

**Washington County Service Authority Board of Commissioners**  
**February 26, 2014 Recessed Meeting Minutes (held February 27, 2014)**

The regular meeting of the Washington County Service Authority Board of Commissioners was called to order by the Chairman at 6:09 pm.

**ROLL CALL**

Commissioners Present:

Mr. Joe Chase, Chairman  
Mr. Ken Taylor, Vice Chairman  
Mr. Devere Hutchinson  
Mr. Jim McCall  
Mr. Dwain Miller  
Mr. Mark Nelson

Commissioners Absent:

Mr. Frank Stephon, IV

WCSA Staff Present:

Robbie Cornett, General Manager  
Dave Cheek, Operations Manager  
Kimberly Harold, Controller  
April Helbert, Engineering Manager  
Carol Ann Shaffer, Administrative Assistant

Also Present:

Mrs. Dawn Figueiras, Legal Counsel

**3. Approval of the Agenda**

Mr. Cornett had not corrections to the Agenda. Mr. Taylor motioned to approve the Agenda. Mr. McCall seconded the motion and the Board approval voting 6-0-0-1.

**4. 2014-2014 WCSA Budget Workshop**

Mr. Cornett referred to an article about WCSA printed in Water System Operator (see attached). Mr. Cornett said he thought it was a very nice story and was pleased to share the efforts of WCSA staff.

Mr. Cornett then began discussions about the Budget saying tonight we envisioned a high level Budget presentation to answer questions.

We will be providing revised Budgets and reports as revisions are made and can have additional workshops at the Board's discretion. Mr. Cornett asked the Board to feel free to share their thoughts about additional workshops.

Raftelis has included this draft budget in their rate and financial plan and any corrections that were made will be incorporated into their rate and financial plan said Mr. Cornett.

In this Budget, departmental expenses amount are based on 7 months of actual data. Some line items have been manually keyed in and are projections based on that 7 month period. Traditionally the Budget is adopted in June.

Mr. Cornett reported health insurance projections are based on 6 months and lower than what they should be making that adjustment. Connection fee revenue for both water and sewer will be revised based on the rates adopted by the Board. Raftelis' information is based on a 5% increase in water and 3% increase in sewer rates. Those figures are included in this draft of the Budget.

Mr. Cornett then turned the presentation over to Mrs. Harold.

Mrs. Harold began with section 1 Department Capital. Mr. Taylor questioned the Departmental Capital. Mrs. Harold said there were some capital items still outstanding in the Meter department. Mr. Cheek said the outstanding capital items in the Meter department were related to the 2 to 6 inch meters and those meters were nearing their end of life cycle. Mr. Cheek is evaluating how long those meters will last and how much it will cost to replace them; about \$250,000. Mr. Cheek said he would like to spread that cost over a 5 year period, starting

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with 10% of the replacement costs the first year.

The Administration Budget was the first item discussed by Mrs. Harold. She stated \$30,533 was expensed in addition to \$45,276.

Mr. McCall asked about an expense item listed for parking lot lighting. Mr. Cornett said it was additional lighting for around the office to address the dark corners. Some folks have expressed concerns about those dark areas when leaving after dark.

Mrs. Harold then went on to page 2 of the Budget; Customer Service. She said all the items listed were expensed.

Mr. Nelson asked what WCSA's Capitalization Policy was.

The policy is over \$5,000 as recommended by the auditor, set by WCSA.

The Maintenance items were the next Budget items discussed. Mrs. Harold pointed out the amount budgeted for the sewer vac truck in the amount of \$225,000.

If things develop with the town of Abingdon we do not need this truck. If things do not develop with the Town of Abingdon, we desperately need this truck, Mr. Cornett stated.

Mr. Nelson asked how often the sewer vac truck would be used.

Mr. Cornett thought Mr. Cheek may be able to better but about the truck. Mr. Cornett said I don't want to say we would use it daily. One option when looking at the sewer vac truck is a hydro excavation unit that would for more utilization when working with main line breaks. In very wet, soupy areas, the hydro excavation unit can be used in place of an excavator to suck up the mud and sludge from around the pipe. This unit will be very helpful for wastewater application as well as for water line

breaks and to clean out the raw water intake wet wells.

Mr. Cheek said there was a team in the Maintenance Department got to look at such a unit in the Blacksburg area very soon.

Mr. Nelson asked if there was a chance we could use or lease the sewer vac truck from the Town of Abingdon.

Mr. Cornett said the Town and BVU have allowed us the use of their sewer vac truck.

Mr. Miller said, by acquiring Damascus we are going to have to have something sooner or later. Mr. Hutchinson asked if we had to borrow one from BVU lately.

Mr. Nelson asked if the truck went up \$100,000 in one year.

Mr. Cornett said WCSA planned to use the remaining \$100,000 from the Exit 13 Project toward the purchase of the truck. We instead decided to use that money on the project. We have not ruled out a refurbished truck to reduce the costs. The Town of Abingdon just paid \$325,000 for their new truck. Mr. Cornett said he knew of two similar trucks that have been recently purchased for \$325,000. If we are comfortable with a refurbished truck we may be able to purchase one below budget.

Mr. Chase asked if the Town would be interested in selling interest in their sewer vac truck.

Mr. Cornett said he talked with Chilhowie and Abingdon about a lease agreement. The problem is keeping the wastewater system compliant and when you need the truck, you need it. Many times, when we may need it, they also need it for example during high rain events or during an emergency. A lease would work fine for maintenance but not in the event of an emergency.

Mr. McCall asked if we were looking at the high end models.

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Mr. Cheek said we are looking into smaller models. He said Tazewell spent \$400,000 on their sewer vac truck. Mr. Cheek said he has looked into several different alternative; demo trucks and smaller trucks which were all around the same price.

Mr. Cheek said they also looked into used trucks but used trucks are not an option if RD monies are used.

Mr. Cornett then discussed the mini excavator listed in the Maintenance Budget. Mr. Cornett said in our industry, A mini excavator would be a very versatile piece of equipment and thought WCSA would be able to make good use of one.

Mr. McCall said there were two big excavators that are not being used and one of them should "go". He then mentioned "a brand new trailer that has a load of straw on it" and he heard it was dangerous. Mr. McCall mentioned "getting rid" of the trailer and one of the excavators.

The Board discussed the size of the excavator. Mr. McCall said they both had very few hours on it.

Mr. Cheek said one truck also needed to be sold. He discussed the trailer saying it did not handle well and needed to be sold.

Mr. Nelson asked Mr. Cheek how much he expected to get for the sale of the equipment. He did not know.

Mr. Cornett said there were several pieces of equipment that needed to be surplused soon to help offset some of the expenses.

Mr. McCall mentioned transiting, over time, to only one ton diesel trucks.

Mr. Nelson said to be cautious of what is purchased so we can show our customers we have been great stewards of our money. Mr. Nelson feels WCSA has to

be able to show the reasons why things are done.

Mr. Hutchinson said maintenance is getting about 20,000 miles a year on the trucks for about 5 years, totaling about 100,000 miles per truck. To pay the excessive cost of idel time and fuel costs associated with a diesel, you will have to put a lot more than 100,000 miles on a diesel to pay the added expense. We are expecting to more than double the mileage on a diesel from 100,000 every 5 years to 250,000 miles every 10 to 15 years.

