Facility No 187	Cour	nty Queen	Anne's	District			
Inspection Date	12-May-10 Inspe	ction Time	12:11:00 PM	Overall Con	dition	Good	
Pond Type Wo	et Pond Emba	nkment Pond		As-Builts Av	ailable		
BMP Location	Side of Acme in	Centreville P	laza, off Litt	le Hut Lane			
Setting							
Erosion Issues			Se	dimentation Is	sues	200	
Component	Conditio	n MWO	C	omponent		Condition	MWO
Emergency Spillway	Good		Fo	rebay		Good	
Inlet Structure or Cha		님	In	let Structures or	Channels	Good	
Outlet Channel Side Slope and Buffe	Good r Good	H	O	itlet Structures o	r Channels	Good	
Top of Slope	Good	H		nd Bottom		Good	
Top of Slope	Coou		Si	de Slope and Bu	ffers	Good	
RipRap Issues			M		Rack Issueroblem Hone		s on trash rack
Dahada Isa							
Debris Issues				ash Issues	~		
Debris Present	Commen Minor	ıτ	1)	rash Present			
•	Willion			•	Very Mi	1101	
Unwanted_Vegetat	ion Issues						
Type	Location	MWO	Comment				
Canada Thistle	Surrounding Pond						
Other	Within Pond		-	e amount within	•		
Phragmites	Surrounding Pond		Large amount	Surrounding po	nd		
Phragmites	Within Pond		Large smount	within pond			
Bike Trails and An	imal Burrows		En	ibankment Po	nd Issnes		
Problem	MWO		2311				
Animal Burrows							
Other Issues							
Problem						M	wo
6' Fence surrounding	Pond, Could not acces	ss. Inspected out	side of Fence.				

Facility No 2	C	ounty	Queen .	Anne's	District		
Inspection Date	12-May-10 Ir	spection	Time	1:47:00 PM	Overall Cond	ition Good	
Pond Type W	et Pond E	mbankme	ent Pond	\checkmark	As-Builts Ava	ilable 🗌	
BMP Location	Rear of Ashle	y Mini S	torage o	ff Railroad A	Ave, Side of C	Center Park Apts.	, on Little Hut
Setting							
Erosion Issues	-			Sed	limentation Iss	ues	
Component	Cond	lition M	<u>wo</u>	C	omponent	Condi	tion MWO
Side Slope and Buffe	er Go	od		Po	nd Bottom	Fair	. \square
Top of Slope	Go	od		Sid	le Slope and Buff	fers Goo	d 🗌
RipRap Issues				Ris	er and Trash I	Rack Issues	
Principal Spillway	Barrel Issues			Ina	dequate Veget	ative Cover Issue	s
Debris Issues Debris Present	Com Minor	nent			ash Issues rash Present	Comment garbage present	
						Minor	
Unwanted_Vegeta	tion Issues						
Туре	Location		MWO	Comment			
Canada Thistle	Surrounding P	ond		Minor to Mod	erate amount		
Canada Thistle	Within Pond			Moderate amo	unt		
Phragmites	Surrounding P	ond		Minor to Mode	erate amount		
Phragmites	Within Pond			Moderate amo	unt		
Trees	Surrounding P	ond		Minor to Mode	erate amount		
Trees	Within Pond			Moderate amo	unt		
Bike Trails and An	imal Burrows			Em	bankment Pon	d Issues	
Problem	MWO)		2/11	~ ····································	- 203440	
Animal Burrows							
Other Issues Problem 6' Fence and Barbed	Wire at Fence. co	ıld not acc	ess into po	nd area.			MWO

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Facility No 201	County Queen Anne'	s District
Inspection Date 31-Mar-10	Inspection Time 2:20:	00 PM Overall Condition
Pond Type Wet Pond	Embankment Pond	As-Builts Available
BMP Location Northbroo	ok Subdivision Lurgan Star	nd Edenderry Ave
Setting	J	•
Erosion Issues		Sedimentation Issues
Component Co	ondition MWO	Component Condition MWO
Emergency Spillway	Good	Inlet Structures or Channels Good
Inlet Structure or Channels	Good	Outlet Structures or Channels Good
Side Slope and Buffer	Good	Pond Bottom Good
Top of Slope	Good	Side Slope and Buffers Good
RipRap Issues		Riser and Trash Rack Issues
Component Co	ondition MWO	Material Problem Debris on trash raci
Inlet Channel	Good	Concrete Exposed Reinforce
Outlet Channel	Good	Concrete Spalling
Principal Spillway Barrel Issu Material Problem Concrete Exposed Reinf Concrete Spalling	Joint Problem MWO	Inadequate Vegetative Cover Issues
Debris Issues		Trash Issues
Debris Present Co	omment	Trash Present Comment
✓ Ve	ery minor	✓ Very minor
Unwanted_Vegetation Issues		
Type Location	n MWO Com	ment
Canada Thistle Surrounding		
Phragmites Surrounding		
Phragmites Within Po	_	
Bike Trails and Animal Burro Problem M	ows WO	Embankment Pond Issues
Animal Burrows Other Issues		

