

Town of Elkton, Virginia  
173 West Spotswood Avenue  
Elkton, Virginia 22827



## PERCEIVED ISSUES AND SOLUTIONS FOR THE DEPARTMENT OF ENVIRONMENTAL QUALITY

*Meeting with staff from Valley Regional Office Virginia Department of Environmental  
Quality regarding the Town of Elkton wastewater treatment plant operations and upgrade  
schedule*

Tuesday, April 27, 2010  
1:00pm

Mayor Larry A. Bompiani  
Vice Mayor M. Lee Dearing  
Timmy Turner, Director of Public Works  
Guy Coffey, Chief Wastewater Operator  
M. Christopher Sigler, Town Attorney  
Christopher S. Fewster, Anderson and Associates  
Reid A. Wodicka, Town Manager

TABLE OF CONTENTS

Table of Contents ..... 2

Executive Summary..... 3

Perceived issues, explanations, and plan of action ..... 4

    Documentation of Operations at the Wastewater Treatment Plant ..... 4

    Compliance with Schedule of Required Actions ..... 6

    Discharge Permit Violations for the First Quarter 2010 ..... 7

Conclusion..... 9

Appendix A: Inflow and Infiltration Repair Program Summer 2010 ..... 10

Appendix B: Proposed Sewer Department Budget FY 2011 ..... 15

## EXECUTIVE SUMMARY

Two years ago, the Town of Elkton agreed to a consent order issued by the Department of Environmental Quality requiring certain actions by the Town to upgrade wastewater facilities. The purpose of this document is to outline the implementation issues as perceived by the Town of Elkton from written communications and telephone conversations with staff from the Department of Environmental Quality. This document outlines reasons and explanations for these issues.

The Town additionally has outlined in this document a proposed plan of action to meet the concerns of the Department and to solve the problems, ensuring that the Department understands that the Town is making a coherent effort to meet the requirements of the order. Furthermore, the Town has also outlined actions that could be taken by the Department which would make compliance more attainable in a period plagued by financial resource scarcity.

The issues and plan of action as described in this document are subject to the scrutiny of the Department. The Town would request that the Department spend time determining if the plan of action outlined in this document will meet its need. If it does not, the Town respectfully requests discussions regarding how this plan of action could be improved to meet the Department's needs. It should be very clear that the Town is interested only in compliance with applicable federal and state law, the requirements of the Department, and the needs of individual staff members at the Department. Although there have been instances of confusion between the Town and the Department, at no time should staff at the Department feel that the Town is attempting to conceal information or avoid responsibility for the requirements in the consent order.

Questions regarding this document should be submitted to:

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## PERCEIVED ISSUES, EXPLANATIONS, AND PLAN OF ACTION

Through written and verbal conversation with staff from the Department of Environmental Quality, the Town has established a list of issues which it perceives as causing trepidation for Department. We have also provided explanations regarding these issues and a description of how the Town intends to solve those issues in an expeditious time frame. Additionally, this section provides a request for assistance from the Department with these issues which would make compliance more attainable. It cannot be stressed enough the Town is committed to meeting the goals of the Department.

Issue	Documentation of Operations at the Wastewater Treatment Plant
<b>Explanation</b>	<p>Through our discussion with staff from DEQ compliance staff, it has become apparent that our current documentation procedures make compliance assurance difficult. The reason for this is that operations are documented in several different locations and that there is not a consistent daily log giving information to DEQ staff. If information is not readily available, it is reasonable that DEQ staff would become concerned if they cannot find specific information that they need to ensure compliance.</p> <p>The decentralization of information also causes operating issues at the plant. If all information is not kept on one central daily sheet, it is difficult for operators to determine what work has been completed daily and what work needs to be fulfilled in order to meet the requirements of the daily, weekly, and monthly operations of the plant.</p> <p>In addition to the difficulties caused by this mode of operations listed above, it seems as though there has been very little quality assurance of the logs. Without providing assurance to the Department that the logs have been reviewed for accuracy, it is reasonable the compliance staff would be confused about certain entries. It is also impossible for the administration of the Town to ensure that accurate logs are kept and that the information provided therein is responsible. For instance, at the end of December 2009, there was a confusing entry into the plant's log regarding a spill which was likely an inappropriate log entry. Had the chief operator reviewed that log, he would have realized that it was likely an inappropriate entry and made an explanation for DEQ staff to review.</p>

