PUBLIC INFORMATIONAL NEWSLETTER CONCERNING SRR

DATE April 14, 2011

At the request of the Prince Edward County Board of Supervisors, the staff in the Prince Edward County Administrator's Office has compiled the following series of articles to provide the citizens of the County an accounting of the data and information being evaluated by the Board regarding the proposed Sandy River Reservoir Project.

INTRODUCTION

The decision to proceed or not in building a public water system for Prince Edward County is one of the most important decisions that will be made for this County, for the next 50 years. There are risks for the County no matter which decision is made. If the decision is made to not proceed, our citizens and businesses will assume the risk that there may be a severe drought and the Appomattox River will not have enough water to support the needs of the community. If that occurs, the County may never be able to overcome the damage it will inflict on the County's ability to attract new businesses and jobs. If the final decision is to move forward and build the water system, the risk faced will be the cost and the impact the debt service will have on the citizens of our County.

The Prince Edward County Board of Supervisors understands the importance of this pivotal decision and has been studying the various aspects of this project for almost four years. There has been a vast amount of information presented to the Board and the public over that time. The Board must now

make a final decision based on the information it has received. It is the intent of the Board to share that information with the public in this newsletter.

This publication is meant to provide to the public information the Board has received over the last four years. The intent is for this publication to provide factual information that will help answer many of the questions the public has about this issue. This issue is so complex there may be some questions that will not be answered by this pull out section. The Board intends to conduct public information meetings on this topic and strongly encourages every citizen in the County to attend. If there is a question that any citizen feels has not been answered by this article please attend one of the public sessions and ask your questions or e-mail your questions to board@co.prince-edward.va.us. The County will respond to your e-mail. The Board will strongly weigh all citizen input before making a final decision.

History of the Sandy River Reservoir

The Sandy River Reservoir (SRR), located about 6 miles east of the Town of Farmville, is a product of a citizen-led planning effort that began in the 1960s. Over 40 years ago, the citizens of Prince Edward County recognized that planning for a reliable long-term water supply would be vital for the future economic stability and viability of the County.

The voters of Prince Edward County have twice voiced their strong approval for constructing the Sandy River Reservoir (SRR) as the future water supply for the County. In 1971, fifty-nine percent of the voters approved a referendum to borrow $725,000 to construct the reservoir. Due to delays and rising costs from inflation, additional funds had to be obtained, and in 1983, eighty-three percent of the voters approved a second referendum to borrow another $600,000 to finance and build the reservoir.

In 1984, the permit to construct the dam was issued with a dry dam restriction. Construction of the dam commenced in 1985 and was completed in 1988. The county received authorization to fill the SRR in 1993, and the gates to the dam were closed in 1994. The 740-acre reservoir was filled in 1995, providing 3.2 billion gallons of water storage, and a safe yield capacity of 8.0 million gallons per day (mgd).

Since that time, the County has evaluated several options for utilization of this resource. After careful consideration, it was determined that the option of a new water treatment plant and distribution system has inherent advantages of opening up new service areas while still providing the ability to serve other municipal customers and was the best option to study in detail. In 2007, the Virginia Heartland Water and Sewer Authority was formed and a withdrawal permit was obtained with a maximum daily water withdrawal of 6.3mgd and a maximum annual water withdrawal of 1.36 billion gallons or a daily average of 3.726mgd.

Prince Edward is now analyzing how best to utilize this valuable resource.

WHY ALL THE FUSS ABOUT WATER?

As stated in the article titled "History of the Sandy River Reservoir" citizens of the County started a process that led to the creation of the Sandy River Reservoir (SRR). But why did they start that process? As early as the 1950s, there was evidence the flow of the Appomattox River was decreasing while the demand for water in and around Farmville was increasing. Droughts and their impacts on the flow of water in the Appomattox River are not a new phenomenon to the area. During the 1940s and 50s there were several years when the flow in the Appomattox got fairly low; then in the 1960s the area experienced 6 years when the flow was low, with the lowest flow being less than 4mgd in 1968. These periods of drought concerned the citizens and they took the necessary action to build the SRR.

As many of you will recall, especially those who farm, raise cattle and grow gardens, last year (2010) was a dry year and the Appomattox River's flow decreased considerably. The flow reached its low point during October. That flow was about 29 cubic feet per second (cfs) or about 18.7 millions of gallons per day. That amount is more than enough to supply Farmville and Prince Edward County now and into the foreseeable future. But when the flow is reduced that low, if the area doesn't receive a good amount of rain soon, the water level of the Appomattox falls quickly.