Facility No	202	County		District	
Inspection Dat	e 31-Mar-10	Inspection Time	1:01:00 PM	Overall Condition	
Pond Type	Wet Pond	Embankment Pond		As-Builts Available	
BMP Location	n Northbroo	k Subdivision, Lurg	en and Gran	ard Avenue	
Setting					
Erosion Issues			Sec	dimentation Issues	
Component	Co	ondition MWO	C	omponent	Condition MWO
Emergency Spill	way	Good	In	let Structures or Channels	Good
Inlet Structure of	r Channels	Good	Oı	tlet Structures or Channels	Good
Side Slope and I	Buffer	Good	Po	nd Bottom	Good
Top of Slope		Good	Sie	de Slope and Buffers	Good
RipRap Issues			Ris	ser and Trash Rack Iss	ues
Component	Co	ondition MWO	M	aterial Problem	Debris on trash rack
Inlet Channel		Good	Co	oncrete Exposed Re	inforce \Box
Outlet Channel		Good	Co	oncrete Spalling	
Principal Spill	way Barrel Issu	es	Ina	idequate Vegetative Co	ver Issues
Material	Problem	Joint Problem M	IWO		
Concrete	Exposed Reinf				
Concrete	Spalling				
Debris Issues				ash Issues rash Present Comm	nent
				✓ Minor	
Unwanted_Veg	•		_		
Туре	Location		Comment		
Canada Thistle	Surroundir	_			
Other	Within Por	_	Cattail		
Phragmites	Surroundir	ng Pond			
Phragmites	Within Por	nd 📙			
Trees	Surroundir	ng Pond			
Trees	Within Por	nd \square			
Bike Trails and	l Animal Burro	ws	Em	bankment Pond Issues	
Problem	MV	VO			
Animal Burrows					
Other Issues					

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Facility No 241	County	District
Inspection Date 06-May-10	Inspection Time	9:35:00 AM Overall Condition
Pond Type Dry Pond	Embankment Pond	As-Builts Available
BMP Location Inter of Rt	213 and Rt 18	
Setting		
Erosion Issues Component Co	ndition MWO	Sedimentation Issues Component Condition MWO Outlet Structures or Channels Good
57	Good	Pond Bottom Good
Top of Slope	Good	Side Slope and Buffers Good
RipRap Issues		Riser and Trash Rack Issues
Principal Spillway Barrel Issue	es	Inadequate Vegetative Cover Issues
Debris Issues		Trash Issues Trash Present Comment
Unwanted_Vegetation Issues		
Bike Trails and Animal Burroy	ws	Embankment Pond Issues
Other Issues		

Other Issues

Facility No	308	County	Queen Anne's	District			
Inspection Date	e 06-May-10	Inspection '	Fime 1:15:0	OPM Overall C	ondition		
Pond Type	Wet Pond	Embankme	nt Pond	As-Builts	Available 🗆]	
BMP Locatio	n At End of C	Circle on Co	met Drive, Re	ar of Building 1	52		
Setting							
Erosion Issues				Sedimentation	Issues		
Component Emergency Spill Inlet Structure or Outlet Channel Side Slope and E Top of Slope	way Channels	ndition M Good Good Good Good Good	wo 	Component Forebay Inlet Structures Outlet Structure Pond Bottom	or Channels	Condition Good Good Good Good	MWO
Top of blope		0000		Side Slope and	Buffers	Good	
RipRap Issues Component Inlet Channel Outlet Channel		ndition M Good Good	wo	Riser and Tra Material Concrete Concrete	sh Rack Issue Problem Exposed Rein Spalling	Debris	s on trash rack
Principal Spills Material Concrete Concrete	way Barrel Issue Problem Exposed Reinf Spalling		dem MWO	Inadequate Ve Inadequate	_	er Issues cation	
Debris Issues				Trash Issues			
Unwanted_Veg Type Canada Thistle Phragmites Phragmites Trees	Location Issues Location Surroundin Surroundin Within Pon	g Pond g Pond d	MWO Comm				
Bike Trails and Problem Animal Burrows	l Animal Burrov MV			Embankment l	Pond Issues		

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	Annual Control of the		
Facility No 321	County Queen Anne	e's District	32,007
Inspection Date 14-May-10	Inspection Time 9:50	:00 AM Overall Condition	
Pond Type Wet Pond	Embankment Pond	As-Builts Available	✓
BMP Location Symphon		ou & Cumphony Way	
	ly village, iveal Soliata vv	ay & Symphony way	
Setting			
Erosion Issues		Sedimentation Issues	
	Condition MWO	Component	Condition MWO
Emergency Spillway	Good 📙	Forebay	Good
Inlet Structure or Channels	Good \square	Inlet Structures or Channels	Good
Outlet Channel	Good \square	Outlet Structures or Channe	ls Good
Side Slope and Buffer	Good \square	Pond Bottom	Good
Top of Slope	Good	Side Slope and Buffers	Good
RipRap Issues		Riser and Trash Rack Is	sues
	Condition MWO	Material Problen	n Debris on trash racl
Inlet Channel	Good	Concrete Exposed F	
Outlet Channel	Good	Concrete Spalling	
Principal Spillway Barrel Is Material Problem Concrete Exposed Reinf Concrete Spalling	Joint Problem MWO	Inadequate Vegetative C	over Issues
Debris Issues		Trash Issues	
Debris assues		Trash Present Com	ment
Unwanted_Vegetation Issues	S		
Type Locati	on MWO Con	nment	
· -		amount of vegetation at discharge	e nine (c
1 magnates outloan	mig rond Large	amount of vegetation at discharg	e pipe (e
Bike Trails and Animal Burn	rows	Embankment Pond Issue	es ·
Other Issues			

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Facility No 322	County	District	
Inspection Date 04-May-10	Inspection Time 10:45:00 A	AM Overall Condition	
Pond Type Wet Pond	Embankment Pond	As-Builts Available	
BMP Location Symphony	Village, Near Overture Way	& Encore Ct	
Setting			
Emergency Spillway	ndition MWO	Sedimentation Issues Component Forebay	Condition MWO
Inlet Structure or Channels Side Slope and Buffer Top of Slope	Good Good Good	Inlet Structures or Channels Pond Bottom Side Slope and Buffers	Good Good Good
RipRap Issues		Riser and Trash Rack Issues	i
Inlet Channel	ndition MWO Good Good Good	Material Problem Concrete Exposed Reinfo Concrete Spalling Inadequate Vegetative Cover	
Material Problem Concrete Exposed Reinf Concrete Spalling	Joint Problem MWO		
Debris Issues		Trash Issues	
Unwanted_Vegetation Issues			
Bike Trails and Animal Burrov	₩S	Embankment Pond Issues	
Other Issues			