	<p>In addition to ensuring that the accuracy of logs is checked, the decentralization of information prevents the Town administration from adequately monitoring the progress and the operations of the wastewater plant.</p>
<p><b>Plan of Action</b></p>	<p>There are three actions which the Town intends to implement in order to solve these problems.</p> <ol style="list-style-type: none"> <li>1. The Town will create a centralized documentation procedure in which all information regarding the operations of the plant for a particular day are readily available. Each day, all operations will be documented on one document and only on one document. This will allow two improvements in service: operators and other staff will be able to easily and quickly identify the issues that have arisen at the plant; DEQ staff will be able to review documents quickly and will not be confused or inconvenienced by massive amounts of information and documents that are currently being provided.</li> <li>2. The Town will develop a quality assurance program which requires that the chief operator sign off on all logs and documents pertaining to the operations of the wastewater plant. This will ensure that all logs are completed appropriately and that all information is accurate.</li> <li>3. The Town requests that staff from the Department of Environmental Quality meet in person with Town staff on a monthly basis for the next six months to ensure that the Town is complying with all documentation requirements, which may be found in statute, administrative code, the consent order, or this plan of action.</li> </ol>
<p><b>Needed Assistance from DEQ</b></p>	<p>In order to appropriately solve these problems, the Town requests that DEQ provide the following assistance:</p> <ol style="list-style-type: none"> <li>1. The Town requests that DEQ compliance staff meet with Town staff to determine what information is needed on a daily basis for the staff to determine compliance with applicable documentation and operations requirements. It is imperative that the DEQ and the Town work together in developing the Town's documentation procedures in order to ensure both parties are able to work with the new system.</li> <li>2. The Town requests administrative oversight from DEQ administration to ensure that monthly meetings are held which ensure compliance. Town administrative staff will also provide administrative oversight ensuring that Town staff does everything possible to guarantee that this action is taken.</li> </ol>

<b>Issue</b>	Compliance with the Schedule of Required Actions
<b>Explanation</b>	<p>The consent order requires that upgrades to the wastewater treatment plant be started by March 2010. As has been expressed in previous discussion, delays on the part of the Town's funding agency (as administered through the revolving loan fund of the Virginia Department of Environmental Quality and the Virginia Resources Authority) and delays with plans approvals from the Department have made this time frame impossible to meet.</p> <p>The Town assumed at that time that the offices within the Department would notify one another of issues related to this project. The Town is now aware that this was an inappropriate assumption and now understands that any future scheduling issues must be communicated directly to the Valley Regional Office of the Department.</p> <p>With respect to the beginning of the construction process, please be advised of the remaining issues which will continue to delay the construction of this project.</p> <ol style="list-style-type: none"> <li>1. The Town is currently awaiting a parity application to be approved by Rural Development through the Office of General Counsel, which will subordinate the loan for the original construction of the wastewater plant in 1981. This balance remaining on this loan is approximately \$150,000. This parity application has already been approved by the local and state offices of Rural Development and those offices see no obstacle for OGC. However, the approval process is approximately sixty days, which will expire in mid May 2010. The Town anticipates closing the loan shortly thereafter and intends to begin construction as soon as possible</li> <li>2. The Town has received a commitment letter from the Virginia Resources Authority. Once the Town has final assurance of all parity issues, construction will begin.</li> </ol>
<b>Plan of Action</b>	<p>The Town's plan of action to encourage DEQ and VRA to complete the loan closing is as follows.</p> <ol style="list-style-type: none"> <li>1. The Town and its legal staff will continue to pressure the VRA and DEQ Revolving Loan Fund staff to finalize approval of the Town of Elkton's loan.</li> <li>2. The Town will also continue to stress the importance of this project and why it must be funded immediately.</li> <li>3. The Town will ensure that all agreements and required actions with</li> </ol>

	<p>contractors are complete prior to loan closing so that the contractors are ready to begin as soon as possible.</p> <p>4. In the future, if the Town finds that it will not be able to meet a scheduled event, the Town commits to contact the Valley Regional Office as soon as that circumstance becomes apparent.</p>
<b>Needed Assistance from DEQ</b>	<p>In order to appropriately solve these problems, the Town requests that the DEQ provide the following assistance:</p> <ol style="list-style-type: none"> <li>1. The Town requests that DEQ Valley Regional Office staff make contacts with officials at the Revolving Loan Fund and the Virginia Resources Authority to explain the severity of the situation with regard to the wastewater upgrades and the addition of a gravity sewer line which will serve the new East Rockingham High School.</li> <li>2. If future scheduled events are not met at the appropriate time, the Town requests that DEQ contact the Town as soon as possible.</li> </ol>