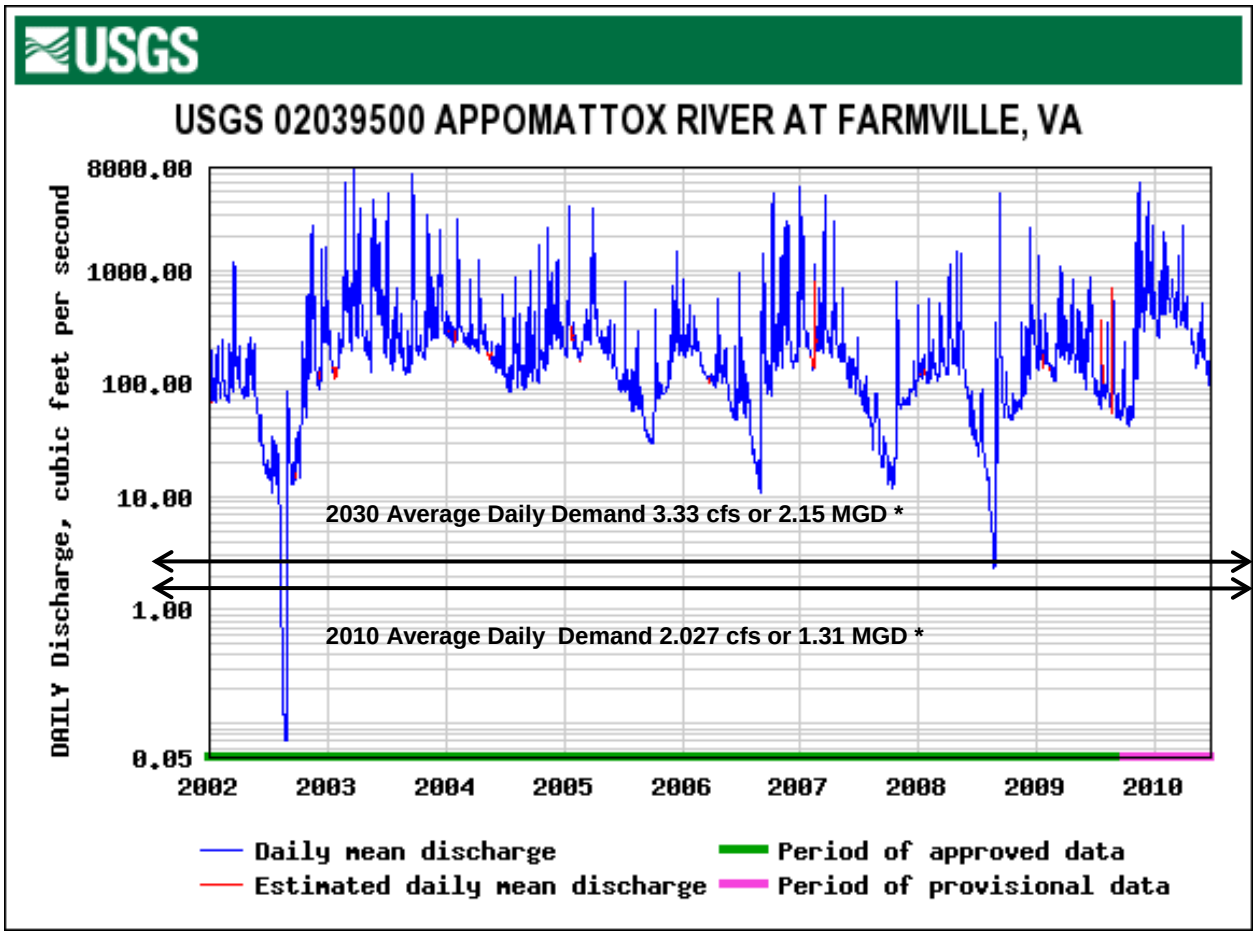
How fast – during the last three periods of low flow in 2002, 2006 and 2008 the flow fell from 30cfs to about 10cfs or 6.4mgd in a matter of days. In 2002, it only took 5 days; in 2006, it took about 25 days; and in 2008, it took 18 days to fall from 30cfs to 10cfs. Once the flow falls to 10cfs without rain, it continues to fall very fast. In 2008, it only took 16 days to go from 10cfs to its low of 2.5cfs or about 1.6mgd. In 2002, it took about 19 days to go from 10 cfs to its low of .07 cfs or about 45,000 gallons per day. In 2008 if it hadn't rained significantly for another week or so the flow could have easily fallen to 2002 levels.

Since 1926 the United States Geological Survey (USGS) has tracked the flow in the Appomattox River at Farmville. How many years in that period has the Appomattox's flow been as low as last year (2010) when it fell to about 29cfs? Looking at the data on the USGS web site (www.usgs.gov) the answer is 25. In the last 85 years, we have had 25 years when the flow of the Appomattox River has fallen to a rate that just a few more days without rain, would have caused the flow in the river to fall to a level approximating the flow in 2008 or even possibly as low as in 2002. That averages out to about once every 3 ½ years. This fact surprises a lot of people; they don't remember droughts occurring that often.

Droughts don't occur in regular patterns. In fact, from 1971 through 2001 a period of thirty years there were only four years, 1977, 1987, 1999 and 2001 that we experienced such low flows in the river. Thus, until the 2000's, most people didn't experience these periods of drought and its impact on the

Appomattox on a consistent basis. But since 2002, the year of the worst drought and the lowest flow ever in the river, we have experienced 5 years (2002, 2006, 2007, 2008, and 2010) when the area experienced drought and flow in the Appomattox River was as low as or lower than last year.

In fact, 2002 and 2008 were the two worst years ever recorded and 2006 and 2007 were the in the bottom 10 with regards to the amount of flow. The chart below shows the flows in the Appomattox River from January 1, 2002 until the early part of 2010. The horizontal bar lines on the graph show the average daily demand of the area to include Farmville and Hampden-Sydney currently in 2010 and the projected demand in 2030.



Why has the flow in the river been so low so often the last 10 years? Has the rainfall been that low? The answer is yes and no. The average rainfall in Prince Edward is 43.5 inches per year. From 1997 through

2010, a period of 14 years, the County's rainfall was below the average for twelve of those years. The average rainfall over that time was 41.7 inches per year, about 2 inches below the average. Most people would not think those were extremely dry years. The worst year was 2007 when the rainfall was 35.6 inches or about 8 inches below average. In only 3 years was rainfall for the year less than 38 inches. Those amounts are below normal but they are not nearly our lowest rainfall totals for a year. In fact, only the 2007 drought was even in the top 10 of the worst droughts. Then why has the river levels fallen so much in times of moderate drought? The County believes the answer may be a declining water table level.

The water table is falling in Prince Edward County and all across the state and in every County in the Appomattox Water shed. Most of the localities in this watershed are rural and most of the people in those Counties get their water from wells. Today in Prince Edward County, there are about 1,000 more wells than there were 10 years ago. Without a public water system being available, every house that has been built outside of Farmville has had to dig a well to provide water. Additionally, the programs to improve our water quality by fencing livestock out of streams have meant many farmers and horse enthusiasts have sunk wells to provide water for their animals. Without a public water system and with the increasing growth in our County and the region, we are going to see even more wells in the future. We could easily have another 1,000 wells in the County by 2020.

All of these wells are drawing water out of the ground at an ever increasing rate. Much of that water is being put back in the ground through the septic systems of the houses. But while we are pulling the water out at levels of 50 to 200 feet below the surface we are putting it back at anywhere from 5 to 10 feet below the surface. So what's the problem – we are replacing the water at a level where it is being absorbed by trees, shrubs and grasses. Then it evaporates into the air.

In addition, much more land in Prince Edward has been cleared and developed. Rainfall on these lands runs off the ground and into streams more quickly than on undeveloped land. Thus, the water has less time to soak into the ground and recharge the groundwater. As growth continues to increase in the County, this trend will only increase. A mathematical model was developed by the County with the aid of interns from Longwood University. The model used regression analysis and measured the reliance of the Appomattox River on rainfall for its flow. When the model was run using data from 1959-1981, it showed that rain accounted for only 58% of the flow. But, using data from 1997-2007 it was found that rainfall accounted for 71% of the flow. The river is relying more and more on rainfall for its water. Thus, when we have dry spells the river level falls faster than it had in the past.

