

REPORT ON THE APPLICATION  
FOR WATER ALLOCATION BY  
MASON DIXON UTILITIES, INC.

I. INTRODUCTION

On August 3, 2007 the Department of Environmental Protection (Department) accepted a water allocation application from Mason Dixon Utilities, Inc. (MDU). The applicant is requesting the right to a maximum day withdrawal of 2.0 million gallons with a peak monthly withdrawal of 500,000 gpd from an intake that is to be constructed in Marsh Creek in Freedom Township, Adams County.

Notice of the application was published in the August 16, 2008 issue of the Pennsylvania Bulletin in accordance with the Act of February 17, 1984 (P.L. 75, No. 14), 71 P.S. §510-5. MDU provided proof of notification of this application to the Freedom Township Board of Supervisors, the Cumberland Township Board of Supervisors and the Adams County Commissioners.

II. ALLOCATION HISTORY

The proposed water allocation is the original request from MDU for a water withdrawal from Marsh Creek so there is no historical information available.

III. COMMENTS FROM OTHER AGENCIES

The Department requested comments on the application from the Public Utility Commission (PUC), Pennsylvania Fish and Boat Commission (PFBC), Interstate Commission on the Potomac River Basin (ICPRB), the Cumberland and Freedom Township Supervisors and the Adams County Office of Planning and Development (ACOPD). Comments were also requested from the Department's Bureau of Water Supply Management, Division of Water Use Planning (DWUP) and the Department's South Central Regional Office Water Supply Program.

At the request of individuals and municipalities located in the area of the proposed withdrawal, the Department held a public hearing on the application on September 17, 2008. Comments were received from 31 individuals and 3 local municipalities. Comments were also received from ICPRB both in writing and during the public hearing. A summary of all the comments that were received and the Department's responses are provided in the comment response document which is presented as an attachment to this report.

Comments were also provided by PFBC both in writing and in meetings between the Department and MDU. Comments from PFBC have been incorporated directly into this report.

IV. WATER USE

Since the proposed withdrawal will provide water to a new system, there is no historical water use data available. MDU utilized Part II of the Department's Water Supply Manual to estimate the projected water use based on the design details of the proposed housing project. A summary of the proposed system including the projected demand is provided in Table 1.

The proposed system will serve, among other facilities, a large housing development, 2 golf courses, several commercial shops, an office building and a restaurant. MDU will utilize a wastewater capture

and re-use system to provide irrigation water for the two proposed golf courses so it will not be necessary to use water drawn directly from Marsh Creek for golf course irrigation.

<b>Table 1 - Proposed System Details</b>			
Use	Units	Average Daily Use Per Unit (gpd)	Average Daily Demand (gpd)
Residential	1,159	168	194,712
Reserved Unallocated Residential Units	14	168	2,352
Country Club (Patrons)	150	60	9,000
Pool Patrons	200	10	2,000
Commercial Shops (Restrooms)	7	400	2,800
Offices (25 @ 10 employees/office)	250	15	3,750
Hotel Rooms	150	100	15,000
Restaurant	300	10	3,000
Rental Cottages	14	100	1,400
			234,014

The average daily use per residential unit was calculated using the per capita usage rates from Part II of the Public Water Supply Manual. The manual prescribes a design consumption of 75 gallons per capita per day (gpcd) for single family detached homes and single family semi-detached homes and 65 gpcd for single family attached homes and multi family units. MDU calculated a per capita usage rate for all the residential units in the proposed development using the number and design per capita usage rate for each type of housing unit that is proposed. These calculations are shown in Table 2.

<b>Table 2: Residential Unit Demand Calculation</b>			
Type of Residential Unit	Number of Residential Units	Unit Demand (gpcd)	Number of Units X Unit Demand
Single Family Detached	375	75	28125
Single Family Semi-Detached	170	75	12750
Single Family Attached	72	75	5400
Multi-family Units	512	65	33280
Townhomes	44	65	2860
Total	1173		82415
Total Residential Units			1173
Weighted Average (gpcd)			70

The total demand per unit to be served was calculated by multiplying the total number of residential units by the estimated population per unit. MDU estimates 2.4 persons/household based on a population figures from similar developments which results in an estimated demand of 168 gpd/residential unit (2.4 person/household x 70 gpcd = 168 gpd/household). All other projected average daily demand values were taken directly from the Water Supply Manual.