<b>Issue</b>	<b>Discharge Permit Violations for the First Quarter 2010</b>
<b>Explanation</b>	<p>The Town of Elkton was issued a Notice of Violation for violations related to the discharge permit for several months at the beginning of calendar year 2010. In particular these issues are related to elevated TSS and BOD levels at the outfall. These issues are directly attributable to the inflow and infiltration issues that plague the collection system.</p> <p>The winter of 2010 provided evidence that the I and I problem in the Elkton, like many localities, is larger than could have expected. However, the Town continues to engage in I and I repair work which will improve the levels identified in the above paragraph.</p> <p>With respect to conducting I and I repairs during the summer and fall of 2010, one of the Town's water sources was declared under the influence of ground water. The Town was placed on a boil water notice for all drinking water in August. In order to deal with this problem, the Town's engineering, human, and financial resources had to be diverted from I and I work to ensuring that drinking water was suitable for residents. Although the boil water notice was removed quickly because of action by the Town, the financial strain on the Town reduced its ability to perform I and I work.</p> <p>In addition to the diversion of engineering and labor resources, the Town had to spend approximately \$80,000 in order to develop and place online</p>

	<p>the new Elkwood Well. At several times during the fall of 2009, the Town simply ran out of money because of the engineering costs of the wastewater project and the costs directly associated with the well testing and development. This situation accounts for the time period between July 2009 and the beginning of December 2009.</p> <p>The winter of 2009/2010 provided the most amount of precipitation experienced by the area in many years. In most locations, the Town was covered by snow for the majority of winter. Furthermore, this was also one of the coldest winters on record, reducing the Town's ability to dig to make repairs. Once snow melted, ground water retreated enough to allow for repairs and, when the ground thawed, the Town immediately began implementation of the I and I program discussed for the last several months. This program is underway and will continue until November 2010. At that time, the staff will revert to continued investigations of I and I problems in the collection system.</p>
<p><b>Plan of Action</b></p>	<p>With respect to the issues identified above, the Town will continue the following action:</p> <ol style="list-style-type: none"> <li>1. The Town, during the winter months of 2010 created an Inflow and Infiltration repair plan for summer 2010. Details of that plan for the coming months are identified in Appendix A of this document. Implementation of this plan began at the beginning of April.</li> <li>2. The proposed FY 2011 budget for the Town of Elkton appropriates approximately \$100,000 in labor and materials cost for the repair of I and I problems throughout the Town. This number of found with a review of the I and I Salary and capital equipment and projects costs in the copy of the Sewer Department's FY 2011 proposed budget, available as Appendix B of this document.</li> <li>3. Upon the completion of the I and I 2010 repair program, Town I and I staff will then be diverted to continue investigations of the collection system. During those investigations, the Town will prepare an I and I repair program for the summer of 2011. The Town will continue this procedure until a significant amount of I and I flow is eliminated from the system.</li> <li>4. In addition to the I and I repair work conducted this summer, staff will continue to conduct smoke testing and other investigations work throughout the summer as time allows.</li> </ol>
<p><b>Needed Assistance from DEQ</b></p>	<p>In order to appropriately solve these problems, the Town requests that DEQ provide the following assistance:</p>

	1. The Town requests assistance with the implementation of the I and I repair program. Any technical assistance suggestion for a more appropriate implementation that might be available from staff would help the Town in its work towards solving this problem.
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In addition to the problems listed above, the Town requests that the Department advise of any other issues that have not been addressed. The Town's ultimate desire is to comply with what the Department requests and desires to return to good standing with the Department.

### CONCLUSION

The Town requests that the Department review this information and provide comments regarding improvement of these plans and other issues that the Department may find with the Town's wastewater system. The Town desires to continually re-iterate its interest in complying with the requirements of the Department and that there is no intention of failure. However, in order to do so, the Town has requested minor actions from the Department which may allow for a more seamless implementation of the plans listed herein.

The Town appreciates the opportunity to discuss these issues with the Department.