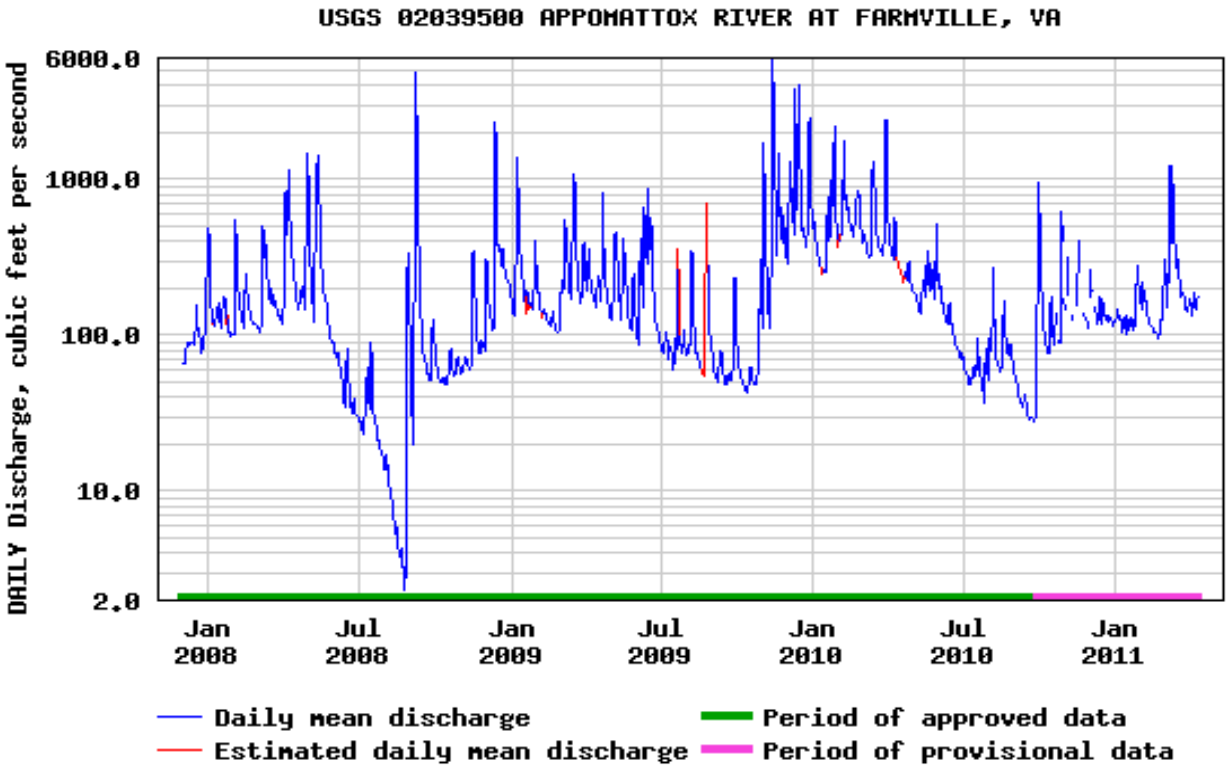
More and more citizens in the County are reporting that springs that used to flow continuously have either dried up completely or only run a few days after a rain. Streams that flowed even in the driest and hottest of years are either dry every summer or dry even in a moderate drought. Indications are that the water table has fallen below the level needed to supply these sources of water or fall below that level with just a few weeks of little or no rain. Without these feeder streams and springs, the flow in the Appomattox River now falls much faster than in the past.

Because of the droughts in the 1960s, Prince Edward County citizens foresaw this problem and initiated action to build the Sandy River Reservoir. The cost to permit and build a reservoir has skyrocketed over the last twenty years. The Cobb Creek Reservoir being designed in Cumberland County will be about 1,100 acres which is about 50% larger than SRR. The cost to build that reservoir is estimated to be $280 million. The Appomattox River Authority has researched building a 622 acre reservoir in Amelia County at a cost of $120 million. If the Sandy River Reservoir wasn't built when it was, Prince Edward may not have been able to afford to build it today.

Data is showing the flow in the Appomattox will not only continue to be affected by moderate droughts, but that the negative effects will continue to get worse over time. The Town of Farmville agrees something must be done. They spent $1,703,999 to buy Motley Lake with the intent to use it as a water source. They have also signed a $244,350 engineering contract to design an intake on the Buffalo Creek and run a pipeline to the Town's water plant. That project is estimated to cost about $2 million. There appears to be little doubt a problem exists. What is the best way to solve that problem and provide a drought resistant water supply for all of Prince Edward County?

