Recently due to some legal changes, communities near the Kankakee River in northeastern Illinois are now applying for permits to obtain water from the river for their water systems. As a result of this, an alliance of five of those communities was formed on June 21, 2018. The alliance was created as a way for the communities to begin to work together and plan for the future of their water systems as a group.

By James Meece
Senior Rural Development Specialist

Rate analysis assistance helps region grow

Indiana city finds solution to rising recycling costs

By Debbie Hackman
Solid Waste Specialist

Reducing, reusing, and recycling has always been the right thing to do for the environment. Reducing, reusing and recycling has always been the right thing to do for the conservation of natural resources. Reducing, reusing and recycling has always been the right thing to do to prolong the life of landfills. However, with the recent downturn in recycling prices many communities, both small and large, are taking a serious look at whether recycling is something they can continue to offer to their residents.

One such community is Portland, Indiana. The City of Portland in northern Indiana has provided its own trash service in the past. This is a service the city officials have taken pleasure in providing to the residents. The personal service the sanitation crew offers to their hometown has never been questioned. The satisfaction is high. Portland contracted recycling curbside pick-up and billed the residents for the service. In 2017, the contractor informed Portland City Council members there would be a 15% increase in the price for recycling pick up.
When Margaret Meade said, “Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has,” she very well could have been describing a small group of public servants in rural Lincoln County, Kentucky.

Located in the central part of the Commonwealth of Kentucky, beautiful Lincoln County is divided into three distinct topographical areas. The northern half of the county, lying within the southern edge of the Bluegrass Region, is known for its excellent farmland and is drained by the Dix River and its smaller tributaries. Stretched from west to east across Lincoln County is the Knobs region with wood covered hills ranging from one to two hundred feet in height. The remainder of the county lies in the Pennyroyal region which is dominated by broad plateau-like areas and ridges separated by deep fertile valleys and streams.

According to John Webb of the Kentucky Division of Water, the Dix River Watershed has been receiving special attention by the U.S. Environmental Protection Agency and the Kentucky Division of Water since its selection as a Clean Water Action Plan Priority in 1998. The river and its impoundment serve as a drinking water supply source for several counties in the region.

Under an EPA 319 grant from the Kentucky Division of Water, Third Rock Consultants performed water quality monitoring from March 2006 to February 2007 for the Hanging Fork Watershed Plan which includes the Dix River and its smaller tributaries. Despite the dominant agricultural land use of the watershed, the study overwhelming noted human waste as the highest contributor during low stream flow conditions.

There are preliminary talks taking place for the communities to move towards having one shared system, instead of each community having their own. As this project begins to move forward, one of the questions being asked is what would the rates for the service be and how would it affect each individual community. RCAP has stepped in to help a number of communities in the alliance understand their current water rates and to analyze them to see where each system is financially. The first step involved is conducting a water rate analysis for each community.

The results of rate studies allows the community to see where their rates are, better understand their water billing, and plan for future needs. RCAP has completed a rate analysis for the Village of Diamond, and has started the process with the Village of Braidwood and Coal City.

RCAP is planning to complete an analysis for each member of the alliance. Once they have been completed, RCAP will bring all of the communities together and facilitate meetings to review and discuss the results, as well as begin developing a strategic plan for the future.
The water operator’s changing role

By Bud Mason  
*Senior Rural Development Specialist*

Almost 40 years ago I was taken under the wing of Buck, my first boss. He was a Coxswain (person in charge of navigation and steering of a boat) in the U.S. Navy in World War II. Though not on water anymore he looked at the water system as his ship and he navigated it through many a storm.

He installed many traits in me. Everything had its place, all tools were kept oiled, and battleship grey was the color of choice. The longest lasting has been the importance of capturing and tracking data. Others have fell by the wayside, like flaring K copper for example. Some have just changed through the years. However, the biggest change I have seen is the role of the operator.

There are three capacities of any system: managerial, financial and technical. When I started, the operator’s focus was only the technical. My priority was to keep the elevated storage tank above 47 psi at the plant. That was because below 47 psi we were in the bowl and did not have many gallons left in reserve. If we accomplished that we did our job. That and keeping the parks mowed in the summer, streets plowed in the winter, and the flags put up on patriotic holidays.

