IRWA
ILLINOIS RURAL WATER ASSOCIATION

Water Ways

Volume V – Spring 2009

Illinois Rural Water Association

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Articles

MISSION STATEMENT

"Protecting and preserving the water and wastewater resources of Rural Illinois through education, representation and on-site technical assistance".

Pictured on the cover are employees from Curran Gardner Public Water District and their trailer with the "Quality on Tap" logo on it located in Springfield, Illinois.

Waterways *is the official publication of the Illinois Rural Water Association, P.O. Box 6049, Taylorville, Illinois 62568, and is published quarterly for distribution to members as well as other industry associations and friends. Articles and photographs are encouraged. Advertising and submissions should be mailed to the above address or e-mail us at ilrwadb@ilrwa.org.*

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The Great American Giveaway

by Frank Dunmire, Executive Director

As we all know, one of the first orders of business for incoming President Barack Obama was the passage and enactment of the American Recovery & Reinvestment Act of 2009. This legislation, now commonly referred to as the Recovery Act, will pour $787 billion into the economy through a combination of direct infusion of cash and tax breaks. When the Act was first signed into law, the media was reporting that money would be falling from the sky. All a person would need is a bucket and a little time and they would be able to capture enough of these funds to complete some long awaited infrastructure act. But wait, it would appear that with the passage of time it has become quite evident that the reporting and accountability requirements the recipients of these funds will be required to provide, seems to have opened everyone's eyes – especially this writer's – to the fact that there is no such thing as a free lunch.

We now find ourselves on the eve of what some are calling the Great American Giveaway, confusion remains as to what a person needs to do to tap into this source of funding. For the purposes of this article we will only be looking at water and wastewater funding.

By far, the largest portion of these funds will be made available through the Illinois Environmental Protection Agency (IEPA). The Act includes significant funding for two State Revolving Fund loan programs currently being administered by the Agency – the Water Pollution Control Loan Program (WPCLP), providing assistance for wastewater projects and the Public Water Supply Loan Program (PWSLP), providing assistance for drinking water projects. Collectively, these two programs are what we all have come to know and love as the IEPA Revolving Loan Fund and initially, the program funding will need to be managed under emergency rules to accommodate the unique features of the Act that contradict current Illinois law. In an attempt to clear up some of the confusion or answer some of the questions that might be out there, IEPA has posted on their website (www.epa.state.il.us/water/financial-assistance/economic-stimulus/index.html) the following summaries for potential borrowers.

Program Funding

The Act includes $4.0 billion for the Clean Water State Revolving Fund (WPCLP) and $2.0 billion for the Drinking Water State Revolving Fund (PWSLP). ***These amounts will yield approximately $177.2 million and $79.5 million for wastewater and drinking water projects, respectively, in Illinois***.

… Funding resulting from the package should be available for loan commitments in Illinois in the early spring.

Planning efforts by the IEPA are focused on the commitment of all economic recovery funds allocated to the State of Illinois within a 180-day time period extending through the end of September 2009. States will run the risk of losing resources uncommitted by February 17, 2010.

Monies available for wastewater and drinking water projects will be allocated entirely through the State Revolving Fund, with funds distributed by the IEPA in the form of zero interest loans with a twenty-year repayment term. The IEPA will provide for additional loan subsidization by forgiving principal on a portion of all funds allocated under the Act.

Participation for any one entity under the Act will be limited to 50% of project costs or a maximum cap: $10 million for WPCLP projects, and $5 million for PWSLP projects. Principal forgiveness terms will be applied at a rate of 50% for all project costs financed under the Act.

Program Implementation

The IEPA will require submission of a pre-application for financial assistance. The Agency will also require a completed loan application, including all necessary certifications to assure appropriate financial and managerial capacity, certification that the necessary project site, rights-of-way, easements and permits for construction of the project have been obtained, and execution of any other

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legal documents necessary for project implementation.

The IEPA will require the submission and approval of a Facilities Plan for wastewater projects and a Project Plan for drinking water projects…

Facilities and Project Plan submissions must be accompanied by the appropriate checklist: the Facilities Plan Submittal Checklist for wastewater projects and the Project Plan Submittal Checklist for drinking water projects, to be considered for funding under the Act.