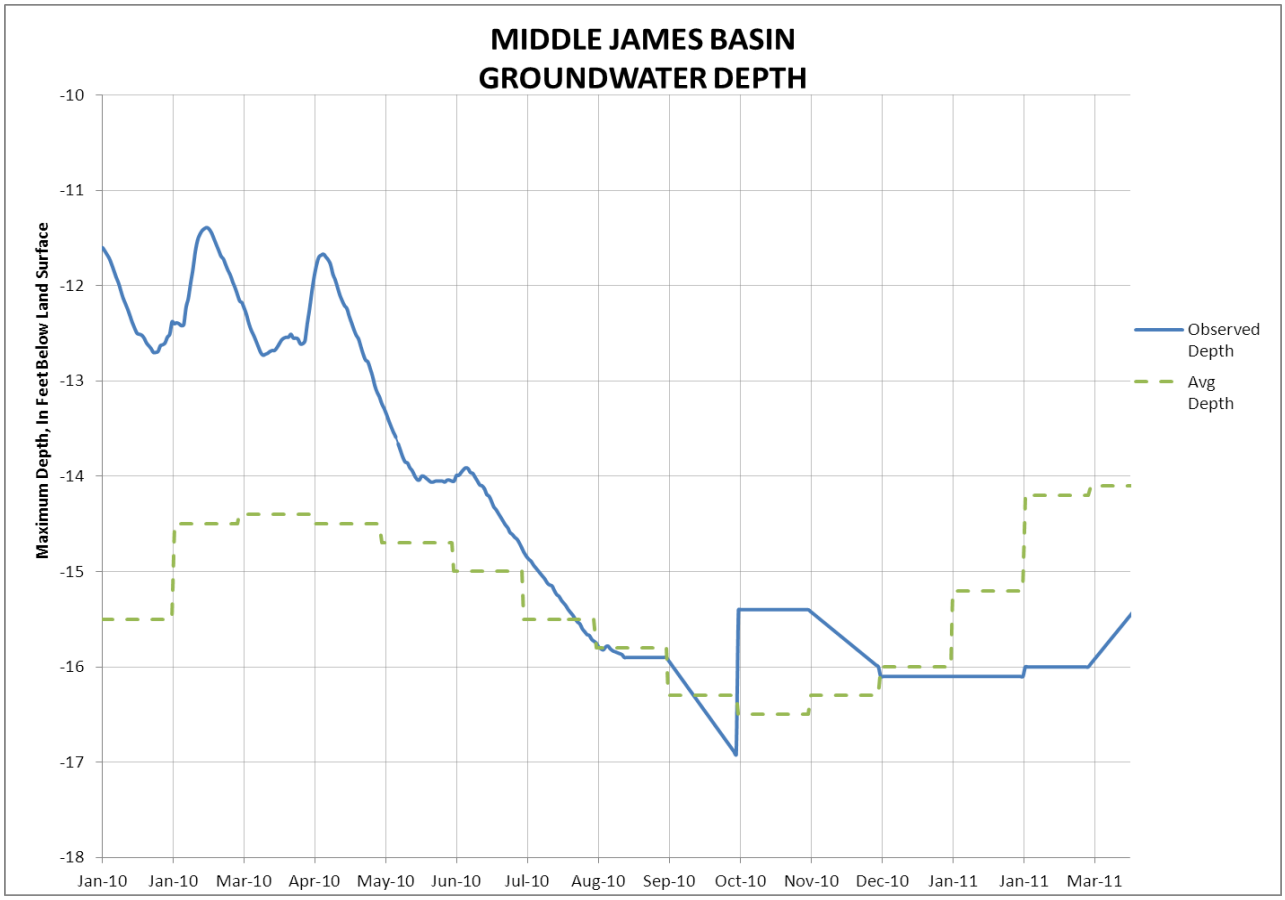
Current Appomattox Flow

How much water is in the Appomattox River now and how does it compare to past years? The graph below shows the flow of the river from January 1, 2008 until April 9, 2011. If we look at the amounts on January 1st of each year, we see the river is at about the same level as in January 2008 and 2009, but much less than the flow in January 2010. The scale of flow on the left side is logarithmic, which means that the flow this year is approximately 5 times lower than the flow the same time last year. The flow on January 1, 2010 was about 545cfs or 351mgd while the flow on January 1, 2011 was about 120cfs or 77mgd. But current river flow is a poor indicator of future flows. If it rains, the flow will increase almost immediately. But it is interesting to note the area is starting this year with less flow.



SOURCE - U.S. Department of the Interior | U.S. Geological Survey
Title: USGS Surface-Water Daily Data for the Nation
URL: http://waterdata.usgs.gov/nwis/dv?

While the flow in the river can change quickly with a substantial rain event, a single rain doesn't change the ground water table very much. The next graph represents groundwater depth. Groundwater levels normally drop in late Summer and Fall and are then recharged in the Winter. You can see from the graph that this did not happen this past winter. The groundwater level in February 2011 is only about a half a foot higher than the lowest point observed in September 2010. Unless there is significant rainfall soon, the Middle James River Basin is in danger of another serious drought in 2011. Prince Edward County is located in the Middle James River Basin.



Source: http://deq2.bse.vt.edu/drought/scripts/show_data.php?gid=6&groupname=Middle James&site_no=02039500&imageurl=/drought/scripts/images

OPTIONS TO SOLVE THE PROBLEM

Now that the problem of a reliable water supply is well documented the question is what should be done to develop a reliable water supply? What option is the best option, not just for now, but for the next 50 years or more? What should be done to secure our children, grandchildren and great-grandchildren's future? Our fathers, grandfathers and great-grandfathers did their part by building the SRR and saved this generation hundreds of millions of dollars by acting when they did. Should we act now or wait? If we act now what should be done.

Several options have been looked at. A joint meeting of the Farmville Town Council and the Prince Edward County Board of Supervisors was held in June of 2007. Timmons Group, an engineering firm hired by the Town of Farmville and Draper Aden Associates, the County's engineering firm made a joint presentation reviewing several options to solve the water supply problem. First, Timmons projected the future water demands for both Farmville and Prince Edward County. They estimated within 20 years the Town's demand would increase by approximately 700,000 gallons per day to a total of about 1.7mgd while the demand in Prince Edward County would be 2.1 million gallons per day, for a grand total of 3.8mgd. (Note: the Timmons report is available in its entirety on the Prince Edward County web site at www.co.prince-edward.va.us.)

Timmons reviewed the option of dredging and expanding Wick's Lake. They estimated the total volume in Wick's lake at 50-70 million gallons with an available storage of only 20-30 million gallons. To increase its capacity enough to provide a 3mgd safe yield would require dredging the lake to an average depth of 6 feet and raising the level of the lake by 1.3 feet. Timmons reported that just the mitigation costs of the environmental impacts were estimated at about $8 million dollars, and that did not include the cost of dredging, raising the dam, permitting, etc. At that time both the Town Council and the Board of Supervisors agreed this was not the best solution.

The focus then moved to how best to use the SRR. The first option reviewed was that Prince Edward County develop a water system, build a 3mgd plant at SRR and provide treated water to Farmville and the Town abandons its water plant. The cost was estimated at $24.96 million. The second option was, Prince Edward develop a water system and provide treated water to the Town in emergencies only. The cost of this option was estimated to cost $28.22 million, which included $3.26 million in upgrades to the Town's water plant. The final option was the County provide raw water to Farmville. The cost of this option was estimated to be $20.95 million. Over the next few months each proposal was evaluated.

The Town preferred the raw water option. That option does solve the Town's water supply issues, but it does not provide any additional water distribution lines into the County. To build such lines and the necessary water tank to provide storage and pressure throughout the County's system would have added more than $7 million to the cost, for a total of roughly 27.95 million.

In November 2007 at a joint meeting of the County and Town the County proposed a "Community Water Solution" which would consist of a new water treatment plant (WTP) at the SRR and the Town could decide if it wanted to abandon its WTP or continue operating the plant. This cost was estimated to be $22.56 million, if a 2mgd water treatment plant was built, or $24.96 million if a 3 MGD plant was built. The County preferred this solution because when the cost of distribution lines into the County are added to the raw water option the water treatment plant option was a less expensive solution. In summary, to build a comparable distribution system into the County under the raw water option would cost $7 million bringing the total cost of a comparable raw water option to $27.95 million. For this reason, the Board of Supervisors decided to study the feasibility of building a new water treatment plant at SRR.

The Board of Supervisors understands that residents of the Town are citizens of the County, and the Town is a vital part of the County. Real Estate values in the Town represent approximately 28% of all assessments in the County. While this is significant and the Board hopes the Town continues to grow and prosper, they also realize 72% of the taxable real estate values are located outside the Town limits, as well as about 65% of the total population of the County. While the Town still has tracts of land that can be developed, even more developable land exists outside the Town limits. At that point, the Board decided it would be best to consider a water system that provides a drought proof-water supply to the Town, but at the same time provides a water system to serve citizens outside the Town limits and to help foster future development and jobs throughout the County.

