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STATE OF ILLINOIS
Pollution Control Board

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November 26, 2004

Clerk's Office
Illinois Pollution Control Board
State of Illinois Center, Suite 11-500
100 W. Randolph
Chicago, IL 60601

PC#12

RE: R04-021

Dear Chairman Novak :

I want to thank the board for the opportunity to speak at the two hearings on October 21 and 22 on behalf of Clean Water-Illinois in support of preserving the current radium water quality standards.

Our concerns along with those of several other environmental organizations in Illinois are highlighted in the attached *Chicago Tribune* story of. This news article also signifies the increased media scrutiny regarding the disposal of radioactive wastes in our environment.

In addition I am submitting articles from Wisconsin and New Jersey that detail similar problems in those states. The bottom line is people are greatly concerned about levels of radium in their environment and the solutions are not easy to find.

Clean Water-Illinois lauds the board for their commitment to ensuring a thorough airing and analysis of this pressing issue that will have a profound impact on the water, wildlife and most importantly, the citizens of Illinois.

Sincerely,



Doug Dobmeyer
Clean Water-Illinois

attachments

Radium filtering doesn't get rid of it

It's taken out of water but put on land, in rivers

By Michael Hawthorne

Tribune staff reporter

Published November 9, 2004

Dozens of northeastern Illinois communities are stripping their drinking water of cancer-causing radium, only to dump the radioactive element back into the environment in sludge spread on farm fields and wastewater pumped into rivers and streams.

State officials say the disposal methods won't threaten human health, food crops or wildlife. But critics, including some federal regulators, fear that in the rush to make drinking water safer, towns might be trading one radium problem for another.

Communities including Joliet, Channahon and Geneva draw their drinking water from deep wells laced with naturally occurring radium. To comply with federal regulations, most of the towns will flush the element through their sewage plants, dividing it between treated wastewater and nutrient-rich sludge that farmers welcome as an inexpensive fertilizer.

A new federal report suggests that future homeowners could inherit a significant problem if suburban sprawl transforms the farmland into subdivisions. As radium decays, it forms radon, an odorless gas that seeps into basements and can cause lung cancer.

Moreover, critics said, releasing concentrated radium into rivers and streams could harm fish and other aquatic life.

"We need to get the radium out of our drinking water, but I'm really concerned there could be side effects that could be even more hazardous," said Michael McCoy, chairman of the Kane County Board and a former water company engineer.

In an August draft report intended to give local officials advice about radium treatment and disposal methods, the U.S. Environmental Protection Agency concluded that spreading radium-contaminated sludge on corn and soybean fields could create radium hot spots that would require future cleanup.

Although sludge may be good for crops, the report said, "EPA believes such benefits should be weighed against potential hazards and risks of the practice."

Communities have been forced to act by U.S. EPA regulations ordering utilities to reduce radium in drinking water to 5 picocuries per liter of water (picocuries are a measure of radioactivity). The rules, along with a federal appeals court ruling, strengthened a legal standard that has been on the books since the mid-1970s.

Illinois records more violations of the federal radium standard than any other state. Deep wells in northeastern Illinois tap geological sources of the radioactive element, which has been linked to bone cancer and poses a greater risk to children than adults.

High levels from deep wells

Many of the northeastern Illinois communities that rely on deep wells post radium levels that are three to five times the legal limit, according to the Illinois EPA. (Radium is not a problem for any community that draws its water from Lake Michigan, or for homes that rely on shallow wells.)

Enforcement of the federal standard was delayed for years by legal battles and conflicting opinions about the risks posed by radium. The U.S. EPA once considered relaxing the drinking water standard but

eventually decided enough research existed to keep it at 5 picocuries per liter.

A child under age 5 exposed to radium-laced water has 10 times the lifetime risk of developing cancer as someone exposed to the same amount of radium at age 25, according to the agency.

Two towns, Elburn and Oswego, are installing equipment that removes radium from drinking water and traps the element in containers that can be sent to a landfill in the Pacific Northwest licensed to handle low-level radioactive waste.

"If there is concern about what is coming into our water treatment plants, there's going to be concern about what is coming out," said David Morrison, the Elburn village administrator. "We figured at some point somebody would figure out we were just moving radium from one place to another instead of getting rid of it."

Officials in Joliet and most of the other towns with radium problems have rejected the system. They say it has not been tested thoroughly and could force dozens of local utilities to register as radioactive waste handlers.

The state already enforces limits on radium in sewage sludge. Under an agreement between the Illinois EPA and the Illinois Division of Nuclear Safety, sludge spreading shouldn't be allowed if it raises the level of radioactivity by more than a tenth of a picocurie per gram of soil.

State regulators recently have warned five communities with radium problems--Joliet, Channahon, Geneva, Huntley and Lake in the Hills--that they will need to cut back the amount of sludge distributed to farmers to reduce potential health risks, according to Illinois EPA records obtained by the Tribune.

Joliet, the largest Illinois community with radium problems, plans to challenge the state's limits.

"There is no basis in science for the state's standard," said Dennis Duffield, the city's director of public works and utilities. "As a result, I don't think there is a problem."

Lower water standard sought

As the Illinois EPA defends its limits on radium in soil, the agency also is pushing to make it easier to dump radium-contaminated wastewater into rivers and streams.

The agency is asking the Illinois Pollution Control Board, a state rule-making panel, to eliminate a 32-year-old standard for radium in surface water.

All of the communities with radium problems violate the current standard of 1 picocurie per liter of surface water, but Illinois EPA officials said they can't figure out why it was set at that level in 1972. The standard apparently has never been enforced.

"We don't expect there will be any measurable difference in the aquatic environment" if the standard is eliminated, said Marcia Willhite, chief of the Illinois EPA water bureau.

While state officials said they couldn't find any scientific literature suggesting there is a problem with radium in surface water, opponents found several papers that document how radiation can harm wildlife.

One Florida study found that levels of radium in some freshwater mussels were high enough that the mollusks would qualify as low-level radioactive waste.

"I don't think the state looked very hard, if they looked at all," said Brian Anderson, a biology professor at Lincolnland Community College in Springfield and a former top official at the Illinois Department of Natural Resources. "Everything out there suggests this is a problem."

Articles found through a search of GOGGLE – Radium in Water

Wash. Twp. gets plant to remove radium in water

Saturday, October 23, 2004

Treatment facility slated to start cleansing process next summer

By LISA GRZYBOSKI
Courier-Post Staff
WASHINGTON TWP.

Technology never before used to remove radium from municipal drinking water is coming to the township. The stated goal couldn't be clearer - eradicate the cancer-causing element and don't leave anything behind.

The township's municipal utilities authority formally broke ground Friday on the \$3.75 million treatment plant located just a stone's throw away from the offending well on Tuckahoe Road.

Layen Christensen Company, a national firm specializing in water-related services and products, will install a patented filtration system that uses a resin to absorb the radium from the water, said Michael Havener, the company's vice president.

Developed by The Dow Chemical Company about 25 years ago for cleaning mining sites, the resin will soak up the radium until it reaches its capacity, which is usually in five years. The resin will then be collected and shipped off to low-level radioactive storage sites in Hanford, Wash., or Clive, Utah, he said.