Mr. Hutchinson thought crew cab trucks was something that should have been considered some time ago. Maintenance costs, insurance costs and the cost of repairs will be more for a diesel than a gas truck and that needed to be taken under consideration too. The flat rate time is much higher for a diesel than a gas truck. Mr. Hutchinson thought WCSA should purchase a couple of diesel trucks and gage the costs over 3 years before purchasing several diesels because in the long run, it would pay to go with diesels versus gas trucks.

Mr. McCall agreed.

Mr. Miller thought a ton diesel truck would be more efficient in pulling the camera truck than pulling it with the big dump truck maintenance has to use now.

Mr. Cornett offered to track costs associated with the one ton diesel approved on February 26<sup>th</sup> and revisit purchasing additional trucks next year.

Mrs. Harold moved onto the Budget for Water Production. She discussed the Intake traveling Screen saying \$20,000 was budgeted for the screen this year. We have spent \$37,000 in parts for the screen and anticipate spending an additional \$17,000 before year end with an additional \$27,000 to finish repair of the screen.

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Mr. Hutchinson asked Mr. Cheek if he when they planned on changing the screen.

Mr. Cheek said if the screen fails, they have to shut the water plant down to repair it and at this time, they do not have the luxury of taking the water plant down. We plan to change the screen once the Intake goes online. We also have developed a plan using rental pumps to keep the plant running in case the screen fails before the South Fork Intake is online.

Mr. Nelson asked how often the filters at Mill Creek were replaced.

There are three filter stages at Mill Creek. Normally, we can get 5 to 6 years per stage. Right now, we are at year 5 with stage 100, so those cartridges will have to be replaced within the next 12 months, explained Mr. Cornett. The stages are staggered so one stage is replaced every 3 of 5 years.

Mr. Nelson about the \$95,788 listed on the Budget.

Mr. Cornett said the \$95,788 was a capital contribution amount fixed in the inter-municipal agreement between WCSA and the Town of Chilhowie. If both WCSA and the Town of Chilhowie were making that required contribution since the plant went online since 1999, we would almost have enough money to pay for the project at Mill Creek. Mr. Cornett said for reasons unknown, the contributions did not start until a few years ago.

Mr. Nelson asked how much was in that account.

Mr. Cornett said there was a line item in reserves specifically for Mill Creek contributions and thought it totaled about \$200,000.

The Distribution Budget on page 5 was the next item discussed.

Mr. Nelson asked if all the items were expenses.

Mrs. Harold said yes sir.

Mr. Cornett then discussed an item in the Budget to replace the Manhaim Altitude Valves. Replacing the valve should help reduce overtime, said Mr. Cornett. He explained, years ago WCSA had several valves that required manual adjustment. The Manhaim Valve is the last valve in the system that requires manual adjustment to maintain appropriate water levels in the Manhaim tank. Call outs are involved if that valve has to be adjusted after hours, which means overtime. Adjusting the valve may have to be done twice a week or three times on Saturday, said Mr. Cornett. The new valve will allow us to set the cut off point for the tank and will be controlled by a computer.

The Meter Department Budget on page 6 was discussed next.

Mr. Nelson asked how many trucks were allocated to the Meter Department.

Mrs. Harold said 4 trucks allocated to the Meter Department, of which, 2 were being replaced this year. She continued saying, actually, all 4 trucks needed to be replaced this year due to the mileage on the trucks and one of the trucks had to be towed today.

Mrs. Harold then discussed the Budget for Hall Creek. Mrs. Harold said Mr. Cheek and Mr. Dotson discussed and evaluated the needs at Hall Creek and those needs are listed. The Board reviewed the items listed.

The Damascus Wastewater Treatment Plants budget was next.

Mr. Miller asked if there was a backhoe at the WWTP that was underutilized.

Mr. Cornett said he was not sure they had a backhoe that could be used elsewhere but if so, he thought it was too heavy.

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Mr. McCall asked who owned the tractor located at the Damascus WWTP that the Town of Damascus claimed. Mr. Cornett said the tractor at the Damascus Plant was not included in the list of assets provided to WCSA when the acquired the Damascus Wastewater Plant. The Town said they wanted the tractor back and took possession of it.

Mr. Cornett brought a line item listed in the amount of \$35,000 to the Board's attention. He said Mrs. Helbert mentioned WCSA is required by DEQ to develop local limits for each WWTP, costing \$35,000 for Hall Creek and \$35,000 for Damascus. This cost should complete the sewer use and regulations development that we have aggressively been pursuing over the past 2 years.

Mr. Nelson asked if that amount would be expensed.

Mr. Cornett said it would be expenses.

Mrs. Harold moved on to page 10; the Capital Improvements Plan. She said \$887,245 was budgeted for fiscal year 2014, but we plan to spend \$457,542.

Mr. Cornett said each part of the Budget is synchronized with Raftelis' Rate Plan to ensure proper allocation for proper fiscal years going forward. The first 27 projects listed on page 10 were either built into the previous financial plan or the one that is ongoing said Mr. Cornett. Projects 28 through 35 are projects we desperately need to move forward with but after staff review and in working with outside engineers, will have to push those projects out to the 2020 Rate Plan.

Mr. Nelson asked if Raftelis would recommend the amount of reserve funds to have on hand and what our cash position should be in their next presentation.

Mr. Cornett said yes sir. That information would be presented to the

Board the week of March 10 and discussed on March 27<sup>th</sup>.

Mrs. Harold referred to page 11; Capital Improvements Plan for the Wastewater Department.

Mr. Cornett believes there may be some funding scenarios available that will offer grant and loan funding for the extension projects listed that are not currently funded that may allow for several of the projects to be cash flow positive. Mr. Cornett proposed to identify 2 or 3 of those projects and seek community interest and funding for them. Mr. Cornett said building cash flow positive projects will only help the bottom line, allow WCSA to provide community sewer service and help build revenue, allowing us to keep rates lower in the future.

Mr. Cornett said we are seeing positive impacts with the work WCSA has done in Damascus. Mr. Cornett thinks with the work Floyd (in maintenance) and his crew will be doing in the Damascus area over the next 24 months, will enable them to make a big difference without having to undertake major rehab projects.

Mr. Hutchinson asked if the unfunded projects listed in the budget were eligible for grant funding.

Mr. Cornett answered saying, "Yes sir".

Mrs. Helbert elaborated saying, based on current income levels and R&D guidelines those projects should be considered for grant funding, up to 30%.

Mr. Cornett said some projects from that group would certainly be presented to the Board based on priority.

Mr. Cornett discussed the Richie Road Project. If we are successful obtaining a grant for this project, that project can move from unfunded to funded projects. If the project is not cash flow positive the Board can decide if they are willing

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to accept additional revenue requirements and / or rate increases to pay for the project.

Mr. McCall asked if service could be provided to those two individuals by adding 2 meters and running service lines to those meters. There are two homes that need water but there is no potential for growth on Richie Road.

Mrs. Helbert said the 2 residences at the end of the road signed agreements and need water. The person in the middle of the road said no.

Mr. Cornett said the two residences were willing to install pipe they could connect to the existing water line.

Mr. McCall said those two individuals needed water and we should help them if we can.

Mr. Cornett agreed and said they would first apply for grant funding and also look into other alternatives such as People Incorporated for help in providing water to those two residences.