If the County builds a water system, members of the Board have indicated publically their willingness to provide treated water to the Town. Should the Town Council accept this option it could discontinue the development of the Buffalo Creek Watershed as a water supply and the need to build a new water line from Wilck's Lake to the Town's water plant. If the Town Council were to accept this option, they would have no reason to continue studying the development of the Buffalo Creek as a water supply and not build a new water line to the town's plant. This would save the Town approximately $2 million. Additionally, with a secure water supply the Town would no longer need Mottley Lake and could sell that property if they desired. If they could sell it for the amount they paid, the Town would have additional cash of 1,703,999 and avoid spending $2 million for a total combined amount of $3.7 million.

What is a PPEA – Why did the County use this process?

PPEA is short for Public Private Education and infrastructure Act. The Act was passed into law in Virginia in 2002 to allow for expedited design and construction of certain infrastructure such as schools, roads, water and sewer treatment plants and pipelines. The process is a competitive selection process of public procurement that encourages creative solutions, collaboration and cooperation between the owner, engineer, and contractor in order to simplify the process and save time and money.

The PPEA process has many advantages over the traditional "design, bid, build" process. Some of the advantages are: (1) the locality has a single point of responsibility for project delivery, (2) a reduction in disputes between the locality and the construction team, (3) it provides more opportunities for cost and time savings, (4) construction methods are integrated with the design, (5) there is more collaboration between the local government and the design/build team, (6) early establishment of a budget, and (7) cost savings by the reduction of risks.

The traditional "design, bid, build" process has several disadvantages as compared to the PPEA. It is often more time consuming, the local government is liable to the contractor for the design, low-bid not

value drives decisions, constructability issues often surface, the final cost is often higher because of change orders and the construction firm faces more risks than under a PPEA which increases the bid. The advantages of using the traditional process are: (1) it is widely applicable and understood, (2) it follows a least-cost approach to construction.

During the construction of a house or other structure, it is not unusual that the construction firm will find that the design has a flaw or some other construction issue. The contractor then contacts the owner who is then stuck in the middle of the dispute between the designer and the contractor. This results in a change order which drives the cost up. With the PPEA process, the design firm and the construction firm are a team and any design/construction issue is resolved by the team internally at no additional cost to Prince Edward.

For Prince Edward County, the PPEA process was a more cost-effective procurement option than the traditional process. Using the USDA fee schedules, a project of this scope would have cost the County approximately $3 million just to obtain the design. The final cost of the interim agreement will be less than $1.85 million, which is about $132,000 lower than the initial contract price. Additionally, the team paid the County $50,000, as required in the County's PPEA ordinance. These funds were used to hire a third party engineering firm to evaluate the proposal and an attorney to review the PPEA contract.

On October 17, 2008, the design-build team of Crowder Construction and Draper Aden Associates submitted an unsolicited PPEA proposal to Prince Edward County for design and construction of a new water system. In accordance with state law and local adopted guidelines, the County advertised for competing proposals for a period of 51 days. THIS PROJECT WAS BID, as required by the Code of Virginia.

The County hired a third party engineering firm (Wiley/Wilson) to review the proposal, and they found it to be reasonable and the project "was reasonably expected to be successful." The firm informed the

County during the early years of operations water demands would be low, but they also stated “Yet, as the system matures, the County will enjoy the benefits that the project will provide. Specifically, the firm stated a “Public water supply for Prince Edward County is critical if the County has goals for public health, fire protection, economic development, and independence as a water purveyor.”

Even after this review found the proposal to be reasonable, the Board of Supervisors had the County’s financial advisors, Davenport & Company, review the financial condition of the County to determine if the County could afford such a project. This analysis concluded the County could afford a project of this scope without an undue burden on the County and its taxpayers. The financial implications will be reviewed in more detail later.

In January 2010, Prince Edward County entered into an Interim Agreement with the Crowder Construction/Draper Aden Associates team. The purpose of the Interim Agreement was to refine the scope of the project by completing preliminary engineering work, assisting the County with the development of partnerships with potential large users including the Towns of Crewe and Burkeville and Hampden-Sydney College, prepare a financial model and deliver a final cost estimate based on the scope of work. The final estimate was delivered to Prince Edward County on February 8, 2011 for a total cost of $24.9 million. Of this amount it is estimated Prince Edward County’s portion of the project will be $19,628,661. This amount could be lower depending on how much capacity the Towns of Crewe and Burkeville eventually decide they would like. This allocation of costs assumes the Towns will only want the exact amount of capacity that they currently use. Normally a locality will want additional capacity to allow for growth.

This was done to assume a worst case scenario for Prince Edward and use that amount to determine if the project was affordable. If you add the costs associated with purchasing the Route 15 infrastructure from the Town ($2.5 million) and the cost of the PPEA ($1.847 million), the amount to be permanently

financed is approximately $24 million. This is the proposal is being evaluated and citizen input is planned before a vote to proceed with a Comprehensive Agreement for final design and construction of the infrastructure.

Partners and Grants

Prince Edward has looked at developing partnerships with surrounding communities and other water users. This was done to not only help development in our region, but to also help make the project more affordable to Prince Edward County. The Towns of Crewe and Burkeville have shown the most interest in joining this project. Both have concerns over their long-term water supplies. Both towns are still interested in the project.

In a letter dated March 15, 2011 signed by the Mayor of Crewe it states –"As you know, the Town of Crewe operates a 1.0 MGD water treatment plant that uses water withdrawn from Crystal Lake. During periods of extreme drought there is concern that there will not be enough water in Crystal Lake to provide an adequate supply to serve the 2,300 residents and 94 businesses that are customers of the Town's water system. Also, as you know there are three State facilities that are served by our water system: the Nottoway Correctional Center, the Piedmont Geriatric Hospital and the Medical Behavior Unit. It is important that the Town have an adequate supply of water to serve all of these customers." The letter goes on to state – "We are interested in working with Prince Edward County to secure low-cost, long-term loan funds to finance the project and are most interested in any grant funds that can be obtained for the benefit of the Town."

In a letter dated March 21, 2011 signed by the Chairman of the Town of Burkeville's Water and Sewer Committee it states – "The Town of Burkeville (Town) continues to be interested in the Sandy River

Reservoir Water Treatment and Distribution Project. Currently, the Town operates a community waterworks system permitted to withdraw 60,900 gallons per day from six wells to supply a population of less than 500 people. With this system, there is no way to know the amount of water in the wells, which leads to concerns of sudden complete loss of water service during any drought situation….We recognize the importance of the reality of this Project and what it means to our geographical region: thereby, we want to continue the dialogue concerning the Project."