"It's a very, very environmentally safe way of dealing with this material," Havener remarked, emphasizing no wastewater stream is created in the process.

Karen Hershey, a spokeswoman for the state Department of Environmental Protection, confirmed the technology is innovative and has the potential to be used by other communities.

"I do know that we see this as a good step forward," she stated.

There are 13 wells in the township, but only one draws water containing radium above federal levels, explained Sheldon Belson, the MUA's executive director. Once it's completed in the summer of 2005, the treatment facility will cleanse the water coming from the Tuckahoe Road well and a new well that is drilled but still awaiting approval to operate from the state.

Both wells tap into the Kirkwood-Cohansey Aquifer, which studies have shown contains naturally elevated radium levels, which are even further raised because of surface proximity and fertilizers farmers and homeowners use to grow crops and plants.

The township's MUA detected the radium in 1988 after it had drilled the Tuckahoe Road well and tested the water. Soon the MUA began blending the water with another well to dilute the radium and meet federal safe drinking water standards, Belson said.

But concerned residents during public meetings in the early 1990s made it clear they "did not want the radium in the water at all," noted Belson.

The MUA began to look into radium removal and the treatment plant is the culmination of about a decade's worth of work and research, he said.

"Standards are based on risk and, in some respect, on probability," said Vicki Binetti, a township resident of 13 years and vice chairman of the environmental commission. "Everything is not without risk. So here we are eliminating the risk from radium."

The radioactive element is linked to increased risk of bone and sinus cancer, particularly among children.

The lifetime risk associated with drinking water that contains the maximum level of radium allowed by federal law is about one in 10,000, according to the federal Environmental Protection Agency. That means if 10,000 people consumed two liters of such water daily for 70 years, it's likely one additional person would develop fatal cancer.

Binetti uses and drinks the public water and considers it safe, but applauds the MUA for assuring that "every effort is being made to clean up the radium" and making an "investment in our security".

And it is an investment.

The MUA is borrowing the \$3.75 million needed to build the plant from the New Jersey Environmental Infrastructure Trust at a 2-percent interest rate.

Belson believes the construction costs shouldn't translate into higher bills for property owners with public water. However, the plant's operation costs could spill over into higher rates, he said.

"It's conceivable that once this thing gets going, it's going to cost more to operate," Belson remarked.

It's a reality that doesn't upset Binetti.

"I think it's a very reasonable and forward-thinking thing to do," she said. "People take the delivery of safe water for granted."

WHERE TO CALL

- For information, call the Washington Township Municipal Utilities Authority at (856) 227-7788.

Work on water plant set to begin

Friday, October 22, 2004

By Shawn G. Menzies

smenzies@sjnewsco.com

WASHINGTON TWP -- It's been close to 16 years since radium was first detected in a water well in town; t officials will break

ground on a near \$4 million treatment plant that will eradicate the radioactive metallic chemical element in th municipality's drinking water.

Local officials and members of the town's Municipal Utilities Authority will hold the ceremonial event at the location where the water in Well 10 was found to have radium when it was dug in 1988 off Tuckahoe Road. was not put into use until 1993, when Well 10's water was blended with water from another well to drop rad levels to within state standards, officials have said.

"It's going to get rid of the radium in all of the town's water," Sheldon Belson, executive director of the MUA former mayor in

town, said. "We hope it will do the job and the people really want this."

Belson said once the plant comes online next year it will handle cleansing radium from approximately 2 billion gallons of water a year. The Central Water Treatment Plant will be built in two phases, the first being the building of structure to house the equipment and the second phase entailing the installation and piecing together of the equipment, Belson said.

Radium is a radioactive metallic chemical element commonly found in very small amounts of pitchblende and other uranium minerals.

Belson said treatment plants like the one the town will build are common in the western part of the United States and is believed to be the first of its kind in the Garden State.

The engineering firm of Federici & Akin will put in place a Layne-design plant, officials said. The plant will use filter media designed by Dow, officials said.

"It is really a huge step in our environment and making sure people have quality clean water," Mayor Randee Davidson said. "It is a big project to get this plant and it will ensure the water supply is radium free."

The MUA was notified in August 2002 by the state it was eligible to receive the \$3.5 million loan with a seven percent rate, Belson said.

Original plans had the plant coming online this year, but the project has been delayed because of a state-required bidding process and a local law dealing with water well protection.

When the council in late 2002 approved the Wellhead Protection Ordinance, which limits development in areas around wellheads, or shallow wells where toxins can enter the drinking water supply, the law forced MUA officials to take the drawing board.

The MUA changed its plan for a plant backup generator's fuel source from diesel to natural gas, because the diesel fuel would have been stored underground in close proximity to a well.

The groundbreaking ceremony will be held at 11:30 a.m. today on Tuckahoe Road near Brunswick Lanes bowling alley, officials said.

WTVD North Carolina:

Dozens of Orange County Residents Fight for Clean Water

By Mike Dunston

(10/20/04 - ORANGE COUNTY) — In Orange County dozens of people say their water is contaminated. They had to boil water for more than a year. They're finally sick of the hassle and they called Eyewitness News for help.

Rita Fellers isn't lugging jugs of filtered water because she wants to; she says she's doing it for her health. "It tastes lousy, it has radium 226 and 228 in it, it gives off radon gas when it comes out of the faucet and the shower head."

For Rita and more than 40 neighbors in the Wildcat Creek subdivision, month after month of the past 14 months there's been no let up to the letters.

They advise them to boil their water before drinking it. According to the notices, their water company found potentially cancer causing radium and coliform bacteria in their water well.

Lonny Kylander will only let his Zinneas drink this water. And he says it's definitely not fit for his dog Sarah

So he's wearing his frustration on his front lawn. "We just want clean water, I mean this has gone on, long enough. This is my message to the neighborhood."

"We put out this boil water advisory as a precautionary measure." Jerry Tweed, the head of the Cary-based water company heater utilities said. "The water in the distribution system is totally safe, the water coming from the well has sporadically given us a problem, the chlorine kills that problem."

"I'd like to see him try to drink this stuff out of the tap, I wouldn't do it, we have to purchase all of the water we drink." According to one document from the Utilities Commission, the water company wants to raise the rate

Residents plan to meet Wednesday night to fight that move. Meantime, company leaders say they found another and hope to lift the boil water advisory by the end of the year.

Lake County Reporter:

City of Delafield - The amount of radium in the water from the city well near Highway 83 and I-94 is approaching levels that are too high, according to federal and state restrictions.

"We are right on the fence line," Public Works Director Tom Hafner told the Common Council during a budget workshop Monday night. In a later interview, Hafner emphasized that he did not think either public or private well water in the city was at risk.

"If the well is determined not to be in compliance, the well water would either need to be treated or blended with water from a shallow well," Hafner said.

Hafner has asked for \$600,000 to \$700,000 to be set aside in the 2005 budget to deal with the issue.

Hafner said radium levels cannot exceed 5 picocuries per liter, according to federal environmental protection standards that are enforced by the Wisconsin Department of Natural Resources.

Radium is the substance that results from the breakdown of radioactive materials naturally found in aquifers, according to Hafner.

The federal Environmental Protection Agency says consumption of large doses of radium over long periods of time can contribute to bone cancer in some people, according to Hafner.