The IEPA will require the submission and approval of appropriate plans, specifications and design documents, and acceptable bid packages for all projects.

The IEPA will require the submission and approval of a complete financial package, including enforceable use and user charge ordinances, a certified debt authorization ordinance, and a dedicated revenue stream adequate to assure loan repayment.

Program Eligibility

Eligible applicants for the WPCLP (wastewater projects) include local government units, primarily cities, villages and sanitary districts, with the following types of projects: construction of new wastewater collection and treatment facilities, or upgrade and expansion of existing facilities; replacement, rehabilitation or extension of collection systems and interceptors; and separation of combined sewers or upgrades to combined systems to eliminate overflows, surcharging or flooding.

Eligible applicants for the PWSLP (drinking water projects) include local government units, primarily cities, villages and water districts, and certain classes of privately-owned community water supplies with the following types of projects: upgrade or replacement of existing facilities to bring them into compliance with the requirements of the Safe Drinking Water Act and the State Environmental Protection Act; construction of new distribution and/or treatment systems; replacement of wells; and renovation of treatment and/or distribution facilities that have reached the end of their useful life, or have inadequate capacity to meet service area needs.

The IEPA will target 20% of available ARRA funding to projects "that address green infrastructure, water or energy efficiency improvements or other environmentally innovative activities". Funded projects under the "Green Project Reserve" may be stand-alone projects or identifiable components of larger projects, and should primarily address targeted improvements and solutions that directly involve wastewater and drinking water treatment facilities, or as part of a comprehensive solution to reduce hydrologic loading in a CSO community.

Examples of projects that might qualify for the Green Project Reserve can be found at the IEPA website mentioned earlier in this article.

Loan applicants for financial assistance must first file a pre-application with the IEPA. All projects included on the current (FY 2009) IEPA priority lists for the WPCLP and PWSLP will be automatically included on the economic recovery program funding list. Other projects with pre-applications will be added to the economic recovery program funding list if a construction start date during calendar year 2009 is indicated for the project. All loan applicants must fully complete all loan application elements before the Agency can offer a loan. A pre-application is not sufficient to secure a loan under the program.

Key elements of a loan application that must be submitted by the applicant and approved by the IEPA prior to receiving a loan include: a facilities or project plan; environmental sign-offs from the appropriate state and/or federal agencies; a user charge system, sewer use ordinance, and a dedicated source of revenue for repayment of the loan; design plans and specifications with an approved construction permit; and a summary of the bids received on the project, along with a recommendation to award a contract or contracts to the low responsive, responsible bidder.

The distribution of funds will be governed by readiness to proceed, with this focus required to meet the volume and timeline proposed for the economic recovery program. Loan applicants should concentrate their efforts on projects that are "bid-ready", or projects that lend themselves to an accelerated schedule for planning and design. The IEPA will limit the amount of funding available to any single entity, ***and will commit the vast majority of funds prior to September 30,***

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2009. A rule-of-thumb schedule with a bid date no later than August 2009 is recommended; however this should not be construed as approval by the IEPA to bid a project that is proposed for funding under the economic recovery program: failure to receive IEPA approval prior to bidding and contract award may make the project ineligible for loan assistance under the program.

The economic recovery program will not include refinancing provisions for projects currently under construction or previously constructed with SRF loan funds from prior years. Program funding will be directed to new construction projects initiated in federal fiscal year 2009 in conformance with language included in the Act.

In addition to funds through IEPA, USDA's Rural Development (RD) will also have Recovery Act dollars available as well. Through language written into the act, RD will disperse their allocation of money through their standard loan/grant process that has been in place for a number of years. In essence there will be a 70% loan and 30% grant ratio of the ***TOTAL*** dollars. I call your attention to the word total because there is no guarantee that you will get that exact split. Some systems will get a higher grant to loan ratio, while others will receive a higher loan to grant ratio. However, at the end of the day, the total dollars allocated will have been dispersed at a 70/30 split. RD underwriting will determine loan and grant splits on a project by project basis and the underwriting process will determine a borrower's grant eligibility.