Mrs. Harold then referred to page 12, the FYE 2014 Operating and Capital Projection Summary and discussed the layout of the page. She said the total Income available after Deb Service is \$3,037,998. Capital projects will be \$1,300,000 for water; \$248,000 for wastewater totaling \$1,600,000. The capital equipment is what we anticipate to spend on departmental capital expenditures; bringing an increase in reserves for the year to about \$940,000, she explained.

Mr. McCall commented on the connection fees listed; saying the cost for connection fees has to be reduced in my opinion.

Mr. Nelson asked if the task force had a recommendation about connection fees.

Mr. Cornett said the task force did have a recommendation about the connection

fees and offered to summarize their recommendation.

Mr. Nelson asked if the committee recommended the connection fees be reduced.

Mr. Cornett said yes sir; a substantial reduction.

Mrs. Helbert said the recommended connection fee was not available at the time the Budget (FYE 2015 Operating and Capital Budget Summary) was produced. Mr. Cornett said the numbers on page 13 would be updated to reflect the recommended reduction in connection fees.

The committee's recommended connection fee can net the number on page 13 and that is why I was interested in what the projection was, said Mr. Nelson. That may drop reserves by \$1.3 million which may very well be in line with Raftelis' recommendation.

Mr. Hutchinson asked if Raftelis offered a formula to offset the decrease in connection fees.

Mr. Cornett said yes sir. Raftelis recommended a substantial decrease in connection fees for water but not for sewer. Mr. Cornett said Raftelis estimated about 100 connections would be affected at a cost of about \$160,000 in revenue. Mr. Cornett said the increase in the monthly user fee is 5% for water and 3% for sewer.

Mr. Nelson asked if the prepayment amount of \$775,000 recommended by Raftelis was included on page 13.

Mrs. Harold said she would double check but felt she did take that \$775,000 out of the debt shown on page 13.

Mrs. Harold then went on to discuss supplemental information as it pertains to benefits and insurance. Mr. Harold's figures show a projected 1% increase in insurance.

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Every year we build in a projected 10% increase in health and dental rates. With the health plan changes that were made last year where employees began paying a part of their insurance premiums, we had a 2.3% decrease in health premiums. So WCSA will see some savings in our current year budget since we will not have that 10% projected increase.

Mr. Cornett said it is hard to project benefits rates since the plan year for insurance will be October 1 and it will be about a month into the fiscal year before we know what the renewal rates will be.

Mr. Nelson said with the 4 year phase in of employees paying a portion of their premiums, employees will pay an additional 5% this year.

Mr. Cornett said yes, and the premiums paid by employees will eventually total 20%.

Mr. Cornett then discussed compensation.

Mr. Cornett said WCSA maintains 79 full time positions and currently there are 6 open positions. From this year to next year, we are showing a \$70,000 decrease in compensation, he stated. This is largely due to the projected reduction in overtime.

Mr. McCall asked what the goal for reducing overtime was for this year; "another 20% I hope".

Mr. Cornett said he was very encouraged in the reduction of overtime for this year until the Polar Vortex and then Mill Creek arose.

Mr. McCall said even with those issues, we still need to press overtime because there is still overtime going on that shouldn't be going on.

Mr. Cornett said he continues to look at opportunities for improvement with overtime. We are looking into putting a team together to evaluate call outs to

optimize time. If the Budget is approved as proposed, we think there will be additional savings in overtime with the revised, or soon to be revised, inspector rotation.

Mr. McCall asked what the 6 open positions were.

Mr. Cornett explained one open position was to fill the Customer Service position available due to Lisa Browning in Customer Service accepting the Administrative Assistance in Engineering position that has been available since Mrs. Barger left WCSA.

We got behind with lifting meters for non-payment and thought we needed additional man power to get back on track. The Board approved those two positions but before we filled them, we doubled our efforts to accomplish that work without hiring 2 new employees and were successful in doing that.

Rather than eliminating those 2 positions, we propose in this Budget, moving them to the Maintenance Department which will enable us to create the inspection rotation we believe is need. We propose these 2 inspection rotation positions be for a 5 year period, and can hopefully be eliminated after that period. With the galvanized line project coming up and because overtime doubled with the last line replacement project, we believe the additional personnel will help keep overtime down as it relates to the galvanized line project RPR Inspection resources we need. Mr. Cornett also believes at least one, 3 person crew if not two, 3 person crews will be needed over the next 2 years for the work required in Damascus. We have a couple of employees in Maintenance who indicate they may be retiring in the next couple of years as well. The other 3 positions would be for a wastewater crew. Since taking on

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wastewater in 1995, we have not hired any new personal to help take care of the wastewater collection system, Mr. Cornett explained.

Mr. Cornett proposed holding the 3 wastewater positions open. If we move forward with the Town of Abingdon, those positions may not be needed. If we do not move forward with the town, those positions will be needed.

We are on the edge. It was all we could do to keep up last week and when all the work was going on with galvanized line, stated Mr. Cornett.

In summary, Mr. Cornett said 6 available positions were as follows:

1 person in Customer Service;  
2 in Maintenance for the next five years to get through galvanized line, the work in Damascus and employees retiring; and a 3 person sewer crew if we do not move forward with the Town of Abingdon.

Mr. Nelson asked if those positions were fully funded in the budgeted amount of \$4,172,475.

Mr. Cornett said yes sir. Mr. Cornett said the budgeted amount also included a 1.5% yearly cost of living raise and an average 1% yearly performance evaluation.

Mr. Nelson noticed the overtime compensation was close to 10% of total regular compensation.

Mr. Cornett said he hoped to eliminate overtime with the inspection rotation. We plan to deploy 1 person with a crew for the galvanized line project as needed, instead of having a 3 person crew on site like we did with Phase 1.

Mr. McCall thought 1 person with a crew would be sufficient.

Mrs. Harold thought WTP production times would decrease when South Fork came online allowing WCSA to produce

more water in a shorter amount of time which would also reduce overtime.

Mr. Nelson said overtime was a way for some people to get raises.

Mr. McCall commented on the 1.5% cost of living raise, saying "that is what we old folks got". He then asked if everyone would receive the 1% raise.

No sir said Mr. Cornett. He explained once the annual evaluations were completed, employees are ranked and percentages are based on top performers getting more and low performers getting less with an average of 1%.

Mr. McCall said he did not like that because he felt it "was too buddy, buddy and caused ill feelings". Mr. McCall thought if someone did not deserve the 1%, WCSA did not need them and "they should be evaluated out of this organization, if they don't deserve that 1%". It happens, it is easy to do; if you have buddies, it is easy to do, stated Mr. McCall. All our employees more than deserve that 1% and the 1.5%. If the supervisor doesn't put on their evaluation that the employee is doing a bad job and discuss it with them; it is bad, said Mr. McCall.

Mr. Nelson said he was a performance person and believed some employees do more than others and you have to have a way to make people want to do more. Mr. Nelson said he had an issue with a straight raise across the board. If one person is doing a better job, giving a better effort; there should be something for them, he said. If you give the same raise to everyone, no one will try to excel, he stated.

Mr. Chase said there were some that were doing their job but were doing all they could and others had more opportunity to excel.



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Mr. Nelson said he was not opposed to a straight 1% and adding something extra for those who excel.