APPENDIX A: INFLOW AND INFILTRATION REPAIR PROGRAM  
SUMMER 2010

TOWN OF ELKTON  
INFLOW AND INFILTRATION REPAIR PLAN  
SUMMER 2010

MAJOR PROJECTS

Project Number	II-2010-1
Name/Location	North Street
Specific Problem	During sewer line camera work, the Town recognized that the sewer pipe between N. Stuart Avenue and Clover Lane had a significant amount of I and I. This was confirmed by visual inspection of manholes as well as very large increases in run-times for the North Lift Station. It was found that a drainage ditch flows directly on top of the sewer pipe. This drainage ditch swells considerably during rainfall, receiving rainwater from three neighborhoods.
Approximate Length of Pipe to be Repaired	500 feet, 8 inch pipe
Anticipated Start Date	April 12, 2010
Anticipated Completion Date	April 26, 2010
Resources Needed	Backhoe, black dump truck, road safety signage and blockage

Project Number	II-2010-2
Name/Location	West Washington Avenue
Specific Problem	There is a considerable amount of I and I flowing into the sewer main. This is particularly because of the low lying area in which this sewer pipe is situated. In addition to the situation of the pipe, there is considerable root growth which causes major leaks into the system. An extremely deep ditch will be required to repair this. However, there is sufficient room to provide for adequate protections.
Approximate Length of Pipe to be Repaired	125 feet, 10 inch pipe
Anticipated Start Date	April 27, 2010
Anticipated Completion Date	Early May 2010
Resources Needed	Backhoe, black dump truck, road safety signage and blockage, trench box possible

Project Number	II-2010-3
Name/Location	Stuart Avenue to Harnsberger Street
Specific Problem	This particular section is also in a low-lying area very near a creek bed. This provides a considerable amount of inflow and infiltration into the system. This project will also replace four manholes. In addition to sewer line replacement, the Town will also use a private contractor to line the sector of pipe which is beneath Elk Run, a major creek in the area. This sewer line runs behind Ace Hardware and is a well-known location for I and I.
Approximate Length of Pipe to be Repaired	1300 feet, 8 inch pipe
Anticipated Start Date	Early to Mid May 2010
Anticipated Completion Date	Early June 2010
Resources Needed	Backhoe, black dump truck

Project Number	II-2010-4
Name/Location	West Prospect Avenue
Specific Problem	Considerable I and I flow in this area causes particularly high flows. Additionally, it is likely that several manholes will need to be replaced. This area is at a low-lying area which collects rainwater from two major neighborhoods and the nearby railroad tracks.
Approximate Length of Pipe to be Repaired	125 feet, 8 inch pipe
Anticipated Start Date	Early to Mid June 2010
Anticipated Completion Date	End of July 2010
Resources Needed	Backhoe, black dump truck

Project Number	II-2010-5
Name/Location	Wirt Avenue
Specific Problem	Sections of the Wirt Avenue sewer line were replaced in summer 2009 as a part of the Town's I and I repair program. This revealed that the sewer line, even in dry weather, sits directly in water from the creek bed. This project will complete the project which began last year beginning at the intersection of Wirt Avenue and Shenandoah Avenue, extending southward towards U.S. Highway 33. This is expected to be a larger contributor to the I and I problem.
Approximate Length of Pipe to be Repaired	500 feet, 10 inch pipe
Anticipated Start Date	Beginning of August 2010
Anticipated Completion Date	End of September 2010
Resources Needed	Backhoe, black dump truck

Project Number	II-2010-6
Name/Location	Spotswood Avenue
Specific Problem	This particular repair will be a point repair which the Town believes is a cross connection between the storm sewer and sanitary. Although camera inspection did not find a solution, visual inspection by Town staff indicates that the sewer pipe is damaged, which allows water from the storm sewer pipe to enter the collection system.
Approximate Length of Pipe to be Repaired	n/a, point repair
Anticipated Start Date	Beginning of October 2010
Anticipated Completion Date	Mid October 2010
Resources Needed	Backhoe, black dump truck, road signage and blockage, air monitoring (possibly)

Project Number	II-2010-7
Name/Location	Blue and Gold Drive
Specific Problem	This project began in 2009 and a considerable amount of I and I was eliminated from the system. However, there is still a significant amount of I and I in other parts of the line between the termination point of the previous project and Elkton Middle School. Additionally several manholes will need to be either replaced or repaired during this section of the project.
Approximate Length of Pipe to be Repaired	Approximately 700 feet
Anticipated Start Date	Mid October 2010
Anticipated Completion Date	Mid November 2010
Resources Needed	Backhoe, black dump truck, road signage and blockage

In the event that projects are completed early, there are a number of other point repairs which must be resolved, including storm downspouts currently connected to the collection system. If those are not completed between projects, these will be completed by other Town staff or at the end of the project season.