As the regulations started to get tighter our role started to become more administrative. That meant that it was not just doing the work but making sure the work and reporting was done on time. The next role the successful operator had to take on was the financial side. Cost of production, fixed costs, variable costs, budgets (just because it is in there does not mean that you get to spend it), and debt ratio became a language that needed to be spoken.

So just when an operator thought that was all he had to do another role has become clear. That role is being a diplomat.

It started with trying to educate the board on taking on a project. How was that accomplished? It was accomplished by the operator documenting the need, identifying the options, and explaining the costs and the benefits. In other words being able to answer questions and calm emotions in a sensitive and effective way.

That role really started to take shape with the Consumer Confidence Report (CCR). The CCR put the operator almost face-to-face with their public on a yearly basis — having to explain any violations, the impact of those violations, and what they were going to do to prevent it from happening again. That was when our customer base began to evolve from uninformed to informed. It was easy to be prepared to answer their questions with the regulations in front of you.

However, all of that changed in 2015 when the Flint water crisis exploded. The operator now had a public relations nightmare through guilt by association. The seriousness of an accusation outweighs the value of the facts and existing regulations that we have at hand. As the lead & copper issue began to settle down then along came PFAS (per- and polyfluoroalkyl substances). No doubt after PFAS there will be some other contaminant that will be of great concern that we do not have the regulations or answers for.

As a diplomat, how do you handle those situations? You are dealing with customers who range on the scale from “I do not drink any water because of the risk” to the “I have been drinking that water all of my life and it has not hurt me” type. You will find extremes with fellow operators.

Of all the roles the operator plays I think the diplomat has the most challenges. However, remember that challenges are opportunities, so be prepared to highlight what you are doing to maintain water quality in your system when you are asked a question. Are you being proactive, inactive, or reactive in relationship to your customers?

My parting question to you is: How are you prepared to answer, “Is my water safe to drink?”
How can your system develop necessary plans and procedures?

By Richard Watson
Senior Rural Development Specialist

INVENTORY CONTROL, PREVENTIVE MAINTENANCE & CAPITAL IMPROVEMENT PLANNING

Inventory control, preventive maintenance and capital improvement planning go hand-in-hand because they all require that you know the assets your system owns. Therefore, initiating any program will help get the others started. Preventive maintenance and capital improvement planning are more extensive than inventory control. Inventory control is simply knowing where and when replacement parts are required. However, all three programs are vital, enabling adequate management and financial processes. That is, as a management tool, you control the use and disposition of your assets and as a financial tool, you can control costs and know where expenses have been or will be incurred.

Inventory control is a system of identifying what you have, how many you have, where it is located and when you need to reorder or restock a particular item. Your system inventory applies to your buildings, equipment, parts, tools and vehicles, etc. Your inventory should identify each property item by an identification number, name, serial number, size or unique information, such as date of construction, make, year, date of purchase, etc.

Preventive maintenance keeps your system operating and minimizes downtime and/or plant equipment failure. If your system has automobiles, basins, buildings, electric motors, ladders, meters, pipes, pumps, storage tanks, test equipment, tools, trucks, valves, assorted other equipment and machinery, their use results in wear and tear and sometimes component failure. Periodically inspecting, checking and servicing these items eliminates, prevents, or reduces equipment failure. In addition, regular service and maintenance (e.g., changing oil, changing packing, painting, etc.) will usually prolong useful life. This is what preventive maintenance is all about.

Implementing your written preventive maintenance program will save money; maximize your equipment’s useful life; identify where maintenance costs are incurred, provide important budget planning information; reduce or eliminate down time and system disruption; reveal minor problems before they become catastrophic; allow quick, easy correction; meet the manufacturer’s recommended maintenance schedules and provide a written record for warranty purposes; achieve and maintain better inventory and spare parts control; show where your maintenance money is being spent and whether your maintenance budget is adequate; and provide necessary rate increase justification/documentation. Remember, replacing your treatment plant, distribution lines, equipment, and tools is expensive. Replacement money is limited, difficult to acquire, and more expensive than proper maintenance. Maintain your system because replacement will be difficult and expensive.

A Capital Improvement Plan (CIP) is a tool to help you plan, fund, and carry out necessary infrastructure replacements and improvements. Your CIP should demonstrate that you are financially prepared to repair or replace worn out equipment, can afford any new equipment required to support a growing service population, and can comply with current and future SDWA requirements. Failure to develop a CIP identifying maintenance, repair, and replacement costs and incorporating them into your budget results in deteriorating infrastructure, increased water loss, increased operating expenses, poor customer service, unreliable operation, and potential health threats associated with unsafe drinking water.