During conversations this past week with Illinois RD, they stated they are still actively looking for projects and, currently there no RD delays in processing applications. Additionally, new projects that RD is not aware of at this time can still qualify for Recovery money – if they get moving now. For additional information on their requirements and access to downloadable forms, visit their website at http://www.rurdev.usda.gov/IL.

Hopefully some of this information has been of value and if I can be of assistance, please feel free to contact me. Good luck on your projects!

IRWA Upcoming Training Sessions

May 6, 2009	Oblong	Water Leak Detection	Water
May 21, 2009	Monticello	Wastewater A-Z, Treatment	Wastewater
May 28, 2009	Yates City	System O. & M.	Water
May 28, 2009	Carterville	Wastewater Math 1 & 2	Wastewater
June 18, 2009	Hopedale	O. & M. / Conservation	Water
July 16, 2009	El Paso	Wastewater A-Z, Treatment	Wastewater
July 16, 2009	Taylorville	System O. & M.	Water
August 27, 2009	Paxton	System O. & M.	Water

***THIS IS A TENTATIVE SCHEDULE. OUR WEBSITE (WWW.ILRWA.ORG) WILL REFLECT THE LATEST CHANGES AS WELL AS CURRENT TRAINING TO REGISTER FOR. PLEASE CALL THE OFFICE AT 217-287-2115 WITH ANY QUESTIONS.

Do You Need Any Help?

by John Bell, Wastewater Technician

The wife and I just came back from a quick vacation and as we stepped through the front door we noticed that it seemed to be a little cold in the house. Yup, the furnace was on the fritz. Welcome back!!! We have a very good heating and air conditioning repair man and he was quickly on the scene and things were set back to normal. This little blip in the road got me to thinking about the Illinois Rural Water Association and its assistance to operators that encounter their own "little blips in the road." I can think of many problem encounters that I and my fellow circuit riders have discussed but two come to mind that I would like to share with you.

Several months back, I was contacted concerning a lagoon that needed to be sludge judged. By now, I think most of my fellow operators with a lagoon system know to what I am referring. IRWA has the equipment and we have the experience to complete the task. Seemed like a minor thing to be done that ended up being very important for the town that needed the lagoon to be sludge judged. The town in question had been visited by IEPA and the inspection letter suggested that the lagoon needed to be cleaned. No easy or cheap task. The town wanted a little more information on the lagoon before they made a reply to IEPA regarding the cleaning of the lagoon. After the sludge judging was completed, it was felt that the lagoon was not in a drastic sludge condition, but the town felt that the lagoon should be cleaned. The sludge judging had helped the Board in making a sound decision in what was the best course of action.

Recently, I stopped by a community with an activated sludge plant and the operator met me as I got out of the truck and stated he had just been thinking about giving me a call. The operator mentioned that the plant was going through a little bit of an upset and the effluent was not as clear as normal. He had noticed things not going right for several days and had been concerned. The plant lab testing was confirming his observations. He had contacted a nearby fellow operator who had suggested some operational changes. After talking with the operator and learning what had been

suggested I concurred that he was on the right path to correcting the problem. I had stopped by the plant in question in the past and was familiar with the look and feel of the plant in question. A nice plant, well operated, and the effluent from this facility was always top notch.

So what is the point I am trying to make? The reason for the circuit rider to stop by and talk with you and look at your facility when things are running good is to be able to help you when things like a "little blip in the road" come along. We have a reference point to know how to help you with your problem. We have stopped by many plants and a fellow operator may have had a similar problem and we were informed how that operator solved the problem and can pass that information on to you. A call to a fellow operator with a similar facility is always a good call. The more information you have will always help you make an informed decision. The circuit rider visits are important to the circuit rider in that he gets to know you and your facility and can be of immediate help to you when the time comes that you happen to face that "little blip in the road."

The Polyurethane Wedgewater Filter Bed System

by Gary Chase, Wastewater Technician

Are you looking for a system that will improve your digested sludge dewatering? This may be the solution to your problem, it was to the Village of Granville.

The Village of Granville, Illinois is located in Northeast Putnam County with 1,400 residents. The wastewater treatment plant is located in Mark, Illinois (a mile West), with a population of 491 residents. The average daily flow to the WWTP is 200,000 gallons/day.