The overall withdrawal must also account for leakage and loss in the distribution system, water treatment plant (WTP) usage, water supply from onsite wells and peak day usage. MDU has estimated leakage and loss rates to be 5% of the average daily demand which is a reasonable estimate for a new water system. The average daily system demand after accounting for leakage and loss is calculated to be 246,331 gpd. In order to provide adequate protection of the intake stream, direct stream withdrawals are calculated on a peak day basis by applying a peaking factor to the average daily demand including system leakage and loss. MDU has assumed a peaking factor of 1.5 which is reasonable for a system of this size resulting in a peak day demand for the system of 369,469 gpd.

MDU has two onsite wells that will be utilized to supplement the water supply for the system and can provide 144,000 gpd. It should be noted that MDU has agreed to conduct additional pump tests of the two water supply wells. The tests may result in an increase in the allowable pumping rate which would decrease stress on the raw water reservoir during times of drought when withdrawals from Marsh Creek are not available. At the time of writing, the additional well tests have not been completed but based on previous pump tests and recharge data, a minimum of 144,000 gpd is expected to be available from the wells.

The peak day stream supply requirement is then calculated by subtracting the available well supply from the total peak day demand. The resultant peak day stream supply requirement is 225,496 gpd. The WTP usage is assumed to be 10% of the raw water influent which means that the peak day stream supply requirement must be 90% of the total peak day stream withdrawal. The total peak-day stream supply withdrawal is then calculated to be 250,551 gpd.

## V. WATER SUPPLY AVAILABLE

The site of the proposed intake is at the 'natural dam' in Marsh Creek in Adams County. The natural dam is a naturally occurring outcropping of bedrock within the stream channel which acts as a small impoundment. The drainage area of the watershed above the taking point is approximately 77.3 square miles. In addition, MDU has also proposed to construct a 14.5 million gallon (effective capacity) off-stream, raw-water reservoir as well as a 1.0 million gallon treated water reservoir.

MDU originally proposed a minimum passby flow requirement of 4.01 cfs however PFBC indicated in a letter to the Department that in accordance with its policies and in consideration of actual low flows in the basin, previous work with the Gettysburg Municipal Authority withdrawal, the Normandeau instream flow study conducted in Marsh Creek and cumulative impacts of withdrawals in the basin, a minimum passby flow of 20% of the average daily flow at the intake is appropriate. The average daily flow for Marsh Creek at the intake site can be estimated by multiplying by the gage flow rate by the ratio of the drainage area at the intake to the drainage area at the Bridgeport gage station (~0.447). The average daily flow for the Bridgeport gage for the period of record is 211 cfs. The resultant average daily flow based on pro-rated stream flow for the period of record at the Bridgeport gage station is 94.3 cfs and 20% of the average daily flow at the is 18.9 cfs. The Department concurs with the PFBC passby flow recommendation.

The proposed passby flow of 18.9 cfs is significantly higher than MDU originally planned for and in response to the increased flow requirement MDU requested consideration of a system operation plan that allows a maximum day withdrawal of 2.0 million gallons with a peak monthly withdrawal of 500,000 gpd. The increased withdrawal rates were determined using a reservoir model that was developed by MDU. The model performs a mass balance on the 14.5 million gallon raw water reservoir using the calculated average daily demand, expected ground water supply capacity and pro-rated flows from the Bridgeport gage. MDU used the model to determine the withdrawal rates necessary for the system to provide an uninterrupted water supply through the drought of record which occurred in 1965 and 1966. The Department and PFBC agreed that a significantly increased withdrawal rate is acceptable, provided that a minimum passby flow of 18.9 cfs is maintained downstream of the intake when withdrawals occur.

In addition to the proposed MDU withdrawal, Gettysburg Municipal Authority (GMA) operates an intake for its public water system that is located upstream of the proposed intake. GMA operates the intake under the provisions of water allocation permit WA 01-1003 which was issued by the

Department in 1996. The permit gives the right to withdraw up to 2.3 mgd based on a yearly average and up to 3.1 mgd on any given day. The permit also requires GMA to maintain a minimum flow downstream of the intake. The required minimum flow is 6.68 cfs (4.3 mgd) or the entire natural stream flow, whichever is less. The required pass-by flow is significantly higher than the Q<sub>7-10</sub> flow rate at the GMA intake. GMA also operates a stream flow augmentation well which allows for a stream withdrawal during times when natural stream flow is less than the required pass-by flow. Due to the withdrawal scheme and permit conditions governing the GMA intake, it is not expected to impact the proposed MDU intake.