Facility No 334	County	District	
Inspection Date 31-Mar-	10 Inspection Time 10:45:	00 AM Overall Condition	
Pond Type Wet Pond	d Embankment Pond	As-Builts Available	
BMP Location North	brook Subdivision (Northbroo	k Drive & Long Creek Way)	
Setting			
Erosion Issues		Sedimentation Issues	
Component	Condition MWO	Component	Condition MWO
Emergency Spillway	Good 🔲	Forebay	Good
Inlet Structure or Channels	Good	Inlet Structures or Channels	Good
Side Slope and Buffer	Good	Outlet Structures or Channels	Good
Top of Slope	Good	Pond Bottom	Good
		Side Slope and Buffers	Good
RipRap Issues		Riser and Trash Rack Issu	ies
Component	Condition MWO	Material Problem	Debris on trash rack
Inlet Channel	Good	Concrete Exposed Rei	inforce
Outlet Channel	Good	Concrete Spalling	
Material Problem Concrete Exposed Re Concrete Spalling			
Debris Issues		Trash Issues	
Unwanted_Vegetation Iss			
- L	eation MWO Com	unent	
Bike Trails and Animal B Problem Animal Burrows	Surrows MWO	Embankment Pond Issues	
Other Issues	gross		

Facility No	335	County		District			
Inspection Dat	e 31-Mar-10	Inspection Time	11:30:00 AM	Overall Co	ndition		
Pond Type	Wet Pond	Embankment Pon	d 🗆	As-Builts A	Available 🗆		
BMP Locatio	n Northbrool	k Subdivision (Sou	ith end of Noi	rthbrook Dr	ive between	Circles)	
Setting							
Erosion Issues			Sec	dimentation	Issues		
Component	Co	ndition MWO	C	omponent		Condition	MWO
Emergency Spill	way	Good		rebay		Good	
Inlet Structure or	r Channels	Poor	Inl	let Structures o	or Channels	Good	
Side Slope and I	Buffer	Good	Ou	itlet Structures	or Channels	Good	
Top of Slope		Good		nd Bottom		Good	
				de Slope and E	Buffers	Good	
RipRap Issues			Ris	ser and Tras	h Rack Issue	es	
Component	Co	ndition MWO	M	aterial	Problem	Debris	on trash rack
Inlet Channel		Good	Co	ncrete	Exposed Rein	force	
Outlet Channel		Good	Co	oncrete	Spalling		
Principal Spilly Material Concrete Concrete	way Barrel Issue Problem Exposed Reinf Spalling	es Joint Problem I		dequate Ve	getative Cov	er Issues	
Debris Issues			Tra	ash Issues			
Debris Prese		mment y Minor					
Unwanted_Veg	retation Issues						
Туре	Location	MWC	Comment				
Canada Thistle	Surroundin						
Phragmites	Surroundin	_					
Bike Trails and	l Animal Burrov	₩S	Em	bankment P	ond Issues		
Problem	MV	vo					
Animal Burrows							
Other Issues							

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Facility No 33	7	County	Queen	Anne's	District			
Inspection Date	04-May-10	Inspection	Time	11:35:00 A	M Overall C	ondition		
Pond Type W	et Pond	Embankme	ent Pond		As-Builts	Available [
BMP Location	Symphony	Village, Ne	ar Taylo	or Mill Rd	. & Bravo Ro	d, off Harmo	ny Way	
Setting								
Erosion Issues					Sedimentation	Issues	THE TAX	
Component	Co	ndition M	wo		Component		Condition	MWO
Access Road		Good			Forebay		Good	
Emergency Spillway	y	Good			Inlet Structures	or Channels	Good	
Inlet Structure or Cl		Good			Outlet Structure		Good	
Outlet Channel		Good			Pond Bottom	or Chambre	Good	
Side Slope and Buff	fer	Good				D., 66		
Top of Slope		Good			Side Slope and	Burrers	Good	
RipRap Issues]	Riser and Tra	sh Rack Issue	es	
					Material	Problem	Debris	on trash rack
					Concrete	Exposed Rein	_	
					Concrete	Spalling		Ħ
	sposed Reinf palling							
Debris Issues				ŗ	Trash Issues			
Unwanted_Vegeta								
Туре	Location		MWO	Comme	ıt			
Canada Thistle	Surroundin	g Pond						
Phragmites	Surroundin	g Pond		Canada Th	istle on surround	ling west side n	ear In	
Phragmites	Within Por	d		Phragmites	surround both b	oottom of pond	and s	
Bike Trails and A				1	Embankment l	Pond Issues		
Problem	MV	VO						
Animal Burrows								
Other Issues								

T	O - 1	Δ	I Diala	12 22 23 23 24
Facility No 36	•	Queen Anno	e's District	
Inspection Date	12-May-10 Inspection	n Time 10:30	:00 AM Overall Condition	Good
Pond Type W	et Pond Embank	nent Pond 🗹	As-Builts Availabl	e \square
BMP Location	Centreville United M	lethodist Chur	ch, 608 Church Hill Road	
Setting				
Erosion Issues			Sedimentation Issues	
Component	Condition	MWO	Component	Condition MWO
Emergency Spillway	y Good		Forebay	Good
Outlet Channel	Good		Outlet Structures or Chan	nels Good
Side Slope and Buff			Pond Bottom	Good
Top of Slope	Good		Side Slope and Buffers	Good
RipRap Issues			Riser and Trash Rack	Issues
			Material Proble	em Debris on trash rac
			Concrete None	
Debris Issues			Trash Issues	
Unwanted_Vegeta	ation Issues			
Type	Location	MWO Cor	nmont	
Canada Thistle	Surrounding Pond			
Other	Surrounding Pond	Catta	ile	
Other	Within Pond	Catta	-	
Phragmites	Surrounding Pond		1119	
Phragmites	Within Pond			
Filiagilities	within Pond			
Bike Trails and A	nimal Burrows		Embankment Pond Iss	ues
Problem	MWO			
Animal Burrows				
Other Issues				