Both Towns state or imply that without funding assistance they could not afford to join this project. That is not a negative statement. It is a statement of fact and is no different than how Prince Edward County has always felt about this project – if it is not financially feasible, then the Board of Supervisors has indicated it would not proceed. This is exactly what the County wanted the letters to say. These letters were included in Prince Edward's grant request to the Virginia Department of Health (VDH). Contact has been made with VDH and they have indicated this project is eligible for either grant funds or low interest loans and that regional projects are stronger candidates for grant funds.

Some are opposed to the County requesting grants for this project stating that grants are just another form of tax payer dollars. They are correct that grant funds do come from tax payers, but the implication is if Prince Edward didn't ask for those grants the grant dollars would not be spent. That is not correct. The amount of grant funds is almost never enough to fund all requests. If Prince Edward County does not apply for these grants they will simply go to another community. Then those tax dollars paid from the pockets of citizens from Prince Edward County will just be spent in another Virginia locality.

Besides grants it is important to have partners because it makes the project more affordable for Prince Edward County. It has been stated that Crewe and Burkeville will only pay 6% of the cost but get most of the water and that Prince Edward is spending millions to send water to those Towns. The final

allocation of cost has not been decided and there will be much discussion and negotiation before any agreement is reached. But what has been proposed is an agreement outline that is often used between communities. Costs are shared based on the amount of total capacity each community desires of the various phases of the Project.

First, Crewe and Burkeville will be responsible for the cost of all infrastructure located in Nottoway County. Second, both will be responsible for their percentage of the capacity they will buy of the proposed 2mgd water plant. It is projected together the two towns will want about .5mgd. This is 25% of the capacity of the water plant so they will be charged 25% of the cost of the water plant. This same process is used for the intake and the water lines running east from the water plant. For the water lines running from the water plant to the Nottoway County, line Crewe and Burkeville's share of this line is about 28% and Prince Edward's is 62%.

Without their involvement it would be more expensive for Prince Edward to run a water line east of the water plant or build a 2mgd water plant. For the intake, which has a capacity of 8mgd, the two Town's portion is 6% because 500,000 is only 6% of the total capacity. If the two Towns want additional capacity they will pay the same rate as Prince Edward. While Prince Edward will not be using as much of the capacity in the beginning, it is desirable for Prince Edward to maintain control over the majority of this valuable resource. Maintaining control over the majority of the resource will allow Prince Edward County to supply Farmville in case of an emergency and to have the capacity to support future growth in the County.

The State and the Federal Governments want regions to work together. Prince Edward is not in competition with our neighbors; Prince Edward is in competition with other states and countries. That is why State and Federal grants favor regional projects. The health of the regional economy is very important for the revenue and employment of not only Prince Edward County, but for Farmville as well.

According to the latest data from the Virginia Employment Commission, 342 residents of Prince Edward County work in Nottoway County. Most work at the three state facilities that get their water from Crewe. It is important to many families in Prince Edward County that those facilities have enough water. The state is studying the possibility of expanding the Medical Behavior Unit and would like to expand the facility in Nottoway County. The state is considering other locations because of their concern over the availability of water. An expansion could mean one hundred or more jobs to our region. Jobs that many citizens of Prince Edward could get.

Prince Edward County and the Town of Farmville serve as the regional retail and job destination. People from seven surrounding Counties work and shop in Farmville and Prince Edward County. This generates a lot of tax dollars to both localities. Farmville's two largest sources of revenue are the Meals Tax and the Business License tax, for Fiscal Year 2010 those two taxes generated $3,115,340 for Farmville while Real Estate taxes only generated $477,809. A large portion of both taxes are paid from money spent by people who live outside of Prince Edward. Prince Edward County received $2,526,302 from sales tax for the General Fund and $2,564,534 in sales tax revenue for the Schools. That is almost $5.1 million dollars; Prince Edward collects much more from this tax per person than any of our surrounding counties and about the same or more than Chesterfield, Goochland, Montgomery and Roanoke Counties. This revenue allows both Farmville and Prince Edward to keep property taxes low. In fact, only seven counties out of 95 have a real estate tax rate lower than Prince Edward County. Thus, the economic health of our region is a vital concern for both Farmville and Prince Edward County.

Is this Project Affordable?

Based on very conservative assumptions, Prince Edward County can afford to pay for this project with no tax increase. The financing plan recommended by the County's financial advisors would require the use of about $4 million from the County's fund balance reserve over a ten year period starting in year

2014 and ending in 2024. By 2025 the County's debt payments will be about the same as they are today.

By conservative assumptions the financial advisor looked at what they thought would be the worst case scenario. As an example it was assumed there would not be a single customer in the Rice area for 5 years. It was also assumed only one new commercial connection would occur every other year. Additionally, the financing plan assumes interest rates that are higher than current rates. It was also assumed only revenues from the real estate tax and the water system would be available to pay the debt and it was assumed there would be no growth in real estate revenues. Based on these conservative assumptions, the revenue available appears to be adequate to fund this project without raising taxes. By excluding all but real estate revenues from consideration the financing plan excludes almost 60% of all local revenues from the calculations. Additionally, real estate revenues have historically grown an average of 2.5% annually; if that pattern continues by the year 2018 an additional $1.3 million dollars in real estate revenues would be available to add to the other local revenues to supplement the General Fund.

The County can afford such a large project because the County has a relatively small amount of debt. Second, the debt that we do have will be paid off quickly. We pay off 72% of all our debt in ten years. Third, over the last 14 years the County had an average revenue growth rate of more than 5%. But to be conservative it was assumed there would be no revenue growth to help fund the project.

The County's financial advisors have recommended a financing plan that calls for paying interest only for the first four years (2013 – 2016) of the debt. This was recommended because in 2017 payments on the current debt will be almost $700,000 less than they are today and in 2018, the first full year of debt service on the water project, debt payments will be almost $925,000 less than they are today. Also

waiting a few years to begin full payments will allow the system to gain new customers and increase revenues from the sale of water.

As stated above, the financing plan calls for four years of interest only payments and it was assumed an interest rate of 3.75% which results in payments of about $901,000 each of the first four years. Current interest rates available to Prince Edward are about 2.5%. At that rate the payments would be about $600,000 a year. That alone would reduce the cost by $1.2 million the first four years, reducing the required draw from the reserves by the same amount. The financing plan then calls for the debt to be amortized over 29 years and assumes an interest rate of 5.5% with payments of $1,676,445 per year. By 2025 the total debt service requirements of the County to include the water project debt will be about the same as they are today.