Capital Improvement Planning consists of developing a detailed inventory of your system components (including your underground infrastructure); determining age, remaining useful life, and replacement costs (this information should be available from your inventory control program); and determining the cost of infrastructure replacement and upgrade. Plans should identify the components in the poorest condition...
necessary plans and procedures?

and those most critical to treatment/distribution/collection, schedule of capital expenditures and determination how you will pay for the improvements. The final product is a system budget (incorporating costs identified in your CIP) and a 5-year budget projection.

EMERGENCY RESPONSE PLANNING

Having a written emergency plan/procedure and trained personnel helps you achieve the goal of limiting or deterring unplanned events. Emergencies can cause your customers and/or staff minor or major inconveniences, service disruption, contamination, injury or death. Emergencies can be caused by cross-connection, miscommunication, unspecified responsibilities, equipment failure, safety violations, inadequate maintenance, accidents, natural disasters, and/or vandalism/terrorism.

Emergencies require quick, responsible action. Implementing a written emergency plan/procedure will help you avoid costly downtime, customer dissatisfaction, liability/litigation and additional damage.
Unsafe working conditions and practices can cause accidents that can result in serious consequences. Enacting a Health and Safety (H&S) program will help minimize risk and create a safer working environment.

SYSTEM HEALTH AND SAFETY PROGRAMS

Your system should have a written Health and Safety (H&S) program in place and must provide a safe working environment. The law dictates that you assure each employee a safe working environment and, where required, provide the training, personal protective equipment, and all other necessary safety apparatus.

Unsafe acts and conditions cause accidents. Accidents are costly and can result in employee absence, legal liability, diminished employee productivity, property damage, injury or death. Initiating a few simple steps and implementing these suggestions will get your H&S program started. The first step is formulating, endorsing, and establishing your safety philosophy. Once you have an H&S program you can tailor it to meet your unique needs, problems and concerns.

Once management is firmly behind developing and implementing an H&S program, the first steps are designating someone responsible for H&S, determining your H&S needs, developing a written H&S program endorsed and supported by management, and beginning implementation of your program. Your designated H&S manager should have some knowledge of safety practices and program administration, be experienced and understand your system operations and have the time to administer, coordinate, and enforce your safety program.

Your H&S program should contain a written policy/program; designate authority; assign manager’s and employee’s responsibilities in H&S policies/practices/programs and system equipment and process training; identify personal protective equipment (PPE) (appropriate for your system conditions) for all employees and site visitors; specify required or necessary safety apparatus, protective guards, warning devices, etc.; require a safety training video, informational handouts, etc. for all system visitors and contractors, outlining your safety policies/procedures; include frequent safety meetings, refresher courses, posters, etc., keeping employees focused on safety issues; and specify regularly scheduled H&S policies/procedures review.

Communities that would like to begin developing or revising their plans can contact their nearest RCAP for assistance.
Water lab enhances learning

By Wesley Hoem  
Senior Rural Development Specialist

Rural Community Assistance Partnership (RCAP) and the American Water Works Association (AWWA) have partnered, with a program funded through the U.S. Environmental Protection Agency (EPA), to present full day water operator trainings. RCAP and the AWWA have developed an extensive toolbox of training courses for water operators to use in this EPA Water Compliance program.

Operator training has become a significant function of RCAP’s many programs. One of the major hurdles of operator training is the ability to keep things fresh, offer a variety of topics, and delivery of the material. Although lectures and power points have been the major delivery method for several years or even decades, but is this the best way to learn? Who is the audience? Our audiences of operators are constantly on the move during their work day, inside and out, one location to another. It is hard for most learners to sit in a chair all day during training and soak up all of the information being presented, especially operators. So how do we keep these operators engaged throughout the day?