The existing WWTP is a single Conventional Activated Sludge plant with a five-acre tertiary lagoon. The tertiary lagoon treats the excess flow from the inflow and infiltration that the Activated Sludge plant cannot handle. Chlorination of the effluent is required after the flow exceeds 0.5 MGD.

The Village has some combined sewers that they intend on separating, when the funds become available.

In the past, the only source of wasting digested sludge were to the two 60'X30' outside drying beds. Well, we all know the difficulty in maintaining a mass balance in the aeration tank when the drying beds are full, frozen or wet.

Removed tile showing under drain tile

The Superintendent of Public Works, Lucian (Lu) Verda, convinced the Mayor and the Village Board that additional sludge handling was needed to operate the Activated Sludge plant more efficiently. Lu contacted Larry Goode, from the Village's engineering firm, Chamblin & Associates, in Peru, Illinois. Larry informed Lu of a sludge dewatering system in Shelbyville, Illinois that uses a polyurethane tile media, instead of sand, no vacuum source to dewater the sludge and the beds are inside a building.

Polyurethane tile 12"X12"X2"

Lu; Assistant Public Works Director for 9.5 years, Sheli Starkey; the Village's water and sewer committee chairman, Randy Borio, and Larry Goode, Village engineer representing Chamblin & Associates, took a field trip to Shelbyville to see the Wedgewater Filter Bed System in operation.

The four Granville representatives

were impressed with the performance of the Wedgewater Filter System and relayed the results to the Mayor and the Village Board.

The Village received approximately 50% Grant funding and financed the remaining 50%.

The total cost of the project was approximately $700,000.

The Village of Granville installed the Polyurethane Wedgewater Filter Bed System for the purpose of dewatering the digested sludge without investing in a centrifuge or a filter press.

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Randy, Lu, Sheli and Dan

The Polyurethane Wedgewater Filter Bed System

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The Polyurethane Wedgewater Filter Bed System uses a 12”X12”X2” Polyurethane tile with slots angling in four directions from the center of the tile. The tiles are laid on a concrete pad and joined by dovetail joints, which lock the tiles in place. The tiles can withstand a load bearing of 3,500 to 4,000 lbs.per square foot. The manufacturer does not recommend using a skid-steer to clean the filters, due to the spinning of the tracks, which can destroy the Polyurethane tiles.

To increase the sludge dewatering capacity, a Velodyne (brand) polymer is added to the sludge before being discharged to the filter bed. Due to the charge of the sludge particles this is a critical area for peak performance of the polymer. If the wrong polymer is used there will be no agglomeration of the sludge, dewatering will take much longer and you’ve wasted money on something that’s not functioning properly. Jar-testing is recommended to match sludge with polymer.

There are two Filter Beds approximately 30’ wide by 45’ long, approximately 1,350 tiles per Filter Bed. Within each Filter Bed are 25-underdrains which join to a common line that drains the filtrate back to the head of the plant from both Filters.

The Polyurethane Wedgewater Filter Bed System went online in September 2007.

While I was there, Sheli wasted approximately 4,000 gallons of 2% sludge to the South Filter Bed. Fifteen minutes after Sheli shut off the wasting pump, you could hear the filtrate running into the underdrain system and the level on the wall was also dropping.

Dan removing sludge from Filter Bed

The building is equipped with a sludge storage bunker, but the sludge dried better outside in the outside bunker and it didn’t have to be moved around the building twice. The building was installed with two overhead gas heaters. Lu, Sheli and Randy all agreed if they could do anything over it would be to install radiant heat in the ceiling, this would increase the sludge drying time even more.

To help dry sludge on the warmer days there is a garage door at the opposite side of the entrance door which is used to create a cross-ventilation flow of air through the building.

To demonstrate the ease of cleaning, Dan Siegmann, who has been with the Village for 5 months, drove the small John Deere tractor into the dried bed and removed the sludge to the stockpile. The procedure here is to drive in and back out. The loader is also equipped with a

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Earth-friendly recycling helping the American Farmer

The Polyurethane Wedgewater Filter Bed System

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4" plastic blade on the front end of the loader to protect the tiles.

To keep the slots open in the media tiles, the beds can be backflushed through the media, or using pressure washer which blasts the sludge out of the slots and all sludge goes back to the head of the plant.