Operational Costs

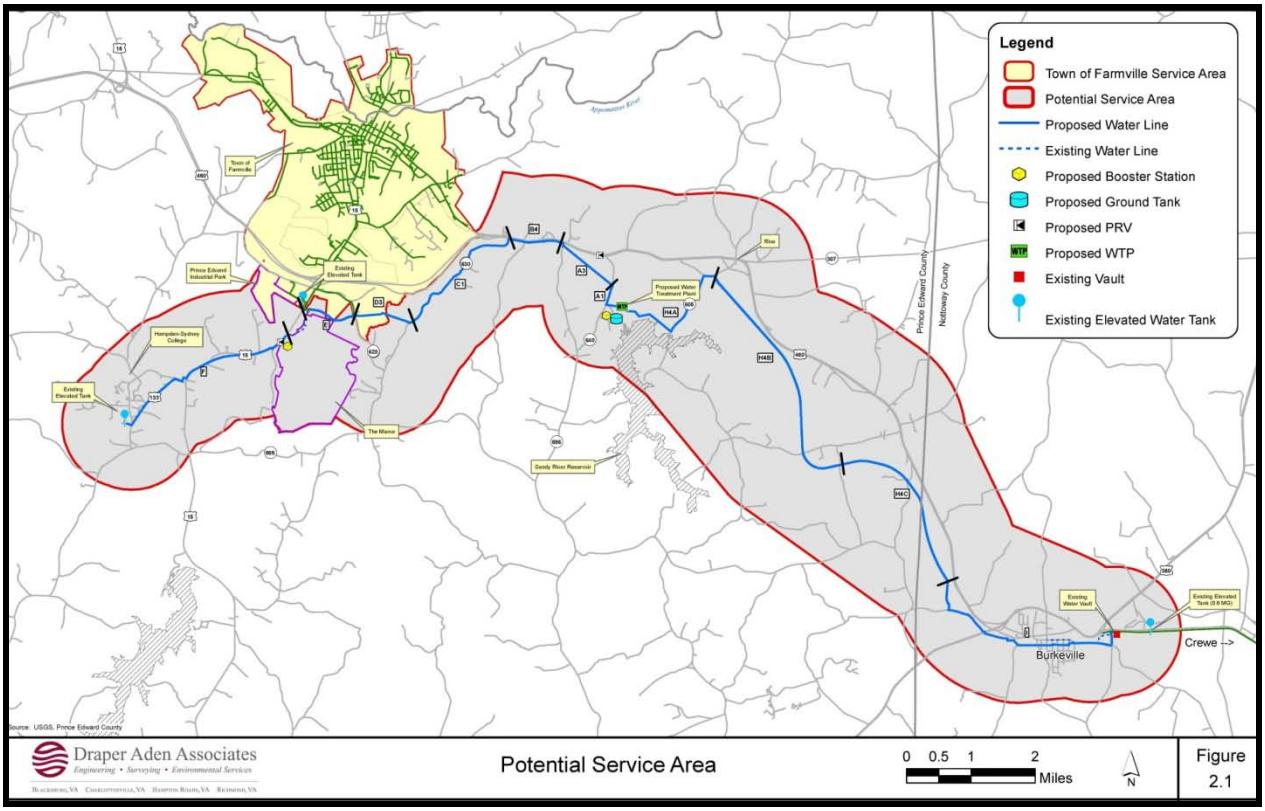
Based on the assumption that the new system would provide water to Crewe, Burkeville and Hampden-Sydney, the County assumed the new water plant would provide those entities with the same amount of water they are using today. That is about 550,000 gallons of water. It is assumed Prince Edward County would only need about 12,000 gallons per day. It was estimated that the operational cost of the plant would be $554,000 annually and Prince Edward's distribution system expenses would be $100,000 (this is extremely high for a new system) annually for a total cost of $654,000. The sale of water to Crewe, Burkeville and Hampden-Sydney would generate revenues of $629,512. Connection fees and aggressive management of costs are assumed to cover the $25,000 shortage.

Project Scope:

The design-build team has worked closely with many participants to develop a scope for this project. Contributors include County staff, the Board of Supervisors, several state agencies, key property owners, leadership from the Towns of Crewe, Burkeville and Nottoway County, Hampden-Sydney College, and

others. The Towns of Crewe and Burkeville and Hampden-Sydney have expressed interest in connecting to the new water system because of the increased reliability that it will provide. The Town of Farmville has been exploring other water supply options to date, however, up to two emergency connections could be added to the project if the Town and Prince Edward County agree. Based on this expression of interest, the proposed project scope includes connection to the Towns of Crewe and Burkeville, and a connection to Hampden-Sydney College.

The proposed project includes a new raw water intake sized for the ultimate safe yield of the reservoir of 8.0mgd. A new water treatment plant with an initial capacity of 2.0mgd expandable to 4.0mgd would be constructed on County-owned land northwest of the existing dam. From this location, water would be pumped in two different directions. The chart below shows the proposed system.



The eastern water system will follow a power line until Route 605, and then head north to provide availability to the Rice community, and then will follow the High Bridge Trail to Nottoway County to connect to the existing water systems in Burkeville and Crewe. There are two locations off the High Bridge Trail where water could be extended to serve areas along Route 460.

The western water system will head north along Route 640; follow power lines northwest to Route 460, and follow East 460 for a short distance to Route 630. The pipeline will head south along Route 630, then turn west to go cross country and provide service to the proposed Granite Falls Convention Center/Hhotel and The Manor, then head south along Route 15 to Hampden-Sydney College.

Projected Demands:

Projection of demands, or water that is expected to be used for a new water system, can be a confusing issue. From a technical design standpoint, it is more conservative to project demands on the high side to make sure that the pipes, pumps, and tanks are large enough to supply enough water to initial users and allow for a reasonable amount of growth. However, from a financial standpoint, it is more conservative to project demands on the low side to make sure enough water will be sold to fund the system. Therefore, in the preliminary design, different numbers are used for demand projections depending on the application.

When projecting demands for a new system, water production data from prospective existing customers, with a history of water service, is analyzed such as the Towns of Crewe and Burkeville and Hampden Sydney College. The maximum daily demand for these three entities totals approximately 650,000 gallons per day. Next, projected demands are added from any specific large users such as the

Granite Falls Hotel and Conference Center, which is projected to have a demand of approximately 52,000 gallons per day when it is fully operational. Finally, a growth factor is added. The growth factor is estimated by looking at potential land use along the proposed service areas as identified in the Comprehensive Plan, and population growth rates, as shown in the most recent available census data. An example of a future growth area is The Manor, which, when completed, is projected to ultimately have hundreds of residences. Since these residences will not all be in service immediately, substantial revenue is not anticipated in the initial years; however, it is important to design the main infrastructure to allow for this future growth.