Enter the Water Learning Lab. This training was designed to be interactive and engage the learners in water quality monitoring to ensure their water is safe to drink. The topics covered in this lab include: total coliform sample collection: Evaluating collection sites, identifying sample collection common mistakes and sample collection; chlorine residual sample collection; free chlorine sample and measurement; and chlorine Residual Mapping; map development. The training of these topics are hands on and keep the learners engaged, which equals more retention of the subject matter for on the job use.
Red Cliff Tribal utility is located on one of the northern most tips of Wisconsin and is part of one of many federally recognized tribes in the United States. The Red Cliff Band of Lake Superior Chippewa is located on a federally recognized reservation which sits on 14,541 acres and serves approximately 1,500 people both tribal and non-tribal. Within the utility there are over 400 connections: 387 of those are residential and approximately 24 are other non-residential connections. The Tribal utility is broken down into two sub-divisions that consist of the Northern System and the Southern System. The treatment plant is the dividing line throughout the collection system. The lift stations on both the Northern and the Southern Systems pump wastewater to the wastewater treatment plant which consists of activated sludge for primary treatment. The plant was designed in 2001 and put into operation in 2003 and has a designed flow of approximately 220,000 gallons per day.

While speaking with Robert Powless, the Director of Public Works, he informed RCAP of...
numerous projects that have been in progress, completed, and that will resume this upcoming construction season. He informed RCAP that the utility just completed an Inflow and Infiltration (I&I) study to assist in keeping the plant operating at maximum efficiency. The I & I describes how groundwater and storm water enter into a dedicated wastewater and sanitary sewer system. Various sources include footing and foundation drains, roof drains, downspouts, window drains, drains from stairways and groundwater basement sump pumps. These types of drains are usually improperly or even illegally connected to sanitary sewer systems. I & I can wreak havoc on a system because sanitary sewers are designed to carry wastewater from toilets, dishwashers, sinks, washers and showers from homes and businesses. Inflow and Infiltration add clear water to sewer systems, which increase the load on the system and throws off the detention and retention times in a traditional treatment plant. Clear water should be piped into storm sewer systems or even on the surface of the ground and not piped into the sanitary sewer system. Storm sewers are designed to carry large amounts of storm water or ground water because the pipe size is usually larger than the sanitary mainline pipe size. When these large amounts of clear water make it back to the treatment plant the plant can suffer from washouts which can cause the microbiology ecosystem to be thrown off causing the plant to treat clear water which does not need to be treated and also burdening the system with extra costs related to treating.

RCAP is also piloting a project involving the tribe’s sanitary sewer lines. The demonstration project involves using specific tools (SL RAT and sewer cameras) to help determine the pipe condition and manage these assets. The SL RAT is an acoustic testing device that is used to determine if any manholes or mainlines are blocked. A transmitting device is placed in one manhole and a receiving device is placed in a different manhole. The transmitting device will send sound through the main down the line to the receiving end, which will give the SL RAT a number. The number determines if there is any blockage in the mainline. The equipment is easy to setup and very quick and easy to use. It can be used on large amounts of a system fairly quickly to determine which sections may need cleaning or maintenance. This is a great tool to eliminate the time and money charged to the utility for cleaning or jetting sections of the mainline, which in fact were already clean. If the data reveals that there may be blockage, RCAP will be able to camera that section of main using a Proteus Mini-Cam sewer camera. This is a tractor style mainline mini-cam which is connected to its own T.V. monitor which gives live feed that can record the data which is transmitted from the sewer cam. This is a smaller mobile unit which is NOT intended to camera the entire collection system. This setup that RCAP is equipped with is intended more for already detected problem areas of the system. The Proteus Mini-Cam is a rugged piece of equipment which consists of a 6x6 tractor with adjustable wheels depending on the pipe size and material. It will work on mainlines with a 6”-24” pipe size. Some of the great attributes of this sewer cam is that the joint connections, service locations, and conditions can be checked as they are tied into the mainline. RCAP can save and compile all the data resulting in a condition assessment of the mainline.

RCAP plans to use this equipment with the Red Cliff Tribal Utility to help maintain and keep the collection system clean. We all know the importance of preventative maintenance and how quick something can go wrong if not properly maintained. Our collection systems are one of the most important assets a town, city or reservation owns, but because it is out of sight it can quickly get overlooked. With all utilities, big or small, funding usually plays a major role in the amount of maintenance that can be scheduled and completed, so when RCAP offered to pilot this project, the Red Cliff Tribal Utility stated they would gladly be a recipient of that assistance.
Identifying and eliminating short circuits

By Bud Mason
Senior Rural Development Specialist

Water quality issues that I troubleshoot in the distribution system include regulatory and aesthetic concerns. The common culprits are iron and manganese that have found their way into the distribution system. Some take the direct route as the system does not treat for the removal of either. However for those that do treat for their removal the iron and manganese will find a way around your treatment process, a short cut or circuit. You can flush as much as you like to clean up your distribution system but if your treatment process has a short circuit then it will be to no avail until the short circuit cuts are eliminated. When I am trouble-shooting a system one of the places I look is under the counter at city hall. If there are bottles of Iron Out there to be given to customers that is a clue to me that aesthetic concerns have been an issue for some time. Following is the process I use when identifying and eliminating short circuits.