Facility No 387	County Queen	Anne's District
Inspection Date 13-Ma	•	11:10:00 AM Overall Condition Good
Pond Type Wet Po	-	
BMP Location Side	of Crossroad Community	Center, Off Banjo Lane
Setting		
Erosion Issues		Sedimentation Issues
Component	Condition MWO	Component Condition MWO
Inlet Structure or Channels		Inlet Structures or Channels Good
Outlet Channel	Good	Outlet Structures or Channels Good
Side Slope and Buffer Top of Slope	Good	Pond Bottom Good
Top of Stope	Good	Side Slope and Buffers Good
RipRap Issues		Riser and Trash Rack Issues
		Material Problem Debris on trash rack
		Plastic None
Principal Spillway Barr	rei Issues	Inadequate Vegetative Cover Issues
Debris Issues		Trash Issues
Debris Present	Comment	I I MAIN ADALLES
Unwanted_Vegetation I	Issues	
Bike Trails and Animal		Embankment Pond Issues
Problem	MWO	
Animal Burrows	•	
Other Issues		

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	<u> </u>	
Facility No 388	County	District
Inspection Date 04-May-10	Inspection Time 2:00:0	0 PM Overall Condition
Pond Type Dry Pond	Embankment Pond	As-Builts Available
BMP Location Centreville	Diagnostic Center, 2540	on Rt 213
Setting		
Erosion Issues Component Emergency Spillway Side Slope and Buffer	ndition MWO Good Good Good	Sedimentation Issues Component Pond Bottom Side Slope and Buffers Condition MWO Good Good
RipRap Issues		Riser and Trash Rack Issues
Principal Spillway Barrel Issue	es	Inadequate Vegetative Cover Issues
Debris Issues		Trash Issues
Unwanted_Vegetation Issues Type Location Canada Thistle Surrounding Phragmites Surrounding Phragmites Within Pone	g Pond	nent
Bike Trails and Animal Burrow Problem MW Animal Burrows	_	Embankment Pond Issues

Other Issues

Facility No 389	County	Queen	Anne's	District	
Inspection Date 0	6-May-10 Inspecti	on Time	2:10:00 PM	Overall Condition	
Pond Type We	et Pond Embanl	cment Pond		As-Builts Available	
BMP Location	Side of 408 S. Libe	rty St, and	side of Mills	stream Park	
Setting					
Erosion Issues			Sec	limentation Issues	
Component	Condition	MWO	C	omponent	Condition MWO
Side Slope and Buffer	r Good		Po	nd Bottom	Fair
Top of Slope	Good		Sic	le Slope and Buffers	Good
RipRap Issues			Ris	er and Trash Rack Is	ssues
Component	Condition	MWO			-
Inlet Channel	Good				
Outlet Channel	Good				
Principal Spillway	Barrel Issues		Ina	dequate Vegetative (Cover Issues
Debris Issues			Tra	ash Issues	
Debris Present	Comment Minor debris i	n pond			
Jnwanted_Vegetat	ion Issues				
Type	Location	MWO	Comment		
Canada Thistle	Surrounding Pond		(Minor)		
Trees	Surrounding Pond		•	ond has Large Amounts	of Trees,
Trees	Within Pond				
Bike Trails and Ani	imal Rurrows		F.m.	bankment Pond Issu	06
nke ITans and Am	inai buriows		Em	wankinent i ong issu	cs .
Other Issues					
Problem					MWO
Good - based on exter	ior observation, interior	of pond unac	cessible due to	trees, vegetation and fen	ce.

Facility No 405	County	District	
Inspection Date 04-May-10	Inspection Time	2:45:00 PM Overall Conditi	on
Pond Type Wet Pond	Embankment Pond	✓ As-Builts Avail	able 🗌
BMP Location Rear of C	G&G Distributors (213)	Pond Off Rt. 18	
Setting			
Erosion Issues Component Emergency Spillway Inlet Structure or Channels Outlet Channel Side Slope and Buffer Top of Slope RipRap Issues	Condition MWO Good Good Good Good Good Good	Sedimentation Issue Component Forebay Inlet Structures or Cha Outlet Structures or Cha Pond Bottom Side Slope and Buffer Riser and Trash Ra	Condition MWO Good Innels Good Good Good Good Good Good Good
Component (Inlet Channel Outlet Channel	Condition MWO Good Good		blem Debris on trash rack osed Reinforce
Principal Spillway Barrel Iss Material Problem Concrete Exposed Reinf Concrete Spalling	sues Joint Problem MV	Inadequate Vegetat VO]]	ive Cover Issues
Debris Issues		Trash Issues	
Unwanted_Vegetation Issues	s		
Bike Trails and Animal Burn	'ows	Embankment Pond	Issues
Other Issues Problem Sinkhole & Erosion Around Rise	r		MWO