The Village land applies all of the sludge generated to a farmer's field close to Granville.

If you have any inquires about the Polyurethane Wedgewater Filter Bed System, you may contact:

Aaron Full, Cahmblin & Associates
PO Box 424, Peru, IL 61354
Phone: (815) 223-3344

Sheli Starkey, Village of Granville
PO Box 580, Granville, IL 61326
Phone: (815) 339-2100

Gravity Flow System Southwest, Inc
2331 North State Highway 46,
Suite 200, Seguin, Texas 78155
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Fax: (830) 379-5781
Email: www.gravityflow.com

On March 27th, the Village will be losing its number one employee and friend of 29 years. Lu has decided to retire and do some of the things he has never had the time to do with his wife.

Congratulations on serving the Village as the Chief of Police for 17 years and the Superintendent of Public Works for 12 years.

Best of luck in your new life!

An Innovative Method of Disinfection

by Tom Shrewsbury, District #2 Board Member

We were having troubles with chlorination at one of our wells in Hebron. There exists a high demand due to the makeup of the raw water. We have .6 mg/l ammonia and other conditions that make disinfection difficult. There were chlorine feed failures resulting in disinfection problems and considerable expense. Every 6-9 months, it became necessary to replace the chlorine pump, which cost about $1200 each time.

The well is located in a community park, and it is not fenced. A chlorine leak was a feared situation, especially if it were to happen during a festival or other activity where large groups of people were present. It seemed that some action should be taken to find an alternate method of disinfection to chlorine gas.

This problem was researched for 3 years. During that time, consideration to bleach was given, but it did not seem to be the right answer. Because of the high demand and the limited space inside the well house, it would have required a separate building of some sort, such as a "lawn building" that you would have if you had insufficient space for your riding lawn mower and other property maintenance tools. This raised the question of vandalism and security problems. In addition, such a structure would not be temperature sensitive, raising the question of maintaining solution strength. Frequent deliveries would be required. Suppliers charge a delivery charge in addition to the cost of the product.

At our Tech Conference, Effingham 2008, Apex Pump was one of the exhibitors. The Constant-Chlor system was shown in their booth, and it caught my eye. I visited briefly about it and set up a breakfast meeting the last morning of the conference with Vince Rodriguez and Bruce Jacobson of Apex Pump. Don Dierker of Arch Chemical also was able to attend. We discussed the principles of operation and how the system would work.

A few days later Bruce, Don, and I met again at my well house, where I was able to see a demonstration unit. All of us felt that it could be a successful application for the problem I had. I asked for references where the system was then in

operation so that I could discuss its merits with a current user. The reference given was New Berlin, Wisconsin.

I contacted the Village Engineer who is Mr. James J. Smith of Applied Technologies, Inc. He advised me that the system was not yet approved as a disinfection method in Illinois. It had received approval in Wisconsin. We made arrangements with their Superintendent for Mr. Smith and myself to see the unit in operation. A hearty welcome was given by Rick Johnson, Utility Superintendent at New Berlin. Upon seeing the operation first hand, we were impressed. We felt it would be a practical and economical solution to the problems we were having in Hebron to

An Innovative Method of Disinfection

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deliver water from that well that was properly disinfected.

Our next step was to present the idea to the Village President and Board of Trustees. We met with them in April 2008. Vince, Bruce, Don, Jim Smith, and I were present to explain the concept. Some very intelligent questions were asked by the Board, and we were able to give forthright answers. Arch Chemical agreed to furnish the equipment and the Constant-Chlor briquettes for the pilot project and the Village of Hebron provided the necessary engineering services. We received approval that evening to proceed.

After Village Board approval, we applied for a construction permit from IEPA for the pilot study. Using protocol data from New Berlin, a permit was obtained. Chris Kohrmann and Jerry Kuhn in the Permits Office at IEPA were most helpful to us in granting the permit. We then made plans to bring the equipment to Hebron. The first requirement was an alkalinity test of the raw water to determine what would be needed in the way of softening equipment and an R/O unit for the "makeup" water, which had to be raw, untreated water. Because of high alkalinity, a rather large softener was needed in addition to the R/O unit.