WHAT IS YOUR RAW WATER QUALITY?

What is the raw levels of iron and manganese that you are dealing with? More times than not when I ask that question I will be told that they do not know. Sometimes I will be quoted an amount from a sample that is taken yearly which is at least a starting point. The next question is where are the samples being drawn from- At the individual well head? At the raw line coming into the treatment system? If two or more wells are pumping into a shared line and you are drawing your raw sample at the plant then at best you are testing a composite sample. In a perfect world you should be testing individually at each well as well as a composite sample prior to any treatment. Though ground water does not have the dramatic shift of water quality that surface water has, the raw water should be monitored seasonally at minimum.

WHAT IS YOUR PRE-FILTER WATER QUALITY?

After reaching the plant the next step is usually the addition of an oxidant, air, and some sort of detention tank to allow the iron and manganese to begin to precipitate and settle out. As it is pumped from the detention tank, a process control check should be performed on the pre-filter water prior to it entering the filters. Compare that to your well head and composite sample results so that you can determine the effectiveness of your treatment system or if there is a short cut to this point. Another question is when was the last time your detention tank was cleaned? If things are settling out then they will start building up. If the residuals are not removed then they will impact the treatment process.

WHAT IS YOUR POST-FILTER QUALITY?

The pre-filter water from the same source entering into each filter will be the same quality. The post filter water leaving each individual filter is definitely not. For this reason the effluent from each filter should be tested. My experience shows me that this is seldom done.
Most systems will check a composite post-filter sample (which is the blended water of all the filters usually drawn at the lab sink). So if you are having shorter filter run times or complaints of water quality in the distribution system, a much closer process control needs to be done to determine what filters are filtering and more importantly, which ones are not. A common problem is a broken underdrain system.

**WHAT IS YOUR BACKWASHING PROCEDURE?**

What is your backwashing procedure? This is another suspect area when looking for short circuits. I have had the fortune to work in several systems during my career. There was always one common denominator in each system. When I would ask why do you do it this way? The answer would be, “Because that is how we have always done it.” Backwashing of a filter is a very important part of the treatment of your water. When it is done correctly no one notices, when it is done incorrectly no one forgets. What triggers a backwash? The day of the week, gallons filtered, sample results at the lab sink showing a higher iron or manganese, or pressure differential in the filters are reasons I have experienced. The answer is what works best in keeping your filters filtering as long as that is in concert with proper process control sampling of pre and post filter water. What water are you using to backwash your filters? If you are running your high service pumps when you backwash then make sure that the post filter water that you are using is clean enough to do an adequate job. If not it is like washing your clothes in dirty water. The next question is how do you start and end the actual backwash. Filters are like hydrants; you start the flow slow and end it slower. This allows the filter media to have a chance to rise without separation and settle down back into the proper layers. If this is not done properly it could cause a short circuit through the filter media. I have seen a system that flipped a switch to start their automatic backwash process. That allowed 100 psi of pressure to slam into their media. How long do you backwash? My experience is to backwash until the backwash water quits clearing up but always follow your manufacturer’s recommendations. Remember when backwashing pressure filters the water quality coming out of the backwash will be the same quality of water that enters into the distribution system when the filter is put back online.

**WHAT IS YOUR PLAN TO INSURE THAT YOUR FILTERS ARE FILTERING AND THAT YOU ARE PRODUCING THE BEST WATER THAT EXCEEDS REGULATIONS AND GIVES YOUR CUSTOMERS CONFIDENCE TO WASH THEIR “GOOD TOWELS”?**

If you are experiencing any water qualities and want someone to review your current processes or help you write new or update your Standard Operating Procedures (SOPs) give RCAP a call.
Following a nationwide trend, declining demand for some residential recycling products and falling prices were the reasons given for the price increase. This coupled with a 20% increase in tipping fees at the local county-owned landfill was placing the City of Portland in a financial bind. Feeling the increase of recycling costs would be a financial burden for most of the residents of this low-income community. As a result, the curbside program was discontinued.