Facility No 42	Cou	nty Qu	ieen Anne's	District			
Inspection Date	3-May-10 Insp	ection Tim	ne 1:35:00	M Overall Cor	dition	Good	
Pond Type Wo	et Pond Emb	ankment I	Pond 🗹	As-Builts A	vailable		
BMP Location				rm on Little Ki	dwell Ave	e	
Setting		5011001, 1	10 (1001100 1 1	THE OIL LACES AND	u won 11v		
Erosion Issues				Sedimentation I	ssues		
Component	Conditi	on MW()	Component		Condition	MWO
Inlet Structure or Cha	nnels Good			Inlet Structures or	Channels	Good	
Outlet Channel	Good			Outlet Structures	or Channels	Good Good	
Side Slope and Buffe				Pond Bottom		Good	
Top of Slope	Good			Side Slope and Bu	uffers	Good	
RipRap Issues				Riser and Trash	Rack Iss	ues	
				Material	Problem	Debri	s on trash rack
				Concrete	None		
	oblem Joint	Problem	MWO	Inadequate Veg	etative Co	over Issues	
Concrete Nor	oblem Joint	: Problem	MWO	Inadequate Veg Trash Issues	etative Co	over Issues	
Material Pro	oblem Joint		a MWO				
Material Processing Concrete North	oblem Joint ne		MWO	Trash Issues	t Comm		d Develo
Material Proconcrete North	oblem Joint ne Comme		MWO	Trash Issues Trash Presen	t Comm	nent	d Develo
Material Proconcrete North	oblem Joint ne Comme	nt	MWO	Trash Issues Trash Present ✓	t Comm	nent	nd Develo
Material Processing Concrete North North North Processing Processi	oblem Joint ne Commen Minor	nt		Trash Issues Trash Present ✓	t Comm	nent	nd Develo
Material Processing Concrete North N	Commendation Issues Location	nt		Trash Issues Trash Present ✓	t Comm	nent	nd Develo
Material Procession Concrete North	Commendation Issues Location Surrounding Pond	nt MY	WO Comme	Trash Issues Trash Present ✓	t Comm	nent	d Develo
Material Proconcrete North	Commendation Issues Location Surrounding Pond Within Pond	nt MY	WO Comme	Trash Issues Trash Present ✓	t Comm Minor -	nent	d Develo
Material Processing Concrete North N	Commendation Issues Location Surrounding Pond Within Pond Surrounding Pond Within Pond	nt MY	WO Comme	Trash Issues Trash Present ✓	t Comm Minor -	nent From School an	d Develo
Material Proconcrete North	Commendation Issues Location Surrounding Pond Within Pond Surrounding Pond Within Pond	nt MY	WO Comme	Trash Issues Trash Present Int ount within pond be	t Comm Minor -	nent From School an	id Develo

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Other Issues

Facility No 422	County Queen Anne'	's District
Inspection Date 31-Ma	ar-10 Inspection Time 8:50:	00 AM Overall Condition
Pond Type Wet Po	ond Embankment Pond	As-Builts Available 🗸
BMP Location North	thbrook Subdivision (MD 213/W	Vexford Drive)
Setting		
Erosion Issues		Sedimentation Issues
Component	Condition MWO	Component Condition MWO
Emergency Spillway	Good	Forebay Good
Inlet Structure or Channels	Good	Inlet Structures or Channels Good
Side Slope and Buffer	Good	Outlet Structures or Channels Good
Top of Slope	Good	Pond Bottom Good
		Side Slope and Buffers Good
RipRap Issues		Riser and Trash Rack Issues
Component	Condition MWO	Material Problem Debris on trash rack
Inlet Channel	Good	Concrete Exposed Reinforce
Other	Good	Concrete Spalling
Outlet Channel	Good	
Principal Spillway Barı	rel Issues	Inadequate Vegetative Cover Issues
Material Problem Concrete Exposed Concrete Spalling		Inadequate Cover Location
Debris Issues Debris Present	Comment minor from development	Trash Issues Trash Present Comment Minor from development
Unwanted_Vegetation 1	Issues	
Type Lo	ocation MWO Com	ment
Canada Thistle Sur	rrounding Pond	
Phragmites Sur	rrounding Pond	
Bike Trails and Animal	Burrows	Embankment Pond Issues
Problem	MWO	
Animal Burrows		
Other Issues		

Facility No 423	County	District
Inspection Date 31-Mar-10	Inspection Time 2:55:00 F	PM Overall Condition
Pond Type Wet Pond	Embankment Pond	As-Builts Available
BMP Location Northbrook	Subdivision (Wexford Driv	re & Trickling Brook)
Setting		
Emergency Spillway Inlet Structure or Channels Side Slope and Buffer	ndition MWO Good Good Good Good	Sedimentation Issues Component Condition Forebay Good Inlet Structures or Channels Outlet Structures or Channels Fond Bottom Good Side Slope and Buffers Good Good Good Good Good Good
Inlet Channel	ndition MWO Good	Riser and Trash Rack Issues Material Problem Debris on trash rack Concrete Exposed Reinforce Concrete Spalling
Principal Spillway Barrel Issue	es ·	Inadequate Vegetative Cover Issues
Material Problem Concrete Exposed Reinf Concrete Spalling	Joint Problem MWO	
Debris Issues		Trash Issues
Unwanted_Vegetation Issues		
Bike Trails and Animal Burrov	ys	Embankment Pond Issues
Other Issues		

Facility No 424	County	District	
Inspection Date 31-Mar-	10 Inspection Time	9:53:00 AM Overall Condition	
Pond Type Wet Pond	d Embankment Pond	As-Builts Available	
BMP Location North	prook Subdivision (MD	213) Brookfiel Dr & Northbrook Dr	
Setting			
Erosion Issues		Sedimentation Issues	
Component	Condition MWO	Component	Condition MWO
Emergency Spillway	Good	Forebay	Good
Inlet Structure or Channels	Good	Inlet Structures or Channels	Good
Outlet Channel	Good	Outlet Structures or Channels	Good
Side Slope and Buffer	Good	Pond Bottom	Good
Top of Slope	Good	Side Slope and Buffers	Good
RipRap Issues		Riser and Trash Rack Issue	S
Component	Condition MWO	Material Problem	Debris on trash rack
Inlet Channel	Good	Concrete Exposed Reinf	Force
Outlet Channel	Good	Concrete Spalling	
Material Problem Concrete Exposed Re Concrete Spalling	Joint Problem N		
Debris Issues		Trash Issues	
Debris Present ✓	Comment Minor	Trash Present Comment Minor	nt
Unwanted_Vegetation Issu	ues		
•		Comment	
- -	unding Pond		
	unding Pond		
Bike Trails and Animal B		Emboulement David Louis	
Problem	MWO	Embankment Pond Issues	
	IVI VV U		
Animal Burrows			