The equipment was brought to the site and installed on an interim basis by Apex Pump with the support of Don Dierker and Zach Adams from Arch Chemical. This also proved to be a learning experience for everyone as some problems ensued. However, we overcame the obstacles as time passed, and all of us learned from it. Shortly after the equipment was first installed, Rich Ransford a product specialist, was brought into the process by Apex Pump to oversee and manage the pilot project to completion. The unit was found to be a viable source of water disinfection for the town of Hebron.

We learned many things along the way during the pilot study period. We had a couple of times when we were down for a couple of weeks, but we carried it through to a successful conclusion. From Zach Adams we learned how to collect the protocol data, and do a solution strength test, which is done each time a production run is completed. This tells us if the solution is producing enough chlorine to properly disinfect the finished water. It is separate from the usual tests that an operator performs to test for free and total chlorine in the finished water. The combination of the two is the measure of the performance of the unit. A solution strength test is relatively simple to take, does not take a great deal of time, costs little, and facilitates adjustment of pump speed setting to get the proper mixture and desired residuals in the finished water.

In December of 2008, we submitted our own protocol data to Illinois EPA, which was prepared by Zach Adams from data I collected during the pilot study. I was very happy to have received an Operating Permit on January 7, 2009. The system is now a permanent installation. Our current budgeting process will allow for the installation of the same type of system at the other well in Hebron if finances permit.

In summary, I feel that we have found a solution to our disinfection problem in Hebron, and have opened the door to a new method that can help other systems. The Constant-Chlor system runs on 110 single phase power. My gas chlorination system ran on 480 3-phase. I don't know much about electricity and rates, but would hope this will save us on energy costs. An added benefit is not having cylinder deposits for gas chlorine or paying shipping on lots of water, as is the case with bleach as I saw it at other systems. The communication and caring of the staff at Apex Pump, Arch Chemical, Applied Technologies, and the Village of Hebron was of a nature rarely seen in the marketplace today. We worked well together to achieve a goal that is mutually beneficial. My door is open to anyone wanting to see how this application works in operation. You can reach me at 815-236-1271.

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So You Think You've Had a Bad Day

by Wayne Nelson, IRWA Training Specialist/Field Staff Coord.

The Hickory-Kerton Water Cooperative services 880 connections in its 204 miles of water mains. It serves a large rural area in Schuyler County as well as a portion of Brown County. Much of the area that the system serves is flat to rolling ground to some pretty good-sized hills. The system purchases treated water from three systems via interconnections. Brad Lanier serves as the system's certified operator. David Shuster and his plumbing firm maintain the distribution system with installations and repairs.

Most of the time the cooperative's operation runs smoothly with the same problems that all rural systems face. Of course, this can include the usual leaks and line breaks. Pretty much your average rural water system- until Thursday February 26, 2009.

On that date a later winter (early spring?) thunderstorm traveled through Hickory-Kerton's service area. Late in the day calls from customers began coming into the cooperative's business office stating that they had little or no water pressure. An immediate search by system personnel found no leaks. Keep in mind that they were checking 204 miles of main after a period of rainfall that had ditches running full of water.

At that point the job of valving off portions of the system to locate and isolate the leak was started. By 11:00 am on Friday February 27 the leak had been located.

What they found was this: One of their 4" PVC water mains had experienced a direct hit from a bolt of lightning from the previous day's storm. This was clearly evident when the main was totally uncovered. Dagger-shaped shards of the PVC pipe had been driven into the soil around the water main. A total of seven feet of the main was cracked and destroyed by the hit. The main had a 26" gap where the main was totally gone-shattered into the above mentioned shards. The tracer wire's insulation was burnt off along the shattered area and wiring insulation further away had been bubbled by the extreme heat.

The one sure thing was that this was a lightning strike. There are no power lines or other utilities in close proximity to the main break site. The site was in a rural field and was on one of the higher elevations in the distribution system. We have to assume that one of two things occurred. One, the direct hit shattered the main just by the sudden impact on the main, or, two, that the extreme heat turned the water inside the main to steam and the main exploded much like an uncontrolled boiler. This would explain the outward direction of the shards of pipe imbedded into the soil.