Mr. Nelson said "I believe your best asset is your people." He continued saying the overtime was outrageous at 10% of compensation. Mr. Nelson said he would rather pay employees more and drop the amount paid for overtime drastically.

Mr. Hutchinson asked how often an employee had to let go because they did not meet expectation.

Mr. Cornett said we have some that rank low on their evaluation. Their supervisor meets with them to discuss issues. WCSA wants to do what we can to help employee succeed, stated Mr. Cornett. We discuss the issues with the employee, put it in writing and give the employee an opportunity to provide feedback. Some employees have been receptive and go from the bottom range to the middle range and higher. Sometimes, lower performers choose to leave on their own and evaluations have been helpful in that regard. Sometimes we have monthly or quarterly reviews with employees; some employees are receptive and some are not. If employees are not receptive, we step up from the evaluation to written warnings or time off without pay, said Mr. Cornett. The goal with the evaluation and written warning process is never punitive but to try to salvage the relationship and develop the employee. The employee is truly are our most valuable asset. The goal is to cultivate and nurture the relationship and make sure we, as supervisors, are doing everything we can to allow that employee to succeed at WCSA.

Mr. Hutchinson asked if we kept track of 1, 3 and 5 year turnover ratios.

Mr. Cornett said we have records but do not keep up with those specific ratios.

Mr. Chase said there isn't that much turnover he, is there?

Mr. Nelson said there can't be much turnover because regular compensation is about \$48,000.

Mr. Hutchinson said there is a reason why there isn't that much turnover.

Mr. Nelson echoed Mr. Hutchinson's comment about turnover.

Mr. Hutchinson said that is what I am getting at.

Mr. Nelson said it is a pretty good place to work and the overall employee package the employees have is pretty strong, "so I take back what I said a minute ago".

Mr. Hutchinson said it did not appear to him that there was any problem with turnover and thought if there was a performance issue, it was taken care of.

Mr. Cheek said there were three people on payroll right now with performance issues; 2 have been given time off without pay.

Mr. Harold said the remaining information in the Budget was summary information, detailed information, showing our status month to date, year to date and budget wise. Projections look good at this point and they will be updated monthly, she said.

Mrs. Harold said she highlighted the connection fees listed in the summary information since Raft Elis is recommending a change to those numbers. Mrs. Harold said we were still working on the Budget with the Town of Chilhowie Steering Committee and those figures will be updated as the Budget process with Chilhowie progresses.

Mr. Nelson asked about the City of Bristol and why there is a \$70,000 increase with the amount of water purchased. Mr. Nelson thought there

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should be a decrease in the amount of water purchased from Bristol.

Mr. Cornett agreed and said that amount should go to 0.

Mrs. Harold said she discussed that with Raft Elis and offered to look over her notes about that.

Mr. McCall thought the amount Budgeted for Public Relations, \$120,000, was too high. He said the newsletters were nice but felt only about 10% were actually read. He thought that amount was "way out of line". Mr. McCall also questioned the Engineering Fees. He thought there was an opportunity to save money there by tightening up on negotiations and said he was not criticizing what has gone on.

Mr. Nelson said the thing about engineering fees is most flow through contracts.

No matter who is paying the bills, a dollar is a dollar, Mr. McCall said. Mr. McCall also thought the monthly legal bills were high and suggested taking a look at them. When you add them all up, it is a lot of money, Mr. McCall stated.

Mr. McCall said maybe they (ELM) is contacted more than they should be. Maybe as general Manager you feel more things need to go before ELM. I think you have a good legal mind, he stated. Mr. McCall continued saying, it is a lot of money when you are considering raising rates.

Mr. Cornett addressed Mr. McCall's concerns starting with the legal costs. He said Mrs. Figueiras and Mr. Lawson and Mr. Cornett discuss on a yearly basis where things at WCSA were going and what we can be done to optimize things. ELM is involved with many different aspects such as; Engineering Agreements, Project Contracts, certifying titles for funding agencies, fixed costs associated with projects and

funding agency requirements, work on contracts between WCSA and another municipalities such as Scott County, Russell County, the Town of Abingdon other contractors with regulatory agencies. Each year we think legal services will decrease. Some of the engineering fees are on a project by project basis.

Mr. Cornett said some of the legal services staff may use, for example, could be for a hydraulic analysis performed for a prospective industrial site and work done on the KVAT building. Mr. Cornett said we try not to exercise that more than we have to but will redouble our efforts and try to do all we can in house.

The Public Relations portion of the Budget is a number we will revisit, said Mr. Cornett. He thought the amount in the Budget was based on 2 large projects that firm helped with last fiscal year. One of those projects should not be there next fiscal year and the other is the newsletter which can be revisited.

Mr. Nelson thought \$70,000 may be reasonable but jumping it up \$50,000; understanding what we want to do from a PR standpoint and what would need that kind of increase.

Mr. Nelson said he knew the legal costs have increased because of all the litigation. There are also legal costs flowing through all those contracts that are directly related to each project, he stated.

Mrs. Harold said that is correct.

Mr. Nelson said he understood all the hard work that went into the Budget and appreciated it. All my comments, I hope, are taken constructively. I am not trying to tear down something that has been built, because I know how hard it is to build it, stated Mr. Nelson.

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Mrs. Harold responded saying she preferred explaining things the Board may have questions about.

Mr. McCall said, "Make that thing with Abingdon work, or find a good used truck".

"We are waiting for a meeting", said Mr. Cornett.

The Board took a short break.

Mr. Cheek discussed the following presentation regarding a potential employee incentive program.

**Why Consider and Incentive Program?**

- WCSA is blessed with skilled and dedicated Employees.
- Is it possible to Unlock more of their Potential as well as Increase their Engagement with an Effective Incentive Program?
  - Constantly Strive for Better Customer Support.
  - Desire to Understand what makes up our Costs.
    - Cause and Effect of their Individual Actions.
    - Catalyst for Continuous Improvement.

**What Makes an Effective Incentive Program?**

- Employee has to feel that they have control over the results.
- Employee has to fully understand how it is calculated.
- Payouts must be timely so that it provides a constant reminder.
- Needs to be Simple.
- Should pull Employees Together, not drive them Apart.
- Goals Align with WCSA's Objectives.
- Must Have an Attractive Return On Investment.

**How do We Keep it an Incentive Program and not let it Become and Entitlement Program?**

- Annually Change the Goals.
- Make it a Sliding Scale.

**Will an Incentive Program Work at WCSA?**

- We must keep it Simple.
- With our Razor Thin Margins can we Provide Enough Incentive to Motivate.
- Will there be Public Backlash.

**There are really Two Type of Incentive Programs:**

1. The 1st is as described above, a % added to your normal pay if you achieve certain milestones.
2. The 2nd is based on a successful 8D Team that sustains it's results.

Mr. Cheek said Toyota really refined the 8D process. This is the program Mr. Cheek feels will work at WCSA.

**What is an 8D Team?**

- Let's Say WCSA has a particular problem or goal for 2014/15. Example: reduce the after hours maintenance call outs by 20% from the 2013/2014 levels. Another Example: Safety Goals.
- We have good data on when and what type of calls we receive.

Mr. Cheek said this process is driven by data, not opinion.