Hafner said the federal agency reduced from 20 picocuries per liter to five picocuries per liter the allowable levels of radium in drinking water.

However, Hafner said a controversy swirling around the regulations made state and federal officials, until recently,

hesitant to enforce the lower level.

At issue in the controversy, according to Hafner, is whether there is enough of a public health risk to merit the high costs some government units to comply with the lower level requirements.

DNR has required quarterly tests of the water in the city's only well. The well is located near the northeast corner of Gc Road and Milwaukee Street.

He said the first two tests this year indicate the radium levels are on the borderline of being too high. He said city levels have ranged from 4 to 7 picocuries per liter.

He said if the levels are too high at the end of the year, the city might decide to dig a shallow well that will be connected to a reservoir so the water from the deep and shallow wells can be blended.

He said he did not think the city's public water supply was at risk because there are a number of alternatives for reducing the radium levels.

He said he did not believe that private water supplies are at risk because most private wells - particularly for residential purposes - are shallow wells not subject to higher levels of radium.

Chicago Sun-Times

Environmentalists slam plan to drop radium limits

October 8, 2004

BY GARY WISBY Environment Reporter

An Illinois Environmental Protection agency proposal to eliminate limits on radium in the state's waterways would contaminate mussels and wildlife that eat them, an environmental group charged Thursday.

At an April hearing, IEPA official Bob Mosher said the agency could find no studies about the impact of the radioactive material on wildlife.

"They didn't look very far," said Doug Dobmeyer, spokesman for Clean Water-Illinois. He cited a study showing fresh water mussels absorb radium-226 at toxic levels.

Humans would be at direct risk if they ate the mussels, according to the study, done for the Southwest Water Management District in Brooksville, Fla. It's not known how many people do eat them.

But it is known that mussels are consumed by fish, raccoons, waterfowl, otters and muskrats, said Brian Anderson, chairman of the biology department at Lincolnland Community College in Springfield.

Those creatures could serve as pathways to other predators, including bald eagles, said Anderson, who formerly worked for the Illinois Department of Natural Resources.

"The scientific literature and common sense argue that IEPA's assertion that releasing concentrated radium into the environment is ridiculous," Anderson said.

When told of the Florida study, Marcia Willhite, chief of IEPA's water bureau and Mosher's boss, said, "We'll certainly take a look at it. It may or may not give us a clue as to the tie between [lowering standards] and the concentration needed to be harmful to aquatic life."

IEPA also wants to raise the radium limit for water near intakes of treatment plants from one picocurie per liter to five picocuries – the same as for drinking water. "It didn't seem appropriate to hold [water being treated] to a cleaner standard than drinking water," IEPA spokeswoman Maggie Carson said.

But the Florida study found that mussels in water with five picocuries of radium accumulated enough to require that the mollusks' flesh be sent to a low-level radioactive waste site.

Galesburg Register-Mail, October 16, 2004

Village seeks grant for well

October 16, 2004

ALEXIS - The Alexis Village Board on Monday approved a resolution to apply for Community Development Assistance Program funds for a new water well.

The vote came after a public hearing to explain and discuss an application to construct a new water system. The village needs a new well to replace its oldest well and to comply with the Illinois Environmental Protection Agency radium standards. The whole water system needs updating, as well.

The project is estimated to cost \$241,955. The village is seeking \$181,451 from the state CDAP grant. That leaves \$60,504 the village would have to pay. The water fund has \$51,050 already available for the work through water fees.

John Roegiers, village engineer with Missman, Stanley and Associates, said the project estimate is 20 percent higher than it was three years ago when the village first applied for the funds. This is the third attempt at a grant. Previous applications were denied due to lack of funds.

Trustee Curtis Moore resolved to establish a second park fund. The original fund for park improvements was established for grant funds. "We have a nice looking park but there are still improvements that need to be made," Moore said.

Among the items still needed are new swings.

The board approved his resolution and will create the fund at the Farmers State Bank. Individuals may contribute there.

Moore, who is a member of the American Legion, reported the local post donated three 8-foot tables for use at the community center.

The next meeting will be at 7 p.m. Nov. 8 in the Community Center.

Lake dwellers fear the suburbs' thirst

Growth increases demand, stirs up clashes over water

By DARRYL ENRIQUEZ
denriquez@journalsentinel.com

Posted: Oct. 10, 2004

During the height of an ugly dispute over water, an embattled town chairman from western Waukesha County publicly predicted that, for communities west of Milwaukee, water would become more precious than oil.

Rapid residential and business growth has put new demands on aging rural water systems, forcing an unprecedented number of suburban municipalities to hunt down new and plentiful sources of contaminant-free water.

The search has put many of them on a collision course with conservationists and owners of lake properties and private wells.

Property owners fear that their private wells and the lakes they share will run dry as water is sucked through high-capacity wells and sent along to newcomers.

Residents of Upper Phantom Lake, near Mukwonago, Beaver Lake, near Hartland, and Lake Beulah, near East Troy, are worried that their predominantly spring-fed bodies of water could be adversely affected by new wells on or near those lakes.

"The issue is basically that (communities) are taking on huge amounts of growth and becoming suburbs of Milwaukee, and East Troy is no different," said Rob Hudson, whose family has lived on the nearly pristine Lake Beulah since the mid-1800s.

"We're saying, 'Don't take a chance of damaging one of your picturesque resources that attracts people to the community,' " he continued. "People with homes on the lake have significant investments. If the lake turns ir green sludge because of damage done by wells, we'll lose our property values and East Troy will lose taxes."

Hudson said Lake Beulah and Upper Phantom Lake residents are enlisting the help of sportsmen and conservationists who are concerned about water resources.

Former Waukesha County Supervisor Karen J. McNelly is to host a meeting of the Citizen's Water Protection Study Group at the Mukwonago Town Hall on Tuesday at 6:45 p.m. State and local water resource experts are to talk about dealing with municipalities and state agencies that are designated to protect public waterways.

"It appears to us that there's never been as many of these kinds of issues showing up," said Bob Biebel, chief environmental engineer with the Southeastern Wisconsin Regional Planning Commission, which oversees water issues.

"Occasionally, there's been conflicts, but historically there's never been this many at one time," Biebel said.

Biebel said it's become necessary for communities to dig new wells outside their municipal boundaries either because there isn't enough space for a new well in the municipality, or potential sites are in areas apt to become

contaminated with gasoline, industrial waste or other poisonous substances.

The recent nasty fight between the village and town of Eagle made headlines. It was so contentious that it spilled over into a failed referendum to dissolve the village in part over a new village well site in the town.

Town officials become angry when the village attempted to annex the land. Eagle Town Chairman Don Wilt said during one of many meetings on the issue that water would surpass oil as the most valuable resource in a county thirsty for continued economic development and the clean water needed to accommodate growth.

The Eagle dispute highlighted the main problem facing water utilities. The traditional source of drinking water deep underground aquifers about 1,000 feet beneath the surface - has become unreliable and potentially dangerous.

Water experts say that as utilities throughout eastern Wisconsin and northern Illinois put more demands on the shared deep aquifer, its water becomes more contaminated with radioactive substances.