It is expected that sufficient water is available from Marsh Creek in conjunction with the 2 water supply wells and the raw water reservoir for the proposed water system.

## VI. DETERMINATIONS BEFORE GRANTING PERMIT

Section 7 of the Water Rights Act of June 24, 1939 outlines the duties of the Commonwealth to investigate water allocation requests, consider conflicts of interest, and to give approval. Approval of the requested allocation shall be given where it is determined that the:

- A. Proposed new source of supply will not conflict with the water rights held by any other public water supply agency.
- B. Water and water rights proposed are reasonably necessary for the present purposes and future needs of the public water supplier making application.
- C. Taking of said water or exercise of water rights will not interfere with navigation.
- D. Taking of said water or exercise of water rights will not jeopardize public safety.
- E. Taking of said water or exercise of water rights will not cause substantial injury to the Commonwealth.

In cases of apparent conflicts of interest, the Commonwealth investigations shall consider the extent of conservation development and use of the existing sources of water to the best advantage.

The Department of Environmental Protection has reviewed the proposed allocation and considered all the issues requiring evaluation under Section 7 of the Water Rights Act. A summary of the findings and conclusions regarding these issues follows:

### A. Conflicts with Water Rights of Other Agencies

The Department finds that there are no conflicts with the water rights of other agencies.

### B. Present and Future Need for Water

MDU has submitted plans showing the number of residential and commercial units planned for construction in the development. Water demand projections were calculated based on the development plans and current Department standards. The Department finds that the amount of water requested is reasonably necessary to supply the proposed housing and commercial development.

### C. Navigation

The Department finds that granting the allocation will have no adverse effect on navigation.

D. Public Safety

The Department finds that granting the allocation will have no adverse effect on public safety.

E. Environmental Issues

The Department finds that granting the allocation will have no adverse effect on the environment.

F. Conservation

The MDU system will be entirely new construction which will help minimize leakage and other unaccounted for losses. MDU will implement a wastewater reuse system to supply water for golf course irrigation so fresh water does not have to be used. MDU has also submitted a detailed drought contingency plan which includes mandatory conservation practices that will be implemented when a prolonged drought occurs.

G. Antidegradation

The Pennsylvania Clean Streams Law and the implementing regulations at 25 Pa. Code Sections 93.4a(b) and 93.4c(a) require that existing uses of surface waters be maintained and protected. Existing use protection must occur at the time of permit issuance and for Water Allocation approvals, both the taking of water and the resultant wastewater production must be considered.

The proposed source of supply is Marsh Creek in southern Adams County. At the point of taking, Marsh Creek has a drainage area of approximately 77.3 square miles. Withdrawals from Marsh Creek will not occur during times when a stream flow of less than 18.9 cfs can be maintained below the intake. MDU has proposed to install a stream gaging station just below the intake to measure the passby flow. A minimum passby flow of 18.9 cfs is expected to protect Marsh Creek from degradation resulting from the proposed withdrawal.

Wastewater generated in the development will be treated at an onsite wastewater treatment plant. The proposed treatment plant will primarily discharge to the golf course irrigation system which will result in no discharge to surface waters. When necessary the treatment plant will discharge to Middle Creek. The wastewater treatment plant will be newly constructed and sized appropriately to meet discharge limits for the flows expected from the development.

The Department has determined that the water allocation authorized by this permit will result in the protection of the existing uses of Marsh Creek and the Middle Creek.

H. Three Point Test

Article I, Section 27 of the Pennsylvania Constitution, as adopted in 1971 states:

The people have a right to clean air, pure water, and to the preservation of the natural scenic, historic, and esthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all of the people.