Facility No 449	County Que	en Anne's	District			
Inspection Date	3-May-10 Inspection Time	2:40:00 PM	Overall Cond	lition	Good	
Pond Type We	et Pond Embankment P	ond 🗸	As-Builts Ava	ailable		
BMP Location	Rear of 2601 (Rt 213) Cen	treville Rd (cva	ch Financial)			
Setting		·	·			
Erosion Issues		Se	dimentation Is	sues		
Component	Condition MWO	C	Component		Condition	MWO
Emergency Spillway	Good	Fe	orebay		Good	
Inlet Structure or Cha		In	let Structures or C	Channels	Good	
Outlet Channel	Good	0	utlet Structures or	r Channels	s Good	
Side Slope and Buffer		Po	ond Bottom		Good	
Top of Slope	Good	Si	ide Slope and Buf	fers	Good	
RipRap Issues		Ri	ser and Trash	Rack Iss	ues	
		N	1aterial P	roblem	Debris	on trash rack
		C	oncrete N	Ione		
Debris Issues Debris Present	Comment		rash Issues Frash Present	Comn		
lacksquare	Minor			minor a	mounts	
				Minor		
Unwanted_Vegetat	ion Issues					
Туре	Location MV	VO Comment				
Canada Thistle	Surrounding Pond					
Phragmites	Surrounding Pond]				
Phragmites	Within Pond					
.		-				
Bike Trails and An	imal Burrows		nbankment Por roblem	ad Issues		n MWO
				# Duless		
		LC	ocal Depression or	Duiges	Good	
Other Issues						
Problem					MV	WO
Some Minor Erosion	on North and South Side of Pond					

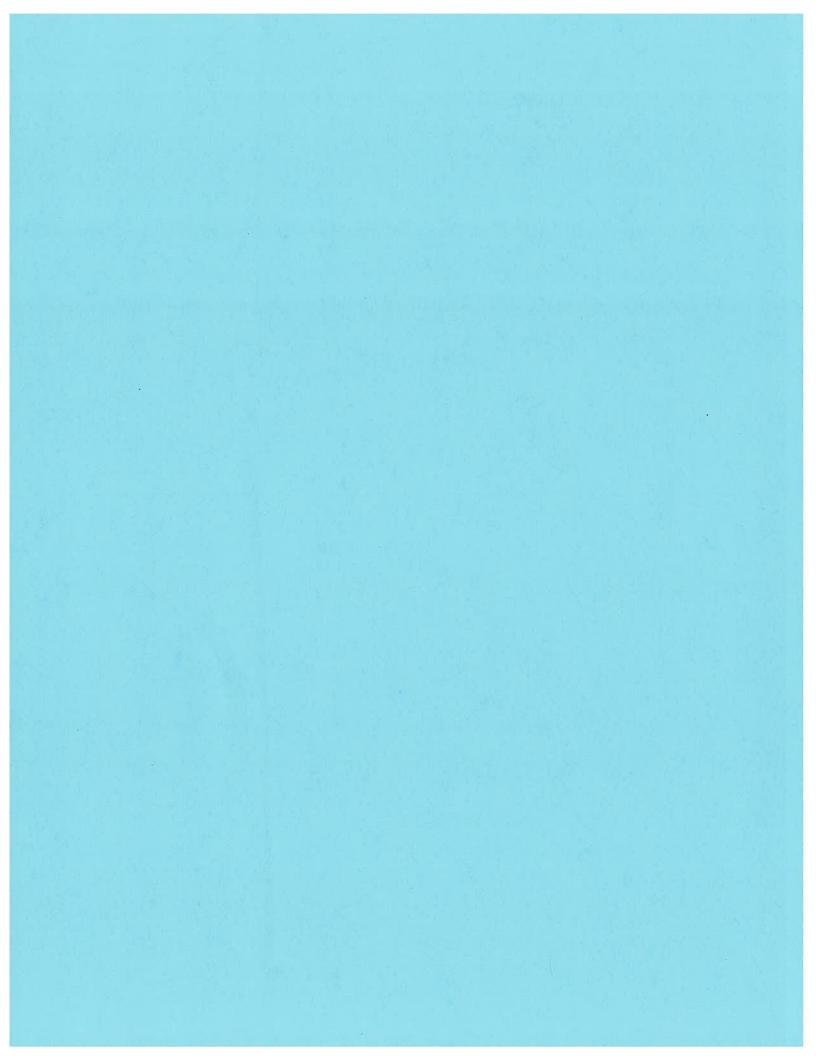
Facility No 51 County Queer	n Anne's District
Inspection Date 10-May-10 Inspection Time	1:10:00 PM Overall Condition Good
Pond Type Wet Pond Embankment Pon	d 🗹 As-Builts Available
BMP Location Intersection of Johnstown Ln	and Powell, Rear of Queen Annes County Senior Center
Setting	
Erosion Issues Component Inlet Structure or Channels Side Slope and Buffer Top of Slope Good Good Good Good Good	Sedimentation Issues Component Inlet Structures or Channels Pond Bottom Side Slope and Buffers Condition MWO Good Good Good
RipRap Issues	Riser and Trash Rack Issues
Principal Spillway Barrel Issues	Inadequate Vegetative Cover Issues
Debris Issues	Trash Issues
Unwanted_Vegetation Issues	
Bike Trails and Animal Burrows	Embankment Pond Issues
Other Issues	

Facility No 52	County	Queen	Anne's	District		
Inspection Date 12-	May-10 Inspection	n Time	2:47:00 PM	Overall Condition	Good	
Pond Type Wet	Pond Embankn	nent Pond	\checkmark	As-Builts Available		
BMP Location R	ear of Queen Annes	S County of	detention Ce	nter on Little Hut Lan	e	
Setting						
Erosion Issues Component Emergency Spillway Inlet Structure or Chann Outlet Channel Side Slope and Buffer	Good Good	MWO	Co Inle Ou Por	limentation Issues Dimponent et Structures or Channels tlet Structures or Channels and Bottom le Slope and Buffers	Condition Good Good Good Good	MWO
Top of Slope RipRap Issues	Good		Ris	er and Trash Rack Issu	ıes	
Debris Issues Debris Present	Comment Minor		Tra	ish Issues		
Unwanted_Vegetatio		164476	a			
Canada Thistle Other Phragmites	Location Surrounding Pond Within Pond Surrounding Pond Within Pond		Cattails Large amount	in Dond		
rmagnites	within Pond		Large amount	in Pond		
Bike Trails and Anim	nal Burrows		Em	bankment Pond Issues		
Other Issues						