Falling depth levels mean that water close to radioactive rock is being drawn for human consumption.

Shallower wells used

This issue has prompted many communities to dig shallow wells, 200 to 300 feet deep, as an alternative water source. Shallow aquifers are free of radium contamination, but they also replenish lakes and streams and are needed for private wells.

Municipal officials argue that they have no intent to damage a natural resource.

"If there was documented proof that it would do damage to (Lake Beulah) - we're not going to do this," East Troy Village President Bill Loesch said. "Three experts have advised us that it (the well) would not present a problem to the lake or even draw water from the springs that recharge the lake."

The water issue has also become heated in Walworth County, where it has reached Circuit Court, although not as heated as it became in the Eagle situation, Loesch said. Tensions are beginning to drive a wedge between East Troy and lake residents, he said.

Just to the north, Mukwonago has an eye on drilling a well on the shores of Upper Phantom Lake to serve its rapidly growing south side. Lake area residents have the same concerns as Lake Beulah residents about its effect on water quality.

Water dispute quiets down

Another dispute over the Hartland well appears for the present to have been resolved.

Village Administrator Wally Thiel said Beaver Lake residents were given complete access to village records, and they hired a hydrologist to run independent tests. They were advised that Hartland's new well was unlikely to damage the lake, although its long-term effect on the environment needs to be monitored, Thiel said.

Growing water troubles in Hartland will be put to rest by the new well, he said.

"It was sort of like striking oil."

SmartMultimedia Gallery:

October 13, 2004 08:50 AM US Eastern Timezone

4/20/05

Watts Premier Completes EPA ETV Program

Watts Premier Reverse Osmosis System. (Photo: Business Wire)

PHOENIX—(BUSINESS WIRE)—Oct. 13, 2004—Watts Premier, a subsidiary of Watts Water Technologies, Inc., has announced its completion of microbial contamination testing of its product line under the EPA Environmental Technology Verification (ETV) program. Watts Premier 5-stage reverse osmosis (RO) systems were tested for removal of microbial contaminants in drinking water.

"Based on these results, it's shown that the use of our reverse osmosis systems will significantly reduce the risk of exposure to waterborne bacteria and virus should there be a contamination within municipal or private water distribution systems," said Shannon Murphy, vice president of municipal programs. "This physical removal of microbial contamination agents is in addition to the NSF International certified reduction capabilities of our RO systems including arsenic, lead, perchlorate, radium and cysts."

"Watts Premier is dedicated to providing innovative, high quality drinking water treatment solutions that continue to meet the growing water concerns of today," said Murphy. "We are pleased with the results of this stringent EPA ETV evaluation on our RO systems. This added evaluation to our current list of certified RO capabilities provides added security to homes and communities that are in need of water treatment solutions."

The goal of the EPA ETV program is to further environmental protection by accelerating the acceptance and use of improved and cost-effective water treatment technologies. As part of the national Homeland Security effort, NSF through its ETV program has developed a test/QA plan for evaluating point-of-use drinking water treatment systems for removal of microbial contamination agents.

Watts Premier (www.wattspremier.com), a Watts Water Technologies company, is based in Phoenix, AZ. Watts Premier provides innovative, cost efficient water treatment solutions, including point-of-use and point-of-entry, commercial, municipal compliance, food service and custom design systems.

Contacts

Families ask again to receive lake water

By Mick Zawislak Daily Herald Staff Writer
Posted 10/27/2004

Considering the source is 20 million gallons a day, a Lake County request to supply four subdivisions east of Libertyville with Lake Michigan water is

just a sip from a tall drink.

Together, the 500 families in unincorporated Countryside Manor, Libertyville Estates, Ashford Trails and Terre Fair neighborhoods use a mere 100,000 gallons of water daily.

Although that's a sliver of what the Central Lake County of Joint Action Water Agency pumps daily, the request has big implications.

JAWA, as it is known, has nine members and decisions are made based on a bigger picture. Making sure there will be enough water for members in the future has the agency and residents in a tough spot.

The situation also hints at a larger concern, as parts of the county outside the membership area experience water supply problems.

"How many areas like this are out there?" asked Ed Glatfelter, JAWA's executive director. "Do we expand outside our original planning area?"

The county's request was rejected in spring, in part, because members did not have a handle on future needs. A planned population and water demand forecast is not complete.

"This is going to be a big issue in the future in Lake County - the county needs to have a more comprehensive approach," said Donald Rudny, Gurnee mayor and JAWA member.

The issues are expected to be aired tonight, as the agency reconsiders a new water source for the subdivisions. Water from wells there exceeds the federal standard for radium. As operator of the system, Lake County has to correct the problem.

Four possibilities, including digging new wells or building a treatment facility to remove the radium, have been considered. Getting Lake Michigan water through the county is the least expensive, however.

Also an option is receiving Lake Michigan water via Green Oaks, which gets its supply from Waukegan. That would come at a premium on monthly bills and would cost more to install, said Peter Kolb, the county's interim public works superintendent. Extending pipes to connect to the system would cost the county \$225,000 through JAWA, compared with \$365,000 through Green Oaks, he said.

As a JAWA member, the county resurrected the issue for a vote based on new information. Kolb is expected to present his own analysis showing future water needs won't be affected if the Libertyville-area residents connect.

The dispute has riled some subdivision residents, who can't understand why they still are drinking water containing radium above federal standards more than a year after it was discovered.

"We have meetings quarterly and it's pretty much the main topic of every meeting we go to," said Jennifer Elfering, a member of the Countryside Manor Homeowners' Association. "I just know that we need to do

something."

Kolb emphasized although the water exceeds the standard, it doesn't mean the supply is unsafe. Nonetheless, the county has a mandate to come into federal compliance.

Rudny, who voted against the extension the first time, said the agency would need to verify the county's numbers.

"I have no problem if someone can convince me there is a serious public health issue at stake," he said. "They have alternatives. Radium can be removed from the system."

Milwaukeeans oppose Lake Michigan water for Waukesha

*Some say water diversion would
increase poverty, segregation*

By DENNIS A. SHOOK - GM Today Staff

September 29, 2004

WEST ALLIS - The tide of public opinion Tuesday certainly was against allowing access to Lake Michigan water for many Waukesha County communities and some even tied the issue to urban poverty and racism.

While several environmentalists told the state Department of Natural Resources that they feared the loss of what they called "a non-renewable resource," others acknowledged that there were social and political reasons behind their opposition.

The Hoan Bridge looms in the background while several small sailboats make their way across the waters of Lake Michigan on Monday. Several environmentalists told the state Department of Natural Resources at a meeting Tuesday they didn't want Waukesha County to tap into Lake Michigan for drinking water because of the loss of what they called "a non-renewable resource."

The public information hearing was one of five being held throughout the state in the next week to gather public opinion to submit to the Council of Great Lakes Governors. That group is considering a set of rules for the future of the Great Lakes that will determine what areas will be able to directly access the fresh water and what environmental protections need to be installed to protect lakes Huron, Ontario, Michigan, Erie and Superior.

The council that will ultimately consider the new regulations, which have been called "Annex 2001," consists of the eight U.S. states adjacent to the lakes and the Canadian provinces of Ontario and Quebec.