What a surprise the mayor and city council received when residents adamantly questioned their decision to suspend the curbside program! In an effort to reinstate the program with the most economical program they could find they asked for IN-RCAP Solid Waste Advisor, Debbie Hackman, for help.

The questions they were considering were as follows:

1. Should they return to contracted recycling services? If so, how do they protect their residents from drastic price increases? How much were their residents willing to pay for a service they had come to expect?
2. Should they contract all trash and recycling services? Would bids received compare to current City costs? What are the City’s current costs? What about the current employees? Could they be transferred to other City departments or would contracting result in job loss?
3. Should the City provide curbside recycling with their current sanitation crew? If so, at least one of the trucks in their fleet would need to be replaced immediately to support the daily 68 mile trip to drop off recyclables at the nearest MRF (Materials Recycling Facility). Also, should they go to single collection of recyclables and trash in color coded bags and deliver that product to a MRF that would sort and process recyclables? Does this type of collection program increase contamination and jeopardize the quality of the resident’s hand sorted bottles, cans, paper, cardboard? This option still would require them to replace their aging equipment. Are grants available for equipment purchases?
4. What changes and adjustments could the City make to their plan of action to reduce costs in other areas that could be transferred to the sanitation programs?

RFPs (Requests for Proposals) were available from previous years’ requests. With a little modifying to open up options to include the combination of contracting trash and recycling services together and separately, the RFPs were complete. Adding more recipients to the list of companies that were receiving the request was a must. Increasing competition is always good for the customer. When working with small communities, it may be beneficial for a collection company to combine nearby towns and cities to complete collections. This is why it was important for RFPs to be sent to companies that may not have been providers in the past.

Then, the City of Portland needed to prepare their own bid on the project. Why bid on their own project? If they could honestly prepare a bid that was lower than the proposals they received, they should definitely continue to provide trash services and pick up recycling as well. If their bid was higher, then serious consideration should be given to passing the services to a private contractor. There was, of course, the human side to the decision. Was the amount of savings a legitimate reason for putting three city employees out of work?

The items the city needed to consider were:

1. Labor costs including benefits
2. Services provided (trash, recycling, heavy item pick-up, annual “clean up” days, holiday pick up)
3. Equipment costs and life of current equipment
4. Fuel
5. Repairs
6. Cart cost per household for trash and recycling (purchase vs rental)
7. Building costs
8. Share of administrative costs (supervisor, human resources, customer service, billing, insurance, even a portion of salaries of the city council and mayor)
This “out of the box” type of thinking is new to most local government employees who only compare expenditures to current and past budgets and have seldom compared themselves to the private sector. It is often used by managers and supervisors who want to contrast their costs to companies who provide the service on a large scale. This type of internal bidding puts a legitimate value to services provided to the community. While we have seen many towns and cities contract services such as sanitation, maintenance and janitorial services, it is often the human vs. the business decision that interfere with accurate cost of service evaluation when it interferes with job retention. In rural America, where job availability is restricted for workers with a limited skill set, it is often a logical decision to keep those jobs and look for adjustments elsewhere in the budget.

What savings could be found for the City of Portland as a whole? Reduction in workman's compensation by providing regular safety training, carefully monitoring overtime and increasing emphasis of preventative maintenance to decrease down time of trucks and crews all caused a reduction in the expense column of the budget.

With so many unknowns in the recycling markets and the future of recycling providing questions, even in the minds of those who have spent years of their careers studying recycling methods and trends, the City of Portland, the mayor, city council members and sanitation staff have worked together to find a system that works best for them without disturbing the current employee count. Working with a nearby MRF to deliver their curbside recycling and trash in color coded bags decreased the need for multiple trips to the MRF and the landfill, lengthened the lives of their aging fleet and kept the curbside recycling program their residents required.

Rising costs of recycling pick-up and other factors have led some municipalities to abandon recycling services, in spite of the popularity of the service. RCAP assisted the city of Portland, Ind. with re-instating its recycling service through evaluating factors involved in operating the program.
E. coli concentrations in area streams often ranged from ten to 1,000 times greater than the statewide limit for safe wading or swimming.