When the projects are complete, inspection work will continue in order to develop a project plan for the coming year.

Plan developed by Timmy Turner, Director of Public Works

APPENDIX B: PROPOSED SEWER DEPARTMENT BUDGET FY 2011

*Sewer*

	<b>FY 2009 Actual</b>	<b>FY 2010 Budget</b>	<b>FY 2010 Act</b>	<b>FY 2011 Budget</b>	<b>Change</b>
Salary Full Time	\$ 128,771.70	\$ 55,450.62	\$ 130,000.00	\$ 135,000.00	4%
Salary Part Time	\$ 9,699.11	\$ 10,000.00	\$ 12,000.00	\$ 5,000.00	-140%
I and I FT Salary	\$ -	\$ -	\$ -	\$ 50,000.00	
Salary Overtime	\$ 24,880.24	\$ 20,000.00	\$ 8,000.00	\$ 7,500.00	-7%
Salary Contract Labor	\$ 2,138.00	\$ 5,000.00	\$ 60,000.00	\$ 20,000.00	-200%
Advertisement	\$ 954.70	\$ 1,000.00	\$ -	\$ 800.00	100%
Dues/Membership	\$ 4,895.00	\$ 5,000.00	\$ 4,350.00	\$ 5,000.00	13%
Small Equipment Purchase	\$ 145.00	\$ 500.00	\$ -	\$ 500.00	100%
Health Insurance	\$ 18,315.00	\$ 20,000.00	\$ 24,000.00	\$ 26,000.00	8%
Insurance/Flood	\$ 1,793.00	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00	0%
Loan Capital Principal	\$ 28,357.51	\$ 76,804.49	\$ 76,804.00	\$ 80,000.00	4%
Loan Capital Interest	\$ 31,889.27	\$ 80,557.05	\$ 80,557.00	\$ 81,000.00	1%
Dumpster	\$ 15,943.90	\$ 76,804.49	\$ -	\$ 15,000.00	100%
Legal	\$ 6,896.00	\$ 7,000.00	\$ 2,600.00	\$ 5,000.00	48%
Computer System Support	\$ 250.00	\$ 200.00	\$ -	\$ 200.00	100%
Maint/Repair Equipment	\$ 7,345.79	\$ 10,000.00	\$ 15,000.00	\$ 10,000.00	-50%
Professional Services	\$ 208,540.78	\$ 150,000.00	\$ 100,000.00	\$ 15,000.00	-567%
Maint/Repair Building	\$ 1,153.93	\$ 2,000.00	\$ 500.00	\$ 1,500.00	67%
Postage	\$ 149.28	\$ 200.00	\$ 50.00	\$ 100.00	50%
Supplies Office	\$ 1,058.42	\$ 1,000.00	\$ 14.00	\$ 500.00	97%
Supplies Maintenance	\$ 4,011.95	\$ 2,500.00	\$ 20,000.00	\$ 5,000.00	-300%
Uniforms	\$ 1,862.18	\$ 1,500.00	\$ 1,000.00	\$ 1,000.00	0%
Miss Utility	\$ 135.32	\$ 200.00	\$ 50.00	\$ 200.00	75%
Cell Phones	\$ 1,133.22	\$ 1,300.00	\$ 1,300.00	\$ 1,500.00	13%
Vehicle Fuel	\$ 5,819.33	\$ 5,000.00	\$ 2,600.00	\$ 3,500.00	26%
Maint/Repair Vehicles	\$ 851.01	\$ 1,000.00	\$ 400.00	\$ 900.00	56%
Capital Projects	\$ 76,562.82	\$ 3,400,000.00	\$ 2,500,000.00	\$ 30,000.00	-8233%
Capital Equipment	\$ 45,319.71	\$ 10,000.00	\$ -	\$ 15,000.00	100%
Social Security	\$ 12,496.29	\$ 12,558.77	\$ 12,000.00	\$ 13,000.00	8%
Group Life	\$ 935.14	\$ 939.82	\$ 800.00	\$ 1,200.00	33%
Retirement	\$ 10,522.99	\$ 10,575.60	\$ 10,000.00	\$ 13,000.00	23%
<b>Total</b>	<b>\$ 652,826.59</b>	<b>\$ 3,969,090.84</b>	<b>\$ 3,064,025.00</b>	<b>\$ 544,400.00</b>	<b>-463%</b>