The new standards would include where and how water from the lakes should be allowed outside the basin. In Waukesha County, only those lands that lie east of the subcontinental divide are considered within that basin.

That rules out all of Waukesha, which would like to access Lake Michigan water as a solution to the high radium levels in the existing water supply. And keeping Waukesha and other suburbs from the water was clearly a major issue for some who spoke during more than two hours of public comment.

Suburban shots

Milwaukee Alderman Michael Murphy drew loud applause when he read a Milwaukee Common Council resolution that asked the council to "minimize all diversions" of water outside the basin.

Murphy added that any consideration of extending water should be linked to suburban efforts to develop affordable housing projects in the county.

Chris Ahmuty, executive director of the American Civil Liberties Union of Wisconsin, took that recommendation even further in his comment, saying that "environmental justice" standards needed to be considered in any consideration of selling Lake Michigan water to Waukesha. Ahmuty cited a section of the proposed changes that states water diversions "that may harm the residents of Milwaukee."

Ahmuty added, "Water diversions will almost certainly increase suburban sprawl. The undisputed lack of affordable housing and the ongoing resistance to meaningful public transportation in and to the suburbs means that many poor Milwaukee families - disproportionately, persons of color - are simply unable to live or work in prosperous suburban communities.

"In a metropolitan area as segregated as Milwaukee, providing water diversions from Lake Michigan to suburbs outside its basin will exacerbate the residential isolation and economic deprivation of the city's poor and minority residents," Ahmuty said.

Even Waukesha County residents joined in the torrent of opposition.

Former New Berlin Alderman Paul Lincoln Scheuble commented, "Some kind of water budget needs to be figured out before any water is diverted."

He said his own community, which already is nearly half in the

basin, should be denied water sales on the basis it would be an "arbitrary" standard.

Steven Onsager, who lives in North Prairie but owns a manufacturing business in West Allis, added, "There should be no exceptions allowed unless they can replace the water" by sending back treated wastewater.

"Instead, we ought to try to lure potential industrial water users into the basin area," Onsager said.

Some approve

Waukesha Water Utility Manager Dan Duchniak has made the argument that Waukesha should be considered part of the Great Lakes basin and should not be denied water from that source in any event. He said about 40 percent of Waukesha groundwater recharges the Great Lakes by seeping into the aquifer and returning to the Great Lakes.

So he believes it is not really a diversion of water from the system, as the proposal has historically been treated. Duchniak said it can be shown that there would be no need for an expensive system to return water to Milwaukee even though Waukesha is located west of the subcontinental divide because Waukesha groundwater seeps back into the Great Lakes basin.

Some comments at the public hearing took the same stream of thought.

New Berlin Mayor Ted Wysocki said that his community, which is split by the subcontinental divide, should be considered completely within the basin. He said the Annex 2001 rules recognize that groundwater and surface water are interconnected.

"In reality, there is only one water," he said. "Water flows between the surface and the ground fairly freely. The proposed rules recognize this connection and, in cases where science is available, allow for even further definition of the extent of this interconnection and potential adjustment of the basin boundary."

If it is adopted by the governors, Congress and the region's state legislatures, the compact would codify Great Lakes protections such as requiring that any water diverted from the basin be returned; calling for greater water conservation throughout the region, and requiring improvements to the Great Lakes environment.

Dennis A. Shook can be reached at dshook@conley.net.

New Berlin's worries eased about groundwater supply

Hydrogeologist says city's levels are strong

By *KAY NOLAN*

Special to the Journal Sentinel

Posted: Oct. 5, 2004

New Berlin - There's plenty of groundwater for future development in western New Berlin, a hydrogeologist told the city's Plan Commission on Tuesday.

Even if all available land in the western portion of the city were to acquire new houses on five-acre plots and each house had four occupants using 100 gallons of water per person every day, groundwater levels would not be noticeably affected, he said.

The Plan Commission had asked for clarification of the matter after a recent study by the Southeastern Wisconsin Regional Planning Commission reported a 500-foot drop in the level of a deep sandstone aquifer in Waukesha County within the last century. The report predicted continuing drops in groundwater levels in coming decades, due to increased water usage by municipal wells.

But Steve Schultz, who heads the water supply department of Ruekert & Mielke Inc., said that residential wells in western New Berlin rarely, if ever, tap the deep sandstone aquifer. "A private well would have to be 400 to 500 feet deep," he said.

Those shallow wells also are free of radium, a radioactive and potentially harmful substance found in water drawn from deep wells. The city is under state order to close contaminated deep wells or employ treatment methods that rid water of radium. The deadline is December 2006.

Six of the city's 10 wells do not comply with federal standards for radium concentrations. The city can bring drinking water into compliance by closing contaminated wells and importing Lake Michigan water, or it can blend shallow well water with contaminated water to dilute radium levels. Another option is to use radium-reduction treatment methods at each of the deep wells.

There is considerable land west of Calhoun Road in New Berlin that is ripe for development. Unlike residents in the eastern portion of New Berlin, who are served by municipal water and sewers, those living in the western half have septic systems and private wells that tap groundwater from a shallow sand-and-gravel aquifer.

Groundwater is quickly replenished in the sand-and-gravel aquifer, separate studies by SEWRPC and Ruekert & Mielke have shown, Schultz said.

Ninety percent of the water pumped by private wells in New Berlin is rapidly returned to the ground by septic systems, he said. Some of the returned water flows into area wetlands and streams, and the rest seeps deeper into the ground and flows east, recharging the aquifer under a large part of Waukesha County before eventually reaching Lake Michigan.

"Western New Berlin is a major recharge area for the entire county," he said.

Both studies showed that groundwater there is recharged at a rate of about 3 million gallons per day, Schultz said. Even if all suitable rural land in western New Berlin were developed, the amount of groundwater recharge would only diminish by about 4%, he said.

In addition, new state regulations that took effect Oct. 1 require new developments to incorporate measures to ensure groundwater recharge at 90% of the site's pre-development levels, said Eric Nitschke, a city engineer.

Plan commissions can require developers to install ponds in new subdivisions to collect storm water. Where dense clay soil is prevalent, developers can grade the area to direct water runoff into the storm water ponds. New types of porous asphalt can be used to minimize water runoff caused by impermeable pavement surface. Roadways can be edged with gravel to further collect runoff.

"We could actually create a net gain (in recharge)," Nitschke said.

"This report is very encouraging to us who have had concerns over the groundwater supply," said Lee Sisson, member of the Plan Commission. He called for copies of the report to be published in the city newsletter.

Pact to protect Great Lakes water finds public support

Many at hearing call for more protections against withdrawals

By LEE BERGQUIST
lbergquist@journalsentinel.com

Posted: Sept. 28, 2004

West Allis - People attending a public hearing Tuesday night strongly supported the idea behind a proposed agreement by Great Lakes governors that would regulate large-scale diversions of water from the lakes.

But most of those who supported the agreement also said it does not go far enough.

They called for more protections against water withdrawals, a faster phase-in of regulations and clearer language about how best to conserve the largest source of fresh water in the world.

The hearing at State Fair Park, and others like it in Wisconsin and in other Great Lakes states during September and October, is intended to provide the governors with public comment about how best to manage the Great Lakes at a time when many experts view fresh water as the most critical resource of this century.