- Employees Bid to be on the Team, they are Interviewed. Between 5 to 7 are Selected.
- Have a Management Sponsor.
- Follow the 8D Methodology.
- If can obtain the desired results for 3 consecutive months then receive Payout #1.
- If can maintain the desired results for 12 months then receive Payout #2.

**Closing Thoughts:**

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- Establishing an Effective Performance Incentive Program will take a lot of careful study.
- Establishing an Effective 8D Team approach can have a lot of merit. It will take a lot of work on WCSA's behalf to get it going and to maintain, but the results could be remarkable.

Mr. Cheek said money may need to be added in the Budget for the Incentive Program. We have a lot of talent here and it could be amazing if we gear that talent toward one issue, said Mr. Cheek.

Mr. Chase said it sounded like the concept may work and suggested Mr. Cheek develop some type of budget for the Incentive Program. Mr. Chase said he would like to hear more about the details; the bidding process and how much time it will take to get it organized. He suggested doing an employee survey to get a sense of employee interest in the program.

Mr. Nelson said "you get a lot out of engaging people". I'm not saying it is not part of their job (employees helping the organization) but I think we all get stale. I believe you have to have something to energize people; something new that creates new energy. Mr. Nelson thought it was a good idea and he would like to see more details about the program.

Mr. Hutchinson thought you could get the employees behind the program once they knew what the incentives were. Mr. Hutchinson suggested having employees look problem areas in their departments. As part of the program, employees would correct or build upon the problem areas they found in their departments.

When you get employees behind the program, it grows, he stated.

Mr. Hutchinson then discussed a program utilized by Toyota. Toyota's

goal was to reduce their parts delivery time to 3 days. They were able to set up a program through the Georgetown KY warehouse, cutting their delivery time from 4 days to 3 days. For the last 10 years, if a part is ordered before 1:30 pm, it will be delivered by 2:30 pm the next day, said Mr. Hutchinson.

Mr. Hutchinson commended Mr. Cheek for coming up with the Incentive Program and recommended WCSA look into the program further.

Mr. Taylor asked if the Incentive Program would be offered to the entire WCSA organization or broken down into departments.

Mr. Taylor said his company did the same thing, focusing on safety. Mr. Taylor thought Management should not be included in the Incentive Program because "that it is your job".

Mr. Nelson said Management was not included in the program where he works. Mr. Cheek wanted to be start slow with the program. He said he wanted to walk, and walk very well, before running with the program. Mr. Cheek's idea is to target one issue; overtime for example; with one team and work very hard to achieve a set goal and "get really good at it". The next year the team would work on a different issue; then maybe two issues as the program becomes more efficient.

Mr. Nelson thought this was a whole different concept for a public entity. If you can prove the Incentive Program helps overall, WCSA can sell the public on the results.

Mr. Hutchinson said if you identify a problem area and set up a team; one person from each department; and it benefits WCSA as a whole, saving money, you do not have a problem selling it to the public.

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Being on many different Boards, it is hard for them to take such a big step, but I am certainly willing and I like it, said Mr. Nelson.

Mr. McCall then discussed paying contractors on a timely basis. He said we have a lot of good contractors; do we need to take so long to get a check to them? "It seems everyone has the same habit, dragging their feet on pay requests", he stated. Is it engineering holding up the payment process or are we holding it up, he asked.

Mr. Cornett said spoke generally about the process for paying contractors. The protocol for projects funded by outside agencies is to receive the completed pay application from the engineer. As soon as we receive that information, we review it, sign it and process it. We normally wait on the projects funds to be transferred before we make payments, but, sometimes we do pay before those funds are transferred.

Mr. Nelson said the worst thing you can do, from the payers prospective, is pay something in a rush and realize you have to get some of that money back. Looking at some of the bills listed in the financials, based on the checks that are being written, it appears the checks are written timely, he said.

Mrs. Figueiras said there was a Prompt Pay Act which limits the amount of time a public entity has to pay bills.

Mr. McCall said "let's look at ourselves, if it is not our problem, is it our engineers problem"? If it is the engineer's problem, we can fix that by not writing them a check, he added.

Mr. Taylor said sometimes the issue is not getting the bills in promptly. Mr. Taylor said the company he works for has a process for paying checks, if you do not go through that process, you do not get paid, he stated.

Mr. McCall said this was critical. Let's police ourselves, if we are fine then lets "follow it down." If we keep the contractors happy, they will bid on jobs. If they like to work for WCSA and get paid on a timely manner, some contractors will bid lower.

Mr. Cornett said one question he asked at progress meetings was; are we paying you on time? There are several steps before a bill gets to us in terms of an inspector working on site with the contractor with stored materials and installed quantities. Next, the engineer reviews it with RPR then it comes to WCSA. Mr. Cornett said when he was in the office, he signed for plats and pay requests daily and Mrs. Harold then processed the checks. Mr. Cornett said on a number of occasions, Mrs. Harold has cut hand checks and delivered them. Mr. Nelson asked if WCSA received complaints for not paying in a timely manner.

Mr. Cornett said he did not know of any. The Board erupted in a brief discussion. Chase's said people know they are going to get paid if they are dealing with the WCSA.

Mrs. Helbert said she thought everyone was getting paid within 30 days, always. Mr. Helbert said there were times contractors called for their check before the pay request from the engineer was completed. Mrs. Helbert said there were instances where contractors had to revise and resubmit pay requests several times. When it takes 8 to 10 days for that revision and resubmission it takes a while to process that pay request, she stated.

In closing, Mr. Chase asked Mr. Cheek to move forward with the incentive program and present some guidelines to the Board.

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Mr. Chase thanked Mr. Cornett, Mrs. Harold and Mr. Cheek for their presentations.

Mr. Chase asked if the Board would like to meet for another workshop.

Mr. Hutchinson said he would like to see the results of the Rates, Fees and Charge Study done by Raftelis.

Mr. Cornett asked if the Board would like to meet again April or May and suggested the Board decide on a date for the workshop at the March meeting.

Mr. McCall said he hoped there would be more information about the Town of Abingdon soon.

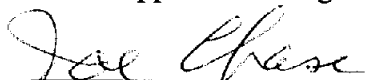
Mr. Taylor also commended Mr. Cornett, Mr. Cheek and Mrs. Harold for their work.

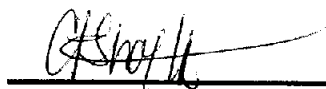
Mr. Taylor said the company he works for also had a good report (Budget) to present to their CEO. Mr. Taylor said all the different departments from his company met recently to present their prospective Budgets to their CEO. The first thing the CEO said when he entered the room was to cut their budgets 6% across the board.

Mr. Chase then asked if there was a motion to adjourn.

**5. Adjourn**

Mr. Nelson motioned to Adjourn at 8:46 pm. Mr. Hutchinson seconded and the Board approved voting 6-0-0-1.

  
\_\_\_\_\_  
Mr. Joe Chase Chairman

  
\_\_\_\_\_  
Carol Ann Shaffer, Assistant Secretary



# COVERING THE TERRITORY

STORY: **JIM FORCE**  
PHOTOGRAPHY: **EARL NEIKIRK**

**The Washington County Service Authority uses aggressive system upgrades and current technology to cut water losses and improve operating efficiency**

QUALITY  
LEADERS  
AGENCY

The Middle Fork Water Treatment Plant has three sedimentation basins like this one. A recent upgrade has substantially increased capacity.