The Amendment does not require the passage of implementing statutes or promulgation of regulations because it is self-executing and establishes rights which it is DEP's duty to protect *Commonwealth v. National Gettysburg Battlefield Tower Inc.*, 8 Pa. Cmwlth. 231, 302A.2d 886

(1973), affirmed, 454 Pa. 193, 311 A.2d 588 (1973). In protecting these rights, DEP is required to measure its actions concerning issuance of a permit by the three point test announced in *Payne et al. v. Kassab et al.*, 11 Pa. Cmwlth. 14, 312 A.2d 86 (1973), affirmed, 14 Pa. Cmwlth. 491, 323 A.2d 407 (1974), affirmed, 468 Pa. 266, 361 A.2d 263 (1976). This test is:

1. Was there compliance with all applicable statutes and regulations relevant to the protection of the Commonwealth's public natural resources *It was determined that proposed withdrawal is reasonable necessary and that issuance of the permit will result in protection of both the water body from which water is withdrawn (Marsh Creek) and the stream to which the resultant wastewater is discharged (Middle Creek). Issuance of the permit will maintain compliance with all applicable statutes and regulations relevant to the Commonwealth's public natural resources.*
2. Does the record demonstrate a reasonable effort to reduce environmental incursion to a minimum? *MDU has agreed to maintain a minimum passby flow of 18.9 cfs in Marsh Creek during all times that a withdrawal occurs. They have also made several provisions within the proposed development to promote conservation. In addition, they proposed to construct a wastewater reuse system that will reduce the source water demand and the wastewater discharge. Environmental incursion has been kept to a minimum.*
3. Does the environmental harm which will result from the challenged decision or action so clearly outweigh the benefits to be derived there from that to proceed further would be an abuse of discretion? *No significant environmental harm is expected to result from the proposed water system, therefore, the benefits outweigh the potential environmental harm caused the project.*

## VII. RECOMMENDATIONS

The application submitted by Mason Dixon Utilities, Inc. has been carefully reviewed and considered. It is recommended that Mason Dixon Utilities, Inc. be granted a permit for the right to a peak day withdrawal of 2.0 mgd with a peak monthly (30-day) withdrawal of 500,000 gpd from an intake to be constructed in Marsh Creek.

The following permit conditions are also recommended:

1. What Permit Does Not Do: This permit does not give any property rights, either in real estate or material, nor any exclusive privileges, nor shall it be construed to grant or confer any right, title, easement or interest in, to or over any land belonging to the Commonwealth of Pennsylvania; neither does it authorize any injury to private property nor invasion of private rights, nor any infringement of federal, state or local laws or regulations; nor does it obviate the necessity of obtaining federal assent when necessary.
2. Term of Permit: The duration of this permit shall be for a period of 25 years only, provided, however, that should the permittee for any reason whatsoever cease to take and use the water hereby allocated for any period of seven (7) consecutive years, then this permit shall cease and be null and void; unless, upon application of the permittee, an extension of such period is granted by the Department.