Before making his comments, Cameron Davis called southeastern Wisconsin the "flash point" for debate about who gets access to Great Lakes water, and who does not.

"The debate is more front and center here than anywhere else," said Davis, executive director of the Lake Michigan Federation, an environmental group.

It's simply a matter of geography. In metro Milwaukee, the Great Lakes basin ends in eastern Waukesha County. From there, all water eventually flows to the Mississippi River.

The basin is all-important because in 1986 Congress passed the Water Resources Development Act, which required the governors of Wisconsin, Minnesota, Illinois, Michigan, Indiana, Ohio, Pennsylvania and New York to unanimously approve water diversions outside the boundary.

Running out of water

But fast-growing communities such as the City of Waukesha that are outside the basin are running out of well water, and their existing supplies are laced with unacceptably high levels of radium, which has the potential to cause cancer.

Those communities want to tap the lake. But under the law, they need approval from all eight governors - something that has happened only twice before.

The agreement tries to open the spigot to the lakes, but perhaps just a little, and in a way that could supply nearby communities while making it virtually impossible for far-away cities to tap in.

Tuesday night's hearing and an earlier informational meeting drew more than a 100 people.

But during the hearing, no one spoke on behalf of the water needs of Waukesha, Muskego, Brookfield, Pewaukee and Sussex - municipalities that lie outside the basin and have water problems.

Where to draw the line

Instead, speakers such as Steven Onsager of North Prairie in Waukesha County said he was fearful of the cumulative effect of water diversions. "Where do you draw the line?" he asked.

Onsager called for minimizing diversions, forcing all those who take water out of the basin to return it and to use incentives for people and businesses to move to Milwaukee County and other places in the basin so that water is preserved.

Bruce Peacock of Burlington said he spoke as someone with property along Lake Michigan near Marinette who feared that already low lake levels would keep falling. Invasive species have reached farther out onto the lake beds, wreaking havoc on his stretch of the lake, he said. He called stronger water conservation practices the best solution to protect the lakes.

Davis, of the Lake Michigan Federation, liked the agreement. But he echoed the sentiments of others and called for these changes:

Abandon language that allows larger water users inside the basin a higher threshold of water removal before governors can step in. Maintain unanimous approval of all water deals by governors. And clarify language about requiring conservation practices for those allowed to tap the lakes.

Chicago exempted

Rep. Jon Richards (D-Milwaukee) said he was troubled that Chicago continues to be exempted from the agreement. "I think it's worth some talk - you'd hate to see the largest user on the lake exempted from this."

A 1967 Supreme Court decree allows Chicago and about 100 communities to use nearly 2 billion gallons of water from the lake daily. But it's not returned and is flushed down the Chicago River, flows into the Chicago Sanitary and Ship Canal and ends up in the Mississippi River.

A sharper critic of the plan was Wisconsin Manufactures & Commerce, the state's largest business group. Jeff Schoepke, director of environmental policy, said it created a "bureaucratic morass" that goes far beyond what is necessary to protect the lakes.

Some of the highlights of the agreement:

- Authority over the Great Lakes would remain in the states and the two Canadian provinces that border the lakes.
- Inside the basin, Great Lakes governors would have to review any new request to use 5 million gallons a day or more that will not be returned to the lake. This would also apply to any existing user that wanted to increase water use by that much.
- Outside the basin, Great Lakes governors would have to review any request for 1 million gallons a day. All eight governors would have to agree to the water use.
- Anyone asking for water would have to demonstrate that they needed the water and couldn't find it elsewhere. They also must agree to return the water after treatment and fund water restoration projects.

After the hearings, governors and their staffs will work with the Council of Great Lakes governors to draft a final agreement - one between the states and another between the states and provinces of Ontario and Quebec.

From there, the process could get dicey.

Any of the legislatures, or Congress, or officials in Canada could reject the agreement.

October 6, 2000

BTMUA will meet with Howell officials, residents

BY DANIELLE MEDINA

Correspondent

HOWELL — Representatives from the Brick Township Municipal Utilities Authority (BTMUA) have been invited by Howell officials to discuss the authority's role as a water supplier for the Ramtown section of the township.

The meeting, scheduled for Oct. 28 at 7 p.m. at Howell Middle School South, Ram-town-Greenville Road, was organized by Mayor Timothy J. Konopka and the Town-ship Council. BTMUA Vice Chairman Andrew P. Nittoso, Executive Director Kevin Donald, Director of Water Quality Louis Gialanella and Director of Engineer-ing Steve Specht are expected to represent the authority at the meeting.

Following a brief presentation, the BTMUA officials will field questions from the public and Howell officia

“This is a big deal for our residents,” Konopka said. “It’s going to have a positive impact on the community

Konopka said he expects that the BTMUA representatives will address water quality issues, rates and how t water will come from the new Brick reservoir instead of from aquifers.

“It’s a get-acquainted session,” said BTMUA attorney John Doyle, “but there is still a lot to do and a lot of approvals to get.”

Doyle was referring to the due diligence process that the authority is currently in with Parkway Water Co., t previous water supplier for Ramtown.

BTMUA commissioners are still considering whether they want to purchase the Parkway Water Co. and its Howell customer base of 1,800 homes and business. Parkway Water serves customers in the Ramtown secti of Howell, including three schools.

Last year, Parkway Water customers were notified that their water supply had excess levels of radium-226 and radium-228, naturally occurring elements in the soil that can become activated by the introduction of fertilizers and lime, as well as by the movement of the soil.

On Aug. 16, the BTMUA began temporarily selling 200,000 gallons of water daily to 500 customers in the lower section of Ramtown, after Parkway Water’s last uncontaminated well ran out of water. Residents in th upper section of Ram-town, as well as the three schools, continue to be served by the New Jersey-Amer-ica Water Co.

Nittoso said that since the BTMUA began supplying water to Ramtown, the authority has averaged about fo phone calls a month with questions about the chloramine in the water. He said there have been no other inquiries on any other topics.

Nittoso added that since the due diligence process is “close to the end,” he expected the Oct. 28 meeting to t the next step in the approval process for the authority’s acquisition of Parkway Water.

The BTMUA needs approval from the Brick and Howell governing bodies as well as approval from the stat Board of Public Utilities before it can purchase the Park-way Water Co.

The Herald Palladium

Thursday, September 23, 2004

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Benton Township factory cleanup completed

By SCOTT AIKEN / H-P Staff Writer

BENTON TOWNSHIP -- The U.S. Environmental Protection Agency has completed an eight-year, \$12 million cleanup of radioactive material and other pollutants at an old factory complex along the Paw Paw River.

However, the EPA will continue to monitor chemicals in the groundwater for at least a decade at the former Aircraft Components property on North Shore Drive.

Cleanup activity on the federal Superfund site began in 1996 after an investigation revealed the presence of radium-226, a radioactive material from World War II-era aircraft gauges stored in buildings on the 17-acre site.

Five contaminated warehouse buildings were demolished, and the rubble was hauled to hazardous waste facilities. The work involved removing concrete foundations and a storage building. Over the course of the project, 10,000 tons of building debris and radioactive aircraft parts were hauled away.