“Our water quality is as good or better than we were achieving with the old process. We’re delivering exceptional water at this point.”

ROBBIE CORNETT



**T**he hilly terrain and rural character of Washington County in far southwest Virginia can be deceiving. Beneath the ground runs a 900-mile-long water distribution system, closely monitored with state-of-the-art software and upgraded with new piping. The results are already saving the Washington County Service Authority (WCSA) and its customers both water and money.

Under the direction of general manager Robbie Cornett, the utility, based in Abingdon, is in Phase 2 of a three-phase project to replace miles of aging 2-inch galvanized pipe. It has also divided its 300-square-mile service area into a series of subdistricts to help monitor water usage more precisely and identify leaks and inefficiencies. At the same time, the utility has constructed a new raw water intake on the Holston River, nearly doubled the capacity of its water treatment plant, and replaced manual meter reading with radio-based reading technology.

"We figure the galvanized pipe was costing us as much as \$1.4 million a year, and we've identified four areas that have been accounting for more than half our water losses," says Cornett. Other benefits of the new pro-

grams include a 33 percent reduction in meter reading staff, an 11 percent increase in water and sewer revenue, and the elimination of all but two of the 12 substandard pumping stations the old system used.

### Spread-out system

Washington County lies in the southwest corner of the state, where Virginia, Tennessee and North Carolina come together. "We're closer to five other state capitals than we are to Richmond [Virginia's capital]," says Cornett. It's a rural area, dotted with small population centers like the towns of Abingdon, Glade Spring and Damascus.

"In utility circles, people are amazed that we only have 23 customers per mile of pipe," Cornett says. Dramatic elevation changes require pressure reduction and pumping stations along the water distribution system. Raw water comes from several sources: the Holston River, two large springs in the Mill Creek and Taylors Valley communities and, until recently, a small well in Mendota that has been phased out in favor of purchased water.

On the river, the Middle Fork intake structure (rated at 6.6 mgd) and the South Fork intake (12 mgd, under construction at press time) supply river water to the Middle Fork Water Treatment Plant, which has just undergone a \$26.8 million capacity expansion. "The two intakes give us redundancy, in case we need to take one down for maintenance, or for water-quality reasons," says Cornett.

Sodium permanganate is added at both intakes, reducing the risk of disinfection byproducts. At the plant, the water is treated in a flocculation-sedimentation process, followed by filtration, disinfection and fluoridation. The recent expansion added tube settlers (Meurer Research) to the downstream end of the existing sedimentation basins to improve the quality of the water passing to further treatment. "The tube settlers do a good job of collecting floc," says Cornett. "The coagulant that best suits our water is Delpac 20/20 by USALCO."

Adsorption clarifiers (WesTech Engineering) were added to bring capacity from 6.6 mgd to 12 mgd. Water flows by gravity from the sedimentation basins, so an energy-efficient intermediate booster station has been added to lift the water to the adsorption clarifiers (see sidebar). Finally, four anthracite media filters were added, bringing the total to eight (seven by Severn Trent and one by Leopold, a Xylem Brand). The clearwell and the finished water pumping station were doubled in size. Chlorine (stored at the plant in one-ton gas cylinders) and fluoride are added as the treated water leaves the plant.

## Washington County Service Authority, Abingdon, Va.

FOUNDED: | 1976

SERVICE AREA: | 300 square miles

POPULATION SERVED: | 45,000 people

SOURCE WATER: | Holston River, two springs, some purchased water

TREATMENT CAPACITY: | 12 mgd

INFRASTRUCTURE: | 900 miles of water lines, 24 storage tanks,  
52 pumps at 26 stations

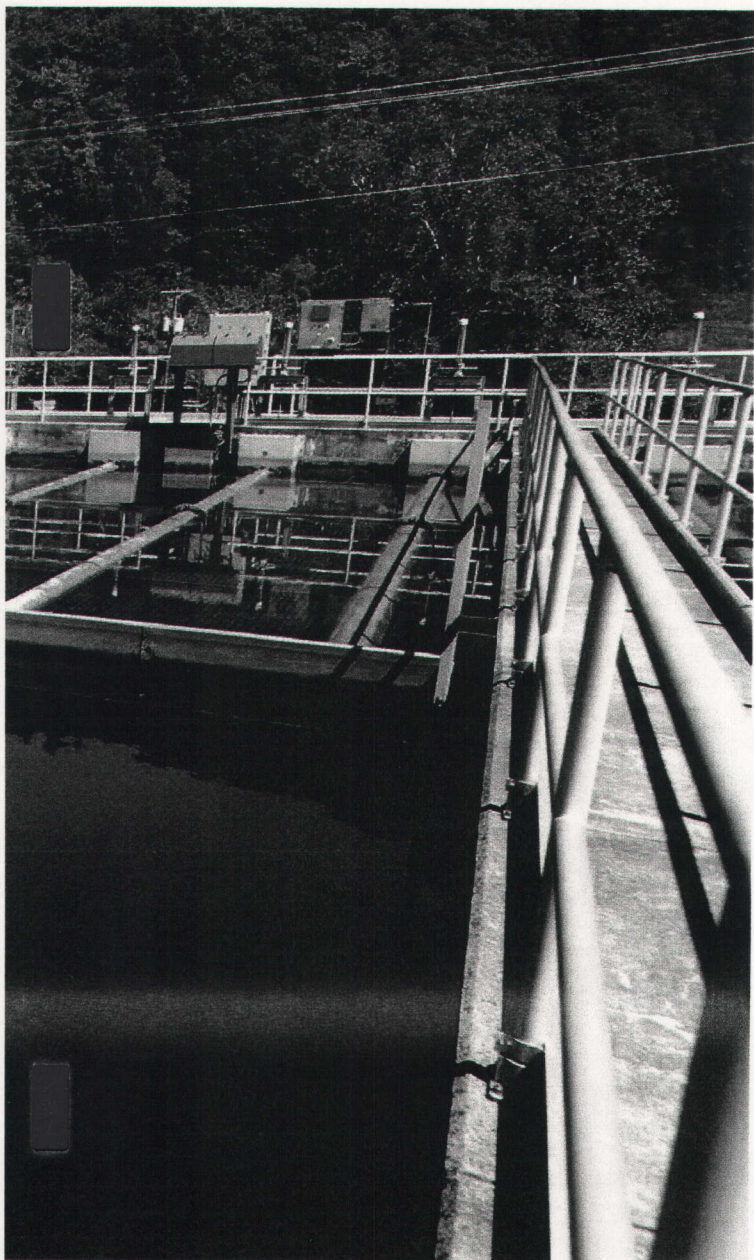
SYSTEM STORAGE: | 13.6 million gallons

EMPLOYEES: | 70

ANNUAL BUDGET: | \$12 million (water operations)

KEY CHALLENGE: | Updating infrastructure, educating customers on the value of water

WEBSITE: | [www.wcsa-water.com](http://www.wcsa-water.com)







## LEADERSHIP TEAM

An experienced team leads the 70-member staff at the Washington County Service Authority. Robbie Cornett, general manager, relies on Don Cole, water treatment manager; Joe Baldwin, chief operator, Middle Fork Water Treatment Plant; April Helbert, P.E., manager of engineering services; Mark Osborne, P.E., technical manager; Johnny Lester, maintenance manager; Kim Harold, controller; and Holly Edwards, customer service manager.