	County	7	District	
Inspection Date	06-May-10 Inspecti	ion Time	10:18:00 AM Overall Condition	
Pond Type We	et Pond Embanl	kment Pond	d 🗸 As-Builts Available 🗆	
BMP Location	At Weatherbee Sub	division on	n Frederick Drive, Rear side of G&G Distributors	
Setting				
Erosion Issues			Sedimentation Issues	
Component	Condition	MWO	Component Condition N	1W(
Emergency Spillway	Fair		Inlet Structures or Channels Good	
Inlet Structure or Cha	innels Good		Pond Bottom Fair	
Side Slope and Buffe Top of Slope	r Good Good		Side Slope and Buffers Good	
RipRap Issues	s		Riser and Trash Rack Issues	
Principal Spillway	Barrel Issues		Inadequate Vegetative Cover Issues	
Debris Issues	C		Trash Issues	
Debris Present	Comment		Trash Issues	
Debris Issues Debris Present ✓	Comment Some Minor -	Moderate	Trash Issues	
Debris Present	Some Minor -	Moderate	Trash Issues	
Debris Present	Some Minor -		Trash Issues Comment	
Debris Present ✓ Unwanted_Vegetat	Some Minor -			
Debris Present ✓ Unwanted_Vegetat Type	Some Minor - tion Issues Location			
Debris Present ✓ Unwanted_Vegetat Type Canada Thistle	Some Minor - tion Issues Location Surrounding Pond	MWO		
Debris Present ✓ Unwanted_Vegetat Type Canada Thistle Phragmites Trees	Some Minor - tion Issues Location Surrounding Pond Surrounding Pond Surrounding Pond	MWO □ ☑	Comment Surrounding Pond has large amounts of trees an	
Debris Present Unwanted_Vegetat Type Canada Thistle Phragmites Trees Bike Trails and An	Some Minor - tion Issues Location Surrounding Pond Surrounding Pond Surrounding Pond	MWO □ ☑	Comment	
Debris Present ✓ Unwanted_Vegetat Type Canada Thistle Phragmites Trees	Some Minor - tion Issues Location Surrounding Pond Surrounding Pond Surrounding Pond	MWO □ ☑	Comment Surrounding Pond has large amounts of trees an	
Debris Present Unwanted_Vegetat Type Canada Thistle Phragmites Trees Bike Trails and An Problem	Some Minor - tion Issues Location Surrounding Pond Surrounding Pond Surrounding Pond	MWO □ ☑	Comment Surrounding Pond has large amounts of trees an	

Facility No 83 County Queen Anne's	District
Inspection Date 12-May-10 Inspection Time 11:35:00	PM Overall Condition Good
Pond Type Wet Pond Embankment Pond	As-Builts Available
BMP Location Side of Acme in Centreville Plaza, of	
	Little fut Lane
Setting	
Erosion Issues	Sedimentation Issues
Component Condition MWO	Component Condition MWO
Inlet Structure or Channels Good	Inlet Structures or Channels Good
Side Slope and Buffer Good U	Pond Bottom Good
Top of Slope Good	Side Slope and Buffers Good
RipRap Issues	Riser and Trash Rack Issues
Principal Spillway Barrel Issues	Inadequate Vegetative Cover Issues
Debris Issues	Trash Issues
Unwanted_Vegetation Issues	
Bike Trails and Animal Burrows	Embankment Pond Issues
Other Issues	

						
Facility No 99	County	Queen Anne's	District			
Inspection Date	11-May-10 Inspectio	n Time 2:50:00	PM Overall Cond	lition	Good	
Pond Type W	et Pond Embankı	nent Pond 🗹	As-Builts Ava	ailable		
BMP Location	160 Cypress Court, I	Rear of, in Circle				
Setting						
Erosion Issues Component Emergency Spillway Inlet Structure or Cha Outlet Channel Side Slope and Buffe Top of Slope	Good	MWO	Sedimentation Iss Component Inlet Structures or C Pond Bottom Side Slope and Buff	Channels	Condition Good Good Good	MWO
RipRap Issues			Riser and Trash I	Rack Issu	ies	
			Material P	roblem one		on trash rack
Material Pro Concrete Nor	_	bblem MWO				
Debris Issues			Trash Issues			
Debris Present ✓	Comment Minor amount i	n Pond	Trash Present ☑		ent nor amount fron	n Develo
Unwanted_Vegetat	tion Issues					
Туре	Location	MWO Commo	ent			
Canada Thistle	Surrounding Pond	Large am	ount of Vegetation, B	rush and T	rees ar	
Phragmites	Surrounding Pond					
Phragmites	Within Pond					
Trees	Surrounding Pond					
Trees	Within Pond					
Bike Trails and An	imal Burrows		Embankment Pon	d Issues		
Problem	MWO					
Animal Burrows						
Other Issues						



E924 N 10	C		, , , , , , , , , , , , , , , , , , ,
Facility No 12	County Queen Ar		
Inspection Date 12-May	-	:15:00 PM Overall Condition	Good
BMP Type Infiltration	on Basin / Trench Emba	nkment Pond As-Builts	Available
BMP Location Center	er Park Apt., Behind Railroa	d Ave, off Little Hut Lane	
Setting			
Erosion Issues Component Trench Basin Area Upland drainage basin	Condition MWO Good Good	Sedimentation Issues Component Trench/Basin Area	Condition MWO Good
Debris Issues		Trash Issues	
Unwanted_Vegetation Is	sues		
Seeding Required		Mowing Issues	
Pretreatment Area			
Aggregate Surface of Aggregate ✓	Clean Stone replacemen	nt needed MWO	
BMP Outlet		Ponding	