The residents of Lincoln County are no different than most residents of rural Kentucky, they utilize septic tanks for wastewater disposal even though the soil quality is not favorable for septic systems. The first objective in the Best Management Practices was to reduce human fecal inputs from septic systems by addressing failing and improperly maintained septic systems and replacing those septic systems with a sanitary sewer collection system.

When the results of the watershed study were released to the local chief elected official, County Judge-executive Jim Adams, he realized at that very moment the wellbeing of the children of his county and the health of the local environment rested upon his shoulders. After careful consideration, he made the difficult decision to do what was best for his county rather than what might be best for his political career.

Judge Adams began by creating the Lincoln County Sanitation District. Upon its formation and appointment of commissioners, an engineering firm was procured, and the planning of providing wastewater service to Lincoln County residents was set into motion by first addressing the issues identified by the Hanging Fork Watershed study.

The Lincoln County Sanitation District Phase 1 project, located south of Junction City along the Highway 127 corridor to the City of Hustonville, consisted of a collection system to provide service to 535 residential and 50 commercial customers in the western portion of Lincoln County that did not have public sewer service. This project was designed to eliminate approximately 223 failing septic tanks, 101 raw water sewage discharges (straight pipes), and two package treatment plants: one located at the Hustonville Elementary School. To continue in the more than twenty year regionalization history in Kentucky, the sanitation district’s collection system will send the waste water to the city of Danville for treatment and the city of Hustonville, the local water provider, will provide billing services.

Project funding in the amount of $7,924,293 came from a variety of agencies: USDA Rural Development grant of $1,663,500 and loan of $350,000; Appalachian Regional Commission grant of $500,000; HUD Community Development Block Grant of $1,000,000; State Revolving Fund loan from the Kentucky Infrastructure Authority of $4,365,793; and a local cash contribution of $45,000.

Near the end of a long and difficult construction phase, Chairman Bill Payne, an Air Force veteran tirelessly dedicated to serving his community, realized the cost of connecting to the sewer system would place a hardship on the property owners and sought a new funding source to alleviate those expenses. He assembled a group of stakeholders which included the Kentucky Division of Water, RCAP, and the Kentucky Association of Counties to exhaust all funding opportunities.

RCAP and the Kentucky Division of Water EPA 319 Section partnered to devise the Lincoln County Homeowner’s Assistance Program. The program, based upon income and home ownership, will pay up to 90% of connection costs. Approved recipients must provide proof of property ownership, proof of income, an invoice from a licensed plumber, a copy of the plumbing permit from the health department, and a certification of installation form from the sanitation district.

RCAP conducted several public events at a local church in the project area to assist the residents with submitting the applications with required documentation. The Sanitation District Chair, Mr. Bill Payne and representatives from the Kentucky Division of Water attended these events to provide face to face updates on the project and operations by the newly formed district. In addition, RCAP conducted training for contractors who want to participate in the program.

Thus far, 344 applicants have been approved for the Lincoln County Homeowner’s Assistance Program funding assistance, more than $610,000 of project funds have been provided to connect 263 recipients, and 378 total sewer connections have been completed.

Since Judge-executive Jim Adams
and the fiscal court passed a mandatory sewer use ordinance that requires every property within a 200 foot distance from the collection system to connect to the public sewer system, it is believed every structure will comply as soon as weather conditions allow for additional construction.

In November 2018, the Lincoln County Sanitation District project was recognized by the U.S. Environmental Protection Agency (EPA) as one of 30 clean water infrastructure projects for excellence and innovation within the Clean Water State Revolving Fund program. EPA’s Performance and Innovation in the SRF Creating Environmental Success (PISCES) program celebrates innovation demonstrated by CWS-RF programs and assistance recipients; this time the efforts of Lincoln County received the prestigious award.

RCAP has been involved with this project since the beginning by obtaining signed petitions from property owners in the county. Additional contributions included completing necessary USDA Rural Development Processing Checklist items for the obligation of Rural Development project funds, addressing requirements as set forth in the USDA Rural Development Letter of Conditions, and administering the Homeowner’s Assistance Program.

As a direct result of RCAP’s assistance, the significant environmental and human health concern in the project area is now being addressed. The Sanitation District is very pleased with Kentucky RCAP’s efforts in Lincoln County. Sanitation District Chairman Bill Payne stated, “We greatly appreciate the assistance that RCAP provided. Whatever situation or issue we encounter, we know that Kentucky RCAP is always willing and able to help. I would definitely recommend them to other systems in need.