The final phase included the demolition in May of a 150-foot-tall smokestack. All traces of radiation have been removed from the site, and this year's work involved removing soil tainted with chemicals or metals.

Radium is considered a public health hazard. Frequent contact with it can cause cancer, according to the Michigan Department of Community Health.

While the EPA said the radium on the site was not a danger to nearby homes, a school and restaurant, cleanup was required to prevent the material from spreading off the site.

U.S. Rep. Fred Upton, R-St. Joseph, who worked to get the site included on the list of projects eligible for federal funding, described the effort as a "Superfund cleanup success story in our own backyard.

"Without having it done, who knows how many people would have been affected," Upton said.

During the summer, contractors excavated and removed about 3,000 tons of contaminated soil and sediment at the site and on the bank of the Paw Paw River. They backfilled excavations and remaining foundations to remove hazards.

A "hot spot" of lead and cadmium in the Paw Paw River's riverbed was removed by driving sheet steel piling into the river bottom to hold back water during excavation.

Cleaning groundwater

A technique called bioremediation is being used to eliminate chlorinated solvents polluting the groundwater. Kevin Adler, site manager for the EPA, said hydrogen-releasing compounds were injected into the plume of contaminated groundwater. The compounds create conditions in which, over time, bacteria use the chlorine solvents and change them into harmless, naturally occurring gas and salt, Adler said.

"We expect to monitor once every couple of months for the first year, then quarterly, and then annually as the levels fall," Adler said.

"The quantity we see is not huge, but it had some time to disperse," he said.

The source of the solvents is unknown, but the chemicals have penetrated 80 feet into the ground. Progress cleaning up the chemicals will be checked with a dozen monitoring wells.

The property, owned by D&L Sales, South Haven, has been a factory site for nearly a century. Baker-Vawter Co. opened a factory on the property in 1907 and merged with other companies in 1927 to form Remington Rand Inc. Later, the company became Sperry-Rand, and paper forms were made at the site until 1964.

The vacant buildings were purchased by the late Charles Zollar of Benton Harbor, a state senator and businessman. For years he and his brother, Herman, used the site to operate Aircraft Components, a mail-order parts company.

Radioactive paint used to illuminate the faces of World War II-era gauges the company sold was the source of radioactive contamination on the property, the EPA said.

When Aircraft Components moved out in 1991, thousands of the gauges were left behind. The deteriorating condition of the buildings allowed radioactive dust to spread around the buildings.

The problem came to light when a truckload of scrap from Aircraft Components, including some of the gauges, set off an Arkansas dealer's radiation detector.

With cleanup finished, Adler said, the EPA is working with the Michigan Department of Environmental Quality and Benton Township to ensure that future uses are compatible with the property.

Deed restrictions or other institutional controls can be put in place, said Adler. The site is suitable for a park, a new factory or other business, he said.

As part of the project, soil was removed in areas contaminated with chemicals and replaced with a 2-foot-thick layer of clean fill.

The property is in a flood plain and has a high water table, which could restrict residential building.

Adler said that until the groundwater contamination is gone, wells could not be used to provide drinking water. But that should not be a problem in using the property, he said, because municipal water lines are nearby.

The Aircraft Components site was the 904th Superfund National Priorities List project completed, the EPA said. There are now 1,242 sites on the list.

August 26, 2004

Board passes series of items for Blackberry Creek subdivision

by Jennifer DuMont

The Elburn Village Board passed a series of motions that will help development at the Blackberry Creek subdivision to continue its pace.

The board approved Monday an annexation agreement between the village and Blackberry Creek, engineering plans for well #5, located in the development, wetland plantings near tributary D of the creek, a proposed total and site plans for Units 8 and 9 site plans.

Annexation agreement

The annexation agreement included an impact fee structure, payable to the village from the developers on a per lot basis. Additionally, the agreement stated that the developers of the subdivision are responsible for paying well #5, located on the property, as well as additional costs associated with the village's radium removal project.

Well site

Well #5 will be located at the base of the Blackberry Creek water tower at the northern entrance to the development. It will be housed in a 15-by-20-foot building that B&B Enterprises' Charlie Blood said was made

to look as attractive as it could be, with brickwork, a metal roof and windows to resemble a house.

Village Administrator David Morrison said the building was a good-looking well building, and village engineer Bill Gain gave his approval, explaining that all well issues have been addressed through several meetings. Gain added that the use of hypochlorite at the well is a good choice, in comparison of the use of gas chlorine, which presents a more serious hazard in the event of a leak.

Hypochlorite is a liquid form of chlorine and although it too is a hazard if spilled, the gas can be more dangerous and requires more training than the use of the hypochlorite.

"Not using gas chlorine in a residential area is a plus," said Gain.

A radium treatment building will be constructed 20 feet from the well building. The two-story building will house a silo, where the radium treatment tanks will be located.

Like the rest of the village, the Blackberry Creek development must deal with the presence of radium in the water supply. Radium is a naturally occurring substance present in the water supply throughout northern Illinois, and, in high enough dosages over a long enough period of time, may cause cancer. The treatment equipment designed to pull the radium out of the water, making it meet the Illinois Environmental Protection Agency's standards.

In the future, the entire site at the base of the water tower will be fenced in and landscaped, said Blood.

Blackberry Creek tributary D

Trustees also reviewed wetland plantings at Blackberry Creek with Pat Kelsey from Christopher B. Burke Engineering. Kelsey said plantings are completed at the island located in the northern pond of the development. He added that the island will eventually be covered with one foot of water once plants have established themselves.

Kelsey has been working with Kathy Chernich at the Army Corps of Engineers, the body with jurisdiction over the creek. In addition to the Army Corps' issues, the Illinois Department of Natural Resources, the Conservation Foundation, Water Conservation District and divisions of fisheries and threatened and endangered species all have a hand in decisions at the creek.

"We have lots of eyes and ears on this," said Village President Jim Willey.

In addition to ensuring water quality enhancements, storm water mitigation is also required at the site.

"This is the most complete storm water mitigation in probably all of northeastern Illinois," said Kelsey.

Plantings along tributary D of Blackberry Creek will take several years to flourish. Kelsey said the development has a construction permit for the plantings that is valid for five years, and then it will have a seven-year monitoring and maintenance period to go with it.

In infancy, the plantings are riddled with weeds, and this allows them to grow under physical cover of the

weeds as they establish. In the second and third years, the weeds diminish and in years four, five and six, the wetlands establish themselves as a transition to open water. Mowing of the weeds or over-mowing of the area delays the process, said Kelsey. After the seven-year maintenance period, the wetland plantings become the responsibility of the village, as outlined by the Army Corp.

"At that time, very little maintenance is required, maybe an annual burn," said Kelsey. "We're using a seed mix that's not too grassy, that puts native annuals in for a better wildflower appearance and we'll add (more wildflowers) to subsequent mixes."

When finished, Blackberry Creek's plans call for 29 acres of created wetland, said Kelsey. "Do not mow" signs will go up along the area, and residents will receive "Living with Wetlands" brochures.

Tot lot

Blocks away, a tot lot will be erected on the northwest side of the development, where there already is a collection of existing park benches. The tot lot will be similar to one B&B Enterprises put in at the Heron Creek subdivision in Sycamore.