3. Public Water Supply Permit Requirement: The permittee shall obtain, within two (2) years from the date of this permit, a Public Water Supply Construction Permit consistent with the permittee's water system operations plan from the Department's Southcentral Regional Office. Failure to secure the required permit within the required time period shall cause this permit to be null and void; unless, upon application by the permittee, the Department grants an extension of such period.
4. Construction Time Limits: The construction of the works necessary for the development of the supply of water allocated under this permit shall begin within two (2) years from the date of this permit and shall be completed within two (2) years thereafter, a total period of four (4) years; unless, upon application by the permittee, the Department grants an extension of such period.
5. Act 537 Plan Requirement: Unless otherwise approved by the Department, in writing, the permittee shall not withdraw water from Marsh Creek until the permittee has obtained Act 537 sewage facilities planning approval for a sewage facilities plan that is consistent with the permittee's public drinking water operations plans and permits.
6. Withdrawals: The average daily withdrawal rate from the permittee's intake on Marsh Creek, including water withdrawn for golf course irrigation shall not exceed 205,000 gallons per day (gpd) on an annual (365 day) basis, 500,000 gpd on a thirty-day basis and 2,000,000 gpd on a peak day basis.
7. Passby Flow: A flow of not less than 18.9 cubic feet per second (cfs) or 12,214,000 gpd, which is calculated by the Department to be equivalent to 20% of the average daily flow at the point of taking, shall be allowed to pass the permittee's Marsh Creek intake at all times. Such flows shall be measured at a point downstream of the permittee's intake including any intake used as a source for golf course irrigation. The permittee shall reduce withdrawals from Marsh Creek to maintain not less than 18.9 cfs in the stream channel below the intake. When the natural flow is at or less than this rate, the permittee shall not withdraw any water from Marsh Creek and the entire natural flow shall be allowed to pass this intake. In the event that an official drought emergency is declared by the Commonwealth in Adams County, Pennsylvania, the permittee's off stream reservoir has been drawn down to 6.0 million gallons of water or less, not including any dead storage, and if it is approved by the Department in writing, the permittee may temporarily reduce the minimum flow that must pass by the intake.
8. Water Use: The maximum combined withdrawal from permittee's groundwater sources and the raw water reservoir shall not exceed 411,000 gallons in any given day. All water shall be used in a manner consistent with the permittee's water system operations plan.
9. Installation of Measuring Devices: The permittee shall install accurate measuring and recording instruments or devices to determine the volume and withdrawal rate of water withdrawn from Marsh Creek, the raw water storage reservoir and both of the water supply wells. Unless otherwise approved by the Department, in writing, the permittee may not withdraw any water from Marsh Creek until after the Department, in writing, has approved the design and layout of the devices, and the permittee has installed the devices. The design and layout of these devices shall be submitted to and be approved by the DEPARTMENT OF ENVIRONMENTAL PROTECTION, SOUTHCENTRAL REGIONAL OFFICE, WATER SUPPLY MANAGEMENT PROGRAM, 909 ELMERTON AVENUE, HARRISBURG, PA 17110. The permittee shall maintain these devices in good working order at all times following their

installation during the term of this permit. The permittee shall notify the Department's Southcentral Regional Office in writing of completion of the measuring device. Additionally, the permittee shall notify the Department's Southcentral Regional Office, Watershed Management Program in writing of not less than 30 days prior to commencing withdrawals authorized by this permit.

10. Withdrawal Records: The permittee shall prepare and maintain accurate records of the amount of water withdrawn each day from Marsh Creek, the raw water storage reservoir and the water supply wells. The permittee shall make the records available, during normal business hours, for inspection and copying by the Department. The permittee shall submit to the DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF WATERSHED MANAGEMENT, DIVISION OF WATER USE PLANNING, PO BOX 8555, HARRISBURG, PA 17105-8555, by the 15th day of each month, on forms approved by the Department, records showing the daily withdrawals by the permittee during the previous month.
11. Passby Flow Measuring Devices: The permittee shall install a stream gaging station to determine the flow passing by the permittee's Marsh Creek intake. The devices must be sufficiently accurate to ensure that the permittee can maintain compliance with the passby flow requirements included in this permit and shall be constructed to United States Geological Survey ("USGS") stream gaging station standards and specifications. Unless otherwise approved by the Department, in writing, the permittee may not withdraw any water from Marsh Creek until after the Department has, in writing, approved the design and layout of these devices, and the permittee has installed them and they are operational. The design and layout of these devices shall be submitted to and be approved by the DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF WATERSHED MANAGEMENT, DIVISION OF WATER USE PLANNING, PO BOX 8555, HARRISBURG, PA 17105-8555 prior to installation. The permittee shall operate and maintain these devices in good working condition. Additionally, at a frequency of not less than once annually, the permittee shall submit to the Department a third-party verification of the accuracy of the flow measuring device. In the event that the gaging station is added to the USGS network of stream gage stations, the permittee shall provide ongoing funding for full operation and maintenance of the gage station as long as water withdrawals from Marsh Creek are authorized under this permit.
12. Passby Flow Records: The permittee shall prepare and maintain accurate records of the daily flow in Marsh Creek. The permittee shall make available these records, during normal business hours, for inspection and copying by the Department. The permittee shall submit, to the DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF WATERSHED MANAGEMENT, DIVISION OF WATER USE PLANNING, PO BOX 8555, HARRISBURG, PA 17105-8555, by the 15th day of each month, on forms approved by the Department, records showing the flow rate in Marsh Creek during the previous month.
13. Drought Contingency Plan: The permittee shall operate its system as outlined within the Daily Operations Plan and Drought Contingency Plan submitted to the Department as part of the application for water allocation or as may be modified with the Department's approval. The permittee shall maintain the passby flow required by condition number 7 of this permit at all times.
14. Annual Permit Compliance Report: The permittee shall submit annually, by March 31 of each year as to the prior calendar year operations, a permit compliance report on forms approved by



the Department, to the DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF WATERSHED MANAGEMENT, DIVISION OF WATER USE PLANNING, PO BOX 8555, HARRISBURG, PA 17105-8555.