Some residential customers currently on wells and who live adjacent to the new water line may elect to connect to the water system, especially if there is a problem with the quantity and/or quality of their well water. These existing residential customers are likely going to be a small contribution to the total demand initially. The real driver of demand is future growth and extensions to new business and/or residential development.

To be conservative from an initial revenue standpoint, the following potential demands for the region have not been included:

- Growth related to Longwood University;
- An expanded service area;
- Commercial growth;
- A large water user, and;
- Growth at the correctional facility and hospital facilities in Crewe

Why do we need a 2 million gallon per day treatment plant if we are only projecting demands of less than 700,000 gallons per day initially? One reason is for operations. In order to produce 2 million gallons, a plant would have to operate 24 hours a day. A plant with this capacity should be able to

produce most of the water needed in a single shift, which simplifies staffing and reduces overtime. In addition, this size plant has built in spare capacity, if needed, to attract a new large water using employer. Finally, when evaluating equipment that will facilitate expansion, the cost savings for a smaller size treatment plant was marginal.

Expansion of the System

This system has been designed with expansion in mind. Most of Prince Edward County outside of the Farmville service area is rural. Therefore, the key is to link up some existing significant water users and provide a "backbone" water system that can be easily extended. Where appropriate, the system will include connection points that will facilitate a future extension of the water main.

The system, as proposed, would provide water to areas in the Districts of Lockett, Farmville District 1 outside the Town limits and, Hampden-Sydney. But water lines proposed to run down State Route 630 are less than a mile away from Leigh District and less than two miles from Worsham Road. From the Burkeville area, the water line would only have to be extended about a mile south down Highway 360 to enter back into Prince Edward County. The line from the existing Hampden-Sydney water system would only have to be extended about a quarter of a mile to reach Five Forks road or about six-tenths of a mile to reach the intersection of Back Hampden-Sydney and Hardtimes Road both located in the Buffalo District. Extending a water line about two miles down Hardtimes Road reaches the Prospect District. Based on the prices we received in the proposal it would cost $400,000 to $500,000 to design and build a mile of water line. The objective of this system is to provide a core system to allow a reasonable expansion to meet the 20-year maximum daily demands and demands beyond. Each expansion of the system will have to be evaluated, as it occurs. Most counties expand their water systems as demand and or grant funds become available.

The treatment plant has an initial capacity of 2.0mgd; however several of the major components including the filters, lab building, chemical feed rooms, and clearwell are sized to allow an upgrade to 4.0 mgd. The intake structure is designed for 8.0 mgd. Incremental capacity upgrades can be made with relatively minor capital costs.

Benefits of a Public Water System

A. Fire Protection

A major benefit of municipal water systems is the ability to provide improved fire protection to the service area. The proposed design for the Sandy River distribution system includes fire hydrants placed approximately every 1,000 feet in areas where the water line is located along roads. The system is designed to deliver a minimum fire flow of 1,500 gallons per minute, twice the recommended flow rate for residential development. This fire protection rate will allow for development of larger structures with higher fire flow requirements. The additional fire hydrants at high pressure provide more convenient locations for a tanker truck to fill up quickly to go fight a rural fire. Fire protection is a significant benefit to the community by increasing public safety, and can also result in lower property insurance rates.

B. Assists in Fostering Future Economic Development

A public water system with a proven drought-resistant supply of water will allow our region to attract companies that would not look at our area today. Strong established companies have become very sophisticated in deciding where to locate. Today, even small companies can locate anywhere in the world. Many employ consultants to determine the best location in which to locate. These consultants study every aspect of a location. Localities are eliminated from consideration before they even know they were in the running if they do not have all the attributes a company wants. A company that uses a large amount of water each day even if it is only 100,000 gallons will see the USGS water graph for our

area and strike us from consideration. We will not even know this because we don't even get to first base in the site evaluation process. Some will disagree with that, but if it was your company what do you think you would do? We must do all we can to bring new companies and jobs to our region. We need jobs for our young people, so they do not have to move away. Over the last 50 years, too many of our children had to move away because there are not enough good paying jobs here in Prince Edward County.

We need to bring in business to increase our commercial tax base. It appears certain both the State and Federal Governments will continue to cut the amount of revenue they provide to local governments to run schools, courts and social services. Services provided by those agencies are often mandated and that will mean the local government will have to pick up those costs. Invariably inflation will also increase the cost of local government and schools. A public water system that is drought resistant is vital in attracting new businesses to provide more jobs and improve the existing tax base to hold down the tax rates.

C. Immediate Local Economic Impact

If the County elects to proceed with the Comprehensive Agreement, Crowder Construction Company will serve as the general contractor who will subcontract a significant portion of the work to local workers. Crowder will provide some of the supervisors and tradesmen who will require many goods and services while in town such as food, lodging, fuel, and entertainment. The construction of the project is scheduled to take approximately 16 months with as many as 100 workers who will contribute to the local economy.

Moving Forward:

Now that the final estimate for the project has been completed, the next step is to finalize the financial model and firm up partnerships with the major parties involved. The financial model will be used as a negotiation tool to allocate costs and estimate water usage rates. This is a work in progress and input from the public will be solicited.

The County has scheduled evening informational meetings so the public will have an opportunity to ask questions about the project. The public meetings are scheduled for the following dates and locations:

Lockett District – April 26, 2011 at 7:00 pm at the Rice Volunteer Fire Department

Prospect District – April 28, 2011 at 7:00 pm at the Prospect Volunteer Fire Department

Hampden District – May 2, 2011 at 7:00 pm at the Hampden-Sydney Volunteer Fire Department

Buffalo District – May 3, 2011 at 7:00 pm at the Darlington-Heights Volunteer Fire Department

Leigh District – May 5, 2011 at 7:00 pm at the Prince Edward County Middle School

Farmville Districts – May 9, 2011 at 7:00 pm in the Prince Edward County Court House, Circuit Court Room

It is envisioned once the Board of Supervisors has heard from the public and is satisfied with the scope of the proposal; a vote will be taken on whether or not to enter into a Comprehensive Agreement with the design-build team. If accepted, the team will immediately secure pricing with their vendors and proceed with detailed design of the treatment plant and pipelines. Some of the sections are farther along in the design process and will take less time to complete. Once all the approvals are obtained, work will commence on the project which is scheduled to be completed and fully operational in 2013.

For additional information please call the Prince Edward County Administrator's office at 434-392-8837 or send an e-mail at board@co.prince-edward.va.us. Additional water project information can be found on the County's web site at www.co.prince-edward.va.us.