System personnel (Mr. Lanier, Mr. Merlin Downs) and Mr. Shuster repaired the destroyed section of main and water service was restored later in the day on Friday. The required boil order was issued and bacti. samples were collected. When I spoke with Mr. Downs and Mr. Shuster the following week the boil order had been lifted and just a few complaints of air in the lines were still coming in. This was pretty good news since the system and tower had been drained due to the massive loss of water.

When I spoke with Mr. Downs and Mr. Shuster they were installing a service connection. This was a service connection that they had planned to install on a stormy Thursday the week before. As things often do for folks in our business something else came up to change their plans.

So the next time that you're fixing a leak due to pipe age, deterioration of components, or from someone digging without the proper J.U.L.I.E. locates remember that sometimes even Mother Nature can give you a bad day.

These pictures show the bits and pieces of the pipe removed from the break area.

Bits and pieces of the water main hit by lightning

Mr. Merlin Downs and Mr. David Shuster with the damaged pipe

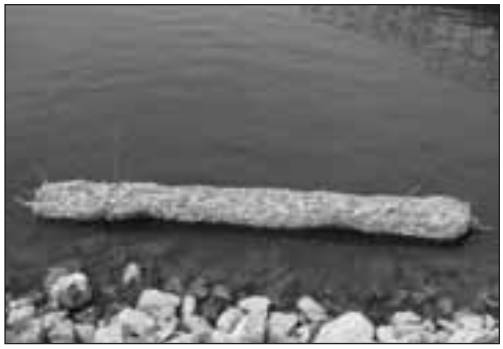
Sewer Lagoon Water Clarity

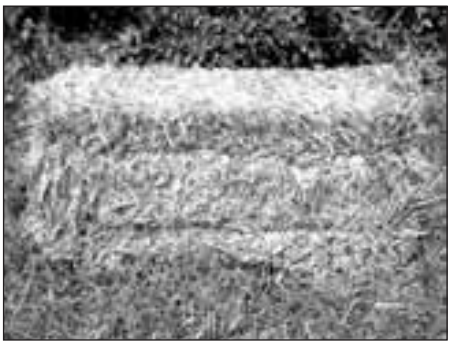
by Perry Musgrave, District 8 Board Member

Spring is here and you can tell that partly by all the green outside. Most of the greenery I enjoy very much but there are two things that green up every spring that causes me a lot of work. The first is my yard and since the invention of Round Up that has become a lot easier and allows me to spend less time on it and more time on the golf greens. Well back to work, the other green that over the last several years has caused me much trouble and time is algae in our sewer lagoons. Every spring or early summer when the algae blooms it raises our CBOD and TSS in our effluent. Some times they are above our permit levels and require some type of treatment. In the past we have used copper sulfate and aqua shade both of them has been costly for little results. In 2006 our algae bloom at the Elkville sewer treatment plant was extreme. During a visit with Dick Rohr IRWA wastewater technician at that time asked if I would be interested in using barley straw.

I said I would but knew nothing about it. He said he would help me get information on where to get barley straw, how much to use, and what methods to use. Dick was able to put me in contact with people that had used barley straw. Then at the 2008 IRWA annual technical conference Charles Corley with IEPA gave a presentation on using barley straw in wastewater ponds. From that I took a wealth of information back to Elkville. I then talked to the mayor about the ideas I had come away with he agreed it would be worth trying. I then built 3 barges 20 feet long 4 feet wide out of 4 inch PVC and attached snow fence to it. We then tied them together 25 feet apart, put in our 250 pounds of barley straw and stretched them across our lagoon. We have replenished the straw as needed and I'm happy to report since we introduced barley straw to our sewer plant we have not exceeded our CBOD or TSS in our effluent. So I would like to say thank you to IRWA for the help and the information on barley straw. Elkville has saved money and man hours by using barley straw.

Disclaimer: It is unlawful to sell barley straw if the seller claims that barley straw "controls" algae. This is because the words "controls algae" makes it a pesticide from the legal perspective according to the U.S. EPA and is subjected to all the rules associated with unregistered pesticides. So I can not recommend barley straw for algae control just water clarity. Now I wonder if anyone in IRWA can help me with my golf game?