Facility No 124	County Queen Ar	nne's	- XI - X - X - X - X - X - X - X - X - X
Inspection Date 10-May	-10 Inspection Time 2	:05:00 PM Overall Condition	Good
BMP Type Infiltrati	on Basin / Trench Emba	nkment Pond As-Builts	Available
BMP Location End	of Armstrong Drive, Front o	f Corsica Hills Long Term C	Care and Rehab
Setting	1000		
Erosion Issues		Sedimentation Issues	
Component	Condition MWO	Component	Condition MWO
Trench Basin Area Upland drainage basin	Good	Trench/Basin Area	Good
op.ad dramage out			
Debris Issues		Trash Issues	
Unwanted_Vegetation Is	sues		
Seeding Required		Mowing Issues	
		Ū	
Pretreatment Area			
Aggregate			
BMP Outlet		Ponding	
Outlet Material RipRap	Condition		

Facility No 183	County	Queen Anne's		
Inspection Date 11	-May-10 Inspection	n Time 1:15:00	PM Overall Condition C	Good
BMP Type Infil	tration Basin / Trend	ch Embankmen	nt Pond 🗀 As-Builts Ava	nilable \square
BMP Location 3	35 N. Liberty St (Rt	213) Across fron	Centreville Police Dept.	
Setting				
Erosion Issues Component BMP Outlet Trench Basin Area Upland drainage basin	Condition M Good Good Good	MWO	Sedimentation Issues Component Forebay/Pretreatment Inlet Ar Forebay/Pretreatment Inlet Pi Trench/Basin Area	Condition MWO Good Good Good
Debris Issues			Trash Issues	
	_			
Unwanted_Vegetation Type	on Issues Location	MWO Commo	e nt	
Phragmites	Surrounding Pond		LIIL	
Seeding Required			Mowing Issues	
Pretreatment Area				
Aggregate				
BMP Outlet Outlet Material Riprap	Condition		Ponding	

Facility No 25	County Queen A	nne's	
Inspection Date 10-M	ay-10 Inspection Time	2:40:00 PM Overall Condition	Good
BMP Type Infiltra	tion Basin / Trench Emba	nkment Pond 🔲 As-Built	s Available
BMP Location Arm	strong Ave., Rear of Corsic	a Hill Long Term Care and R	Rehab
Setting			
Erosion Issues	JACOBA MARKA	Sedimentation Issues	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Component	Condition MWO	Component	Condition MWO
BMP Outlet	Good	Trench/Basin Area	Good
Trench Basin Area	Good \square		
Upland drainage basin	Good		
Debris Issues		Trash Issues	
Unwanted_Vegetation	Issues		
Seeding Required		Mowing Issues	
Pretreatment Area			
Aggregate			
BMP Outlet		Ponding	
Outlet Material RipRap	Condition		

Facility No 25	7 County Queen Anne's
Inspection Date	11-May-10 Inspection Time 2:15:00 PM Overall Condition Good
BMP Type In	filtration Basin / Trench Embankment Pond As-Builts Available
BMP Location	Side of 202 Ridgeview Court, at Townhomes, Side of
Setting	This appears to be a Storm Well per JK ON 5/11/10
Erosion Issues	Sedimentation Issues
D 1 . Y	m
Debris Issues	Trash Issues
Unwanted_Vegeta	stian Ioguae
Onwanted_vegen	mun reares
Seeding Required	Mowing Issues
Pretreatment Are	
i Teu caunent Ale	a
Aggregate	
BMP Outlet	Ponding

Facility No 27 County Queen Anne's	s
Inspection Date 10-May-10 Inspection Time 11:20:0	00 AM Overall Condition Good
BMP Type Infiltration Basin / Trench Embankm	nent Pond 🗆 As-Builts Available 🗆
BMP Location Rear of Delmarva Power and Light of	on Rt 213, 2600 Centreville Road
Setting	
Erosion Issues Component Trench Basin Area Upland drainage basin Condition Good Good Good	Sedimentation Issues Component Trench/Basin Area Condition MWO Good
Debris Issues	Trash Issues Trash Present Comment very minor debris
Unwanted_Vegetation Issues	
Seeding Required	Mowing Issues
Pretreatment Area	
Aggregate Surface of Aggregate Clean Stone replacement n	eeded MWO
BMP Outlet	Ponding

Facility No 3	County Queen Anne's	· · · · · · · · · · · · · · · · · · ·	
Inspection Date 13-May	-10 Inspection Time 9:40:0	0 AM Overall Condition	
BMP Type Infiltration	on Basin / Trench Embankm	ent Pond 🗆 As-Builts	Available
BMP Location 505 R	ailroad Ave, Side of Police / Sl	neriffs Dept	
Setting			
Erosion Issues		Sedimentation Issues	
Component	Condition MWO	Component	Condition MWO
BMP Outlet	Good	Trench/Basin Area	Good
Trench Basin Area Upland drainage basin	Good		
Opiand dramage basin	G000 🗀		
Debris Issues		Trash Issues	
Debris Present	Comment	Trash Present Con	mment
Unwanted_Vegetation Iss	sues		
Seeding Required		Mowing Issues	3
Pretreatment Area			
Aggregate			
BMP Outlet		Ponding	

Facility No Temp 500 County Queen A	nne's
Inspection Date 13-May-10 Inspection Time 12	2:20:00 PM Overall Condition Good
BMP Type Rain Garden Emba	ankment Pond 🔲 As-Builts Available 🔲
BMP Location Queen Annes County Free Library, on Rt 213 (S. Commerce St) Rear of	
Setting	
Erosion Issues	Sedimentation Issues
Component Condition MWO BMP Outlet Good Trench Basin Area Good Upland drainage basin Good	Component Condition MWO Trench/Basin Area Good
Debris Issues	Trash Issues Trash Present Comment Minor litter
Unwanted_Vegetation Issues	
Seeding Required	Mowing Issues
Pretreatment Area	
Aggregate	
BMP Outlet Outlet Material Condition RipRap	Ponding

ATTACHMENT 2