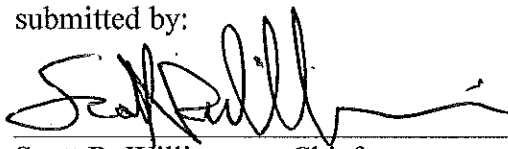
15. Non-Compliance Reporting: The permittee shall record and report to the Department's Southcentral Regional Office any non-compliance with the terms and conditions of this permit that may endanger public health or safety or the environment. This information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A Non-Compliance Report shall be submitted to the Department within two weeks of the oral report. Where necessary, the Non-Compliance Report shall be supplemented with a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; if not already corrected, the anticipated time the noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
16. Permit Deviation Reporting: Beginning on the month of permit issuance and on a frequency of not less than once every 6 months, the permittee shall submit to the Department's Southcentral Regional Office, a report documenting and describing any deviations from the requirements of this permit during the previous 6-month period. The report shall include a description of each deviation and its cause, the exact dates and times of each deviation and, if not already corrected, the anticipated time the deviation is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence.
17. Supplying Water to Other Public Water Suppliers Prohibition: The permittee shall not supply any new or additional quantity of water to any public water supply agency until that agency shall have first obtained, from the Department of Environmental Protection's Southcentral Regional Office, a subsidiary water allocation permit for the specific purchase quantity.
18. Reservoir Storage Measuring Devices and Reporting: The permittee shall install accurate measuring and recording devices to determine the amount of water supply storage in the raw water reservoir. The design and layout of said measuring devices shall be submitted to and approved by the Department of Environmental Protection's Division of Water Use Planning before installation. The permittee shall also develop an elevation-storage capacity-surface area table and graph and submit the table and graph to the Department of Environmental Protection's Division of Water Use Planning. The elevation-storage capacity-surface area table and graph shall be submitted to the Department's Division of Water Use Planning concurrent with the permittee's submission of the reservoir design portion of the Public Water Supply System Construction Permit to the Department's South Central Regional Office. Records of reservoir elevations and remaining storage volumes shall be submitted to the Division of Water Use Planning monthly, and original field records shall be available at all times for inspection by representatives of the Department. The required measuring devices shall be installed, and readings shall begin upon commencing use of the raw water reservoir for public water supply purposes.
19. Renewal Requirement. Within one (1) year, but no less than ninety (90) days, prior to the expiration date specified in Condition No. 2, the permittee shall submit to the Department a complete and acceptable application for a new permit, if permittee desires to continue to acquire the water rights granted by this permit beyond the expiration date. Upon the Department's acceptance of such application for review, the expiration date of this permit shall be extended during the review period until issuance or denial of said permit.

20. Permit Modification: This permit is subject to review and possible modification of said rights, conditions, or restrictions at a later date or dates, as provided in Section 7 of the Act of June 24, 1939, P.L. 842 (No. 365). The Department may modify, suspend, or revoke this permit in whole or in part during its term for cause including but not limited to the following: violation of any terms or conditions of the permit, obtaining a permit by misrepresentation or failure to disclose fully relevant facts, or a change in condition that requires either a temporary or permanent reduction or elimination of the permitted water withdrawal or as necessary to protect, maintain, or restore existing or designated uses of surface waters as provided by the Clean Streams Law.

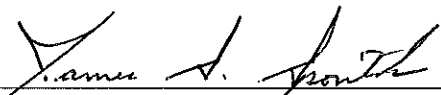
This report was prepared by:

  
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Joseph Adams, P.E.  
Watershed Management Program

This report was reviewed and is respectfully submitted by:

  
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Scott R. Williamson, Chief  
Planning and Assessment Section  
Watershed Management Program

The foregoing recommendation is concurred in:

  
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James Spontak, Program Manager  
Watershed Management Program

Date: MAY 25 2010