Ronnie Cornett, general manager, Washington County Service Authority.

## Peak performance

The new equipment went into operation early last summer, and all processes have been performing well. "Our water quality is as good as or better than we were achieving with the old process," Cornett says. "We're delivering exceptional water at this point."

They certainly are. For the third straight year, though in the midst of a major renovation, the Middle Fork plant achieved the highest possible ranking (20 in the judging criteria) in operations excellence for water utilities from the Virginia Department of Health. The plant was one of 22 conventional plants out of 130 that received a gold award in 2012. That followed gold awards in 2010 and 2011.

The water from WCSA's springs is naturally pristine and requires little treatment beyond precautionary disinfection. Reservation Spring produces about 900,000 gpd. Chlorine, stored in 50-pound cylinders, is added at the point where the water enters the distribution system.

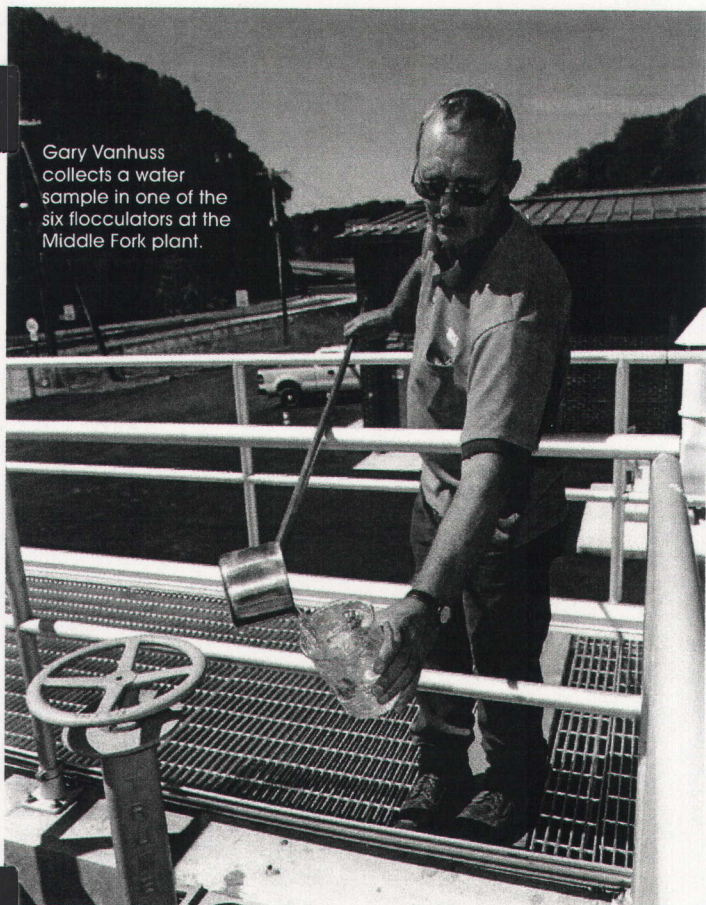
"This is one of the few springs in Virginia that is not under the influence of surface water," explains Cornett. "It's very high quality. We use it for entering the various water tasting contests." (WCSA finished fourth among 100 entries in the Berkeley Springs International Water Tasting Awards competition in 2004.)

The elevation of the spring eliminates the need for pumping: the water flows by gravity to a number of customers in one of the small communities WCSA serves. The other spring delivers 1.8 mgd and requires treatment, as regulators have declared it to be affected by surface water. A small membrane plant (Koch Membrane Systems), one of the first in Virginia, has been in operation since 1999. WCSA owns the plant with a neighboring utility and has received excellent water quality, although the facility is due for upgrading and replacement in five to six years.

The Middle Fork Water Treatment Plant team includes, from left, Joe Baldwin, chief operator; Beverly Hall, Class 1 operator; Don Cole, water production manager; and Gary Vanhuss, compliance manager.







Gary Vanhuss collects a water sample in one of the six flocculators at the Middle Fork plant.

### Galvanized pipe issues

Improvements to the water management system have involved more than upgrades to the intake and treatment facilities. When Cornett joined the agency in the early 1990s, he was quick to recognize the harmful impact the 2-inch and smaller galvanized pipe was having on the system. "Forty percent of all our connections were served by the galvanized pipe," he remembers. "We had numerous customer complaints about lack of water pressure or poor-quality water — even colored water that would ruin a load of clothes in a washing machine."

Ultimately, the agency committed to addressing the issue. As a stop-gap, small blow-off valves (Cla-Val) were installed so that operators didn't have to go into the field to turn water on or off. The blow-offs allowed automatic flushing of the system at night so that customers would get the best-quality water when they started their day.

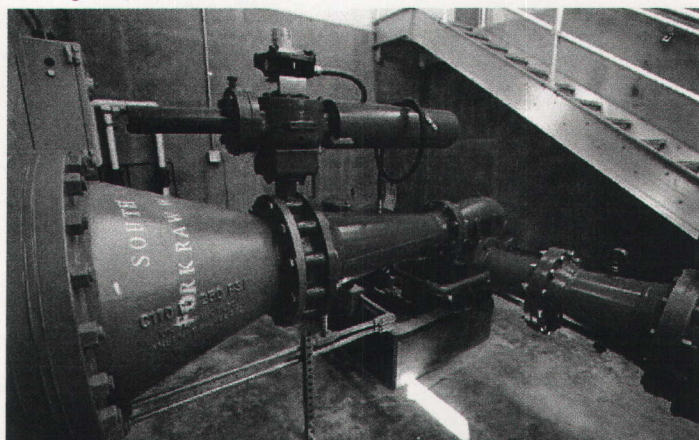
In addition, to deal with pressure drops, WCSA installed 12 booster pump stations along the lines. While these measures eliminated most

**“Our goal is to convey information about water use to our customers — such as the time of day, how much they’re using and why they should consider reconfiguring their plumbing.”**

**ROBBIE CORNETT**

complaints, WCSA undertook a full-scale study of the galvanized pipe issue, analyzing leaks and breaks and the overall impact on the utility, especially costs. According to the agency's calculations, 86 percent of all system leaks and breaks could be traced to the galvanized piping. That figure was later validated in an independent review of the system by The Lane Group engineering consultants.

One of the two turbines (Cornell Pump Company) that are housed in the Energy Recovery Building at the Middle Fork Water Treatment Plant, which has a 12 mgd capacity.



### ENERGY BOOST

The Washington County Service Authority's expanded Middle Fork Water Treatment Plant features more capacity and demonstrates innovative energy recovery as well. At the point where raw water enters flocculation, pressure reduction was required. The agency installed a pair of Francis turbines that generate electrical energy from the water passing through the valves and use a pressure-reducing valve as a backup.

"The turbines operate like a centrifugal pump in reverse," explains Robbie Cornett, general manager. "Water hits the impeller, which then turns the motor and generates electricity."

Francis turbines date to inventions in the mid-1800s and are common in water projects. A spiral casing surrounds the runner blades and directs the energy of the flowing water onto the blades. The units have a total generating capacity of 150 kW. The electricity powers the utility's intermediate booster pump station.