Family Time: Instant Protection Against Dangerous Influences

by Elena Neitich

Family time is a necessity for those wishing to build happy and healthy families. Parents that take time out to eat as a family, play, read, and talk together, teach children that they matter, that relationships are worth nurturing, and that strong family bonds breed success.

Setting aside blocks allocated for family time can be very difficult for busy families. By the time everyone is home from work, school, sports, and other outside activities people are tired, playing a board game seems like the least important item on the to-do list. However, playing a board game, metaphorically, is the most important item to cross off of the list.

Family time is valuable time when parents can take time out to observe their children, follow their children, hug and kiss them, encourage, guide, and laugh. Family time is when children feel comfortable opening up to their parents; this is a time when the mood is relaxed and children feel supported, valued and loved.

Eat together

Studies have shown that the family activity with the greatest positive impact on children, is sitting down together to dinner each evening. Benefits for children include learning patience, (family members should wait for everyone to be served before eating and remain at the table until everyone is through), sitting quietly and calmly to eat, and listening attentively and participating in the conversation. If an evening meal is impossible to schedule, families can find a different meal to gather, a fun idea is to set the table later in the evening when everyone is home, and have dessert together.

Children should be included in meal

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Family Time: Instant Protection Against Dangerous Influences

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preparation, setting the table, and clean-up. Although table manners must be taught and reinforced, mealtime should be a pleasant experience with a focus on togetherness. Quick behavioral reminders will reinforce good manners and then conversation can be resumed. Parents should choose to be in a good mood and not let the day's issues weigh down the meal. After all, this is family time!

Creative planning can make the evening meal easier to put on the table and clean up afterwards. Simple meals, and meals prepared in advance and frozen, are good ways to ease the evening scramble and help keep the focus on family time, not on cooking and cleanup. Instead of spending an hour cleaning the kitchen after the meal, simple meals free up some time in the evening for togetherness.

Shut off the television and the computer

Shutting off the television in the evening helps to place the focus on the people in the house instead of the strangers on the screen. The evening hours spent interacting as a family instead of staring at the television will benefit everyone greatly and will help create warm and lasting memories.

Shutting off the television and the computer eliminates the risk that children will be exposed to damaging levels of violence and sexual content. Experts claim that violence and sexual imagery negatively change the brain chemistry of children, resulting in permanent changes in the brain's wiring.

Set a relaxed mood

Bathe young children and put them in their pajamas. Put on some light music that isn't jarring or offensive, this often cues a little impromptu dancing from children, always good for a laugh. No arguing, bickering, or crabbiness. Family time should be warm, joyful and happy. Parents should be demonstrative and giving, snuggle, hug, and kiss the kids and each other. Family time like this is ideal for modeling loving, kind behavior.

Find fun games and activities

The nature of children is to be fun loving and flexible and open to many ideas. Coloring, board games, guessing games, acting, playing with dolls or cars, and reading are all fun things to do together. Allow children to help set the evening agenda. One idea based on the Montessori principal of learning suggests observing the child and leading by following the child.

There are other opportunities during the day for family time

The evening is not the only option for family time. Parents should seek out other times to be together. Take the kids on the morning and afternoon dog walk, invite them to join in on gardening, ask them to help wash the car or help with the laundry. It is probably true that activities will be completed slower with kids as helpers, but their happiness far outweighs the inconvenience.

Parents who zone out each evening in front of the television or computer for hours and hours rob children of the necessary family time that they need. It is stingy of parents to choose to channel or web surf over spending time with their kids. In a blink of an eye the kids will be up and out of the house and parents will have the rest of their lives to stare blankly at a screen, alone.

Making a conscious effort to spend quality family time together is vital to the health and welfare of children. Children do not thrive if parents don't interact with them daily. When parents choose to have kids, they automatically choose to sacrifice their time to raise their kids. Family time is a parenting tool which helps to regulate the content that children are exposed to and introduce healthier activities. Developing strong relationships with children also will build bonds that last a lifetime.

About The Author

Elena Neitlich is owner of Moms on Edge at http://www.momsonedge.com When you're tired of battling with potty training, bedtime and other behavioral issues, find clever parenting tools and products proven to quickly help solve common parenting issues.

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