As Cornett explains, an adsorption clarifier has been added downstream of the existing sedimentation basins. Water flows by gravity out of the basins and needs to be lifted to the clarifier before it moves on to the filtration and disinfection. "We are powering the pump station entirely from the turbines," Cornett says.

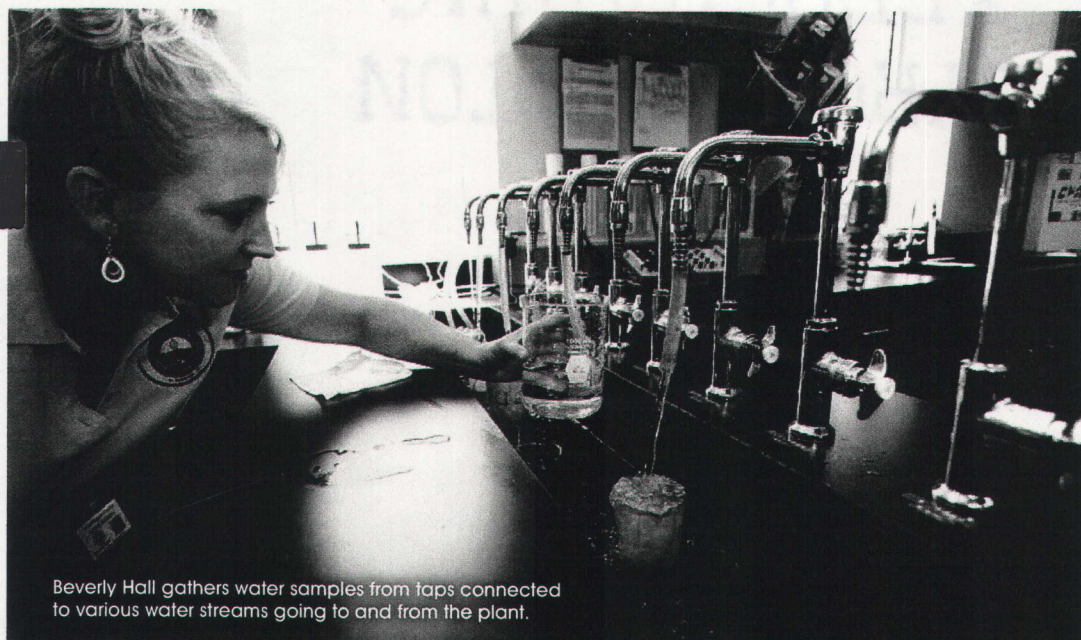
"It became obvious that we needed to become more aggressive than we'd been in the past in replacing this pipe," Cornett says. "Much of it wouldn't have been capable of providing service to anyone in another 10 years."

The project unfolded in three phases. WCSA tackled the most difficult replacement areas first. Those included the towns of Abingdon and Glade Spring, along with areas near and next to the city of Bristol — populous areas where lines run under streets and private property. Using open-cut methods for the most part, workers removed the galvanized lines and replaced them — with PVC for smaller diameters and ductile iron for larger.

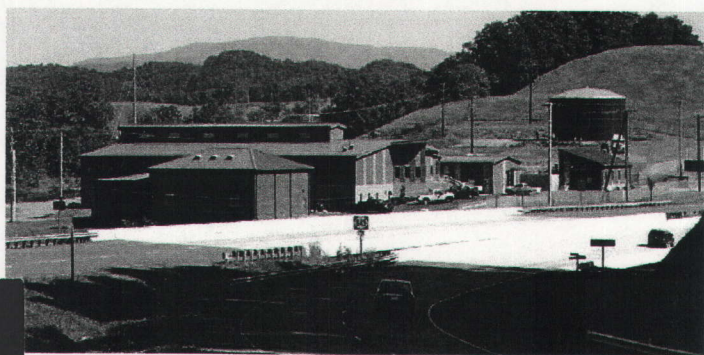
Phase 1 involved installation of about 30 miles (3 percent) of the system, not including service lines, which added 10 miles. The replaced pipe serves about 8 percent of WCSA customers. "The pipe removed from service wasn't inventoried but may have been greater than the number of miles installed," explains Cornett.

"In some cases, it was a matter of jumping taps from the old galvanized line to a new line that had been installed in recent years — the old galvanized line was just never abandoned. It was a major undertaking,





Beverly Hall gathers water samples from taps connected to various water streams going to and from the plant.



The Middle Fork Water Treatment Plant is served by two separate intakes to provide redundancy in case of a source water quality issue or the need for maintenance.

but Phase 1 was completed at the end of 2012 and went well. It's early, but we're already seeing a decrease in leaks and breaks and improved water line production." WCSA advertised for bids on Phase 2 last fall and hoped to seek bids on Phase 3 by the fall of 2014.

### Embracing automation

WCSA improvements don't stop at fixing pipes. Cornett and his team launched other programs to make the system more efficient and enhance customer value. Automation is one area. "A few years ago we realized that most of our water meters were 20 to 40 years old," says Cornett. "We were reading them manually, and over a 300-square-mile area, it took six people two months to completely read the system. Also, many meters were not correctly sized for the application."

Since then, WCSA has adopted a radio-read system and a meter calibration and validation program. "We were able to reduce our meter reading staff from six people to four, reassigning the other two to a different department," says Cornett. The agency also regularly checks the larger meters for accuracy, randomly checks residential meters, and remains on alert for any meters reading zero usage for several consecutive months.

SCADA represents another enhancement. "In 1998, we had no SCADA system, so we began implementing one," says Cornett. "Before, our pumps ran on timers set by the operators, and tank levels were determined by visual observation, twice a day. Some tanks ran dry, others overflowed. It was an inefficient and ineffective way to run a system."

It took six years, but today WCSA is equipped with a fully operational

SCADA system (GE Intelligent Platforms, integrated by Innovative Controls) that has eliminated tank level issues and helps identify where breaks have occurred in the system. That has helped reduce water losses, as has refurbishment or installation of 16 new pressure-reducing valves throughout the system to cope with elevation changes.

### Loss control

WCSA was also invited to take part in a beta study of new AWWA water audit software, a result of Cornett's participation on the association's Water Loss Control Committee. "The software was free, and we now use it to track real and apparent water losses and monitor our improvement efforts," Cornett says. "It has allowed us to test and validate the accuracy of our data."

In another move to enhance efficiency and improve system data, WCSA subdivided its service area into 30 smaller district metered areas. Customers in these areas are coded so that the team can monitor water use more closely and compare water use versus sales. "We're still validating data, but what we've found so far is that four of these smaller districts account for more than half our water loss," Cornett says. Two are older parts of the system, and the other two are industrial parks.

When staff members looked more closely at the water usage patterns, they realized that the industrial areas had the biggest concentration of unmetered fire lines, and that as industries expanded, contractors had been inadvertently tying into fire lines for process water, dust control and other uses. That led the agency to use clamp-on meters to try to measure flows. "Our goal is to convey information about water use to our customers — such as the time of day, how much they're using and why they should consider reconfiguring their plumbing," Cornett says.

The water loss program has also led WCSA to monitor its own water usage and optimize where possible. "We installed meters at all 26 of our lift stations and at all our facilities including the treatment plant," Cornett says. "We found we use about 3 million gallons a month on average, not including the blow-offs on the galvanized lines. It was an eye-opener!" **WWS**

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