It will have playground equipment with slides and a bridge, as well as four swings. The area will be surrounded by railroad ties and approved wood chip mulch that complies with all requirements, such as the Americans with Disabilities Act, as this type of chip allows wheelchairs to traverse the area.

The mulch, said Blood, is a cost-effective option and is easy to replace. The entire park site is over one acre with access from sidewalks. The tot lot will cost approximately \$30,000 to install.

Housing units

The board also approved to more units of the subdivision itself. Unit 8, located on the southwest corner, has 4 lots, and Unit 9, near the middle of the development, has 68 lots, all built by Kennedy Homes. All units are sold and under contract, according to Blood.

The next time Blood plans to appear before the Village Board, he will seek approval for Unit 10, which includes 89 lots built as custom homes.

NEW RADIUM FILTER NOT AN OPTION FOR SUSSEX

Jim Stevens, staff writer

August 25, 2002

A new radium-filtering system that the village of Pewaukee is considering is not now an option for Sussex.

That's the view of Steven Schultz, who heads the water supply department of Ruekert/ Mielke, the engineering firm overseeing the test well project near Maple Avenue and Plainview Road in Lisbon, close to the Sussex border.

If the test well proves out, Schultz said, the shallow water well Sussex will build there "will be more cost effective" than a "treatment solution" to the radium problem.

Advertisem

Blending option

Shallow water wells are not prone to the radium problems of deep wells, and their water can be blended with the output of deep water wells to meet federal radium standards.

Schultz pointed out that the village of Pewaukee is taking a "multilegged path" to solving its radium problems, including the blending option.

"The solution is different for each well," he said, "and depends on the well's location in the water distribution system and its closeness to shallow water resources."

Test well

Schultz said the Sussex test well would be drilled shortly before Labor Day, and tested shortly after.

He said the village is also considering other sites for future wells, "but all of them have some limits - regulatory or geological."

He said he could not divulge where those sites were "because the property owners have not been approached yet."

New filtering technology

With the deadline to meet federal regulations for radium levels in drinking water only about 27 months away, the village of Pewaukee is looking at some new filtering technology.

David White, director of public works, recommended to the Village Board at its Aug. 17 meeting a pilot program that involves a relatively new technology that filters radium out of the water.

U.S. Filter would provide the equipment for free, but would charge an engineering fee of about \$12,000, and between \$12,000 and \$15,000 for lab analysis of the results of testing the system.

White said he would ask the board next month for formal approval of the pilot program.

The filter system "has a lot of promise," he said.

The village has completed one pilot test involving the process of absorbing radium. That test went "very well," White said, though a lab analysis of the water has not yet been completed.

EPA deadline

The village - along with more than 50 communities or water systems in the state - is seeking ways to reduce the amount of radium in its system to meet federal Environmental Protection Agency (EPA) regulations limiting radium in water supplies to 5 picocuries or less per liter of water.

Wisconsin's Department of Natural Resources is acting as the enforcement agency for the EPA's Dec. 8, 2006, deadline.

The village is also looking at the blending option for one of its four wells, and is currently testing several sites on the Pewaukee School District campus.

At two other wells, radium levels are just above the allowable federal limit. One is at 5.1 and the other is at 5.6 picocuries per liter.

Lining off the radium

The village is testing the water in the well to determine where the highest concentration of radium is coming in. Once that is identified, those areas in the well would be lined off with the hope of keeping the higher levels of radium out of the

well and lowering the overall radium level in village water.

The city of Brookfield has just completed a pilot program using the filter system and U.S. Filter will be giving the village that equipment. The city of Waukesha and Germantown have also been involved in that pilot program.

Radium occurs naturally as certain elements, including uranium, decay in sandstone. Municipal deep wells draw water from the aquifer in the sandstone. Radium has been linked to cancer when there has been exposure over a lifetime.

Staff writer Peter Abbott contributed to this story.

New Jersey:

Howell now serviced by BTMUA Lower section of

Ramtown gets water;

upper section on way

BY JENNIFER DOME

Staff Writer

BRICK — Water is flowing in Howell.

And no, it's not because of the torrential rains the region has experienced recently. It's all thanks to the Brick Township Municipal Utilities Authority (BTMUA).

The authority began pumping water to the southern portion of the Ramtown section of Howell on Aug. 16, Executive Director Kevin Donald said Monday. Approximately 500 homes and businesses that were previously served by the Parkway Water Co. of Marlboro will now receive about 200,000 gallons of water per day from the BTMUA.

The interim sale of water comes as the authority considers purchasing Parkway Water and its customer base 1,800 homes and businesses. Parkway Water serves customers in the Ramtown section of Howell, including three schools — Ramtown Elementary School, Greenville Elementary School and Howell Middle School South.

Last year, Parkway Water customers were notified that their water supply had excess levels of radium-226 and radium-228, naturally occurring elements in the soil that can become activated by the introduction of fertilizers and lime, as well as by the movement of the soil.

Since then, Parkway Water has been providing residents in the lower section of Ramtown with water from the company's Englishtown well. That aquifer is not contaminated, but its supply was scheduled to run out on

Aug. 15, BTMUA officials said.

The Ramtown customers will pay the authority's bulk rate for water, which is \$3.13 per 1,000 gallons.

Last month, the authority said it will inform its new Ramtown customers of two specific concerns regarding the chloramine additive in its water. Chloramine can be toxic to fish in aquariums, as well as to patients on kidney dialysis machines. Both problems can be avoided by switching filters.

Residents in the upper section of Ramtown, including the three schools, will continue to be supplied with water from the New Jersey-American Water Co. Donald said that by next year the BTMUA will have the hydraulic system in place to pump its water through the pipes to the customers in the upper section of Ramtown

Peoria Journal-Star

Glasford will drill new well to control water supply

Thursday, October 28, 2004

**Effort to remove radium
from water unsuccessful**

BY ELAINE HOPKINS

of the Journal Star

GLASFORD - The village will drill at least one new well after a \$30,000 effort to remove high levels of radium and radioactive particles from the town's water supply failed.

That way, the town can maintain control of its water supply and rates, Village Board President Jack Ru said.

"It's pretty much a done deal," he said of the new well.

The alternative, he said, is a \$300,000 connection to the T-L Rural Water District, which buys water from Illinois-American Water Co.

The new well will likely cost about the same as the connection, he said.

Robert Meyer, board president of T-L Rural Water District, said Mapleton already has connected to the water district.

The water district recently commissioned a \$6,000 environmental assessment to evaluate the impact of expanding its system to Mapleton, Glasford and Kingston Mines.

Nothing adverse was found, Meyer said of the assessment, which included an archeological survey.

"We had to do it," he said of the survey, even though Glasford likely won't be connecting to the system.

Rudd said the \$30,000 spent on Glasford's current wells was not totally wasted. If the same company gets the bid for drilling a new well, "We'll get a discount."

"It was shot in the dark," he said of the failed effort.

The new well will be about 860 feet deep instead of 1,600 feet, Rudd said.

The village also is looking for grants to pay for the project, he said.

Charlette Hancock, Kingston Mines village board president, said her town plans to connect to the water district, and is looking for grants to help pay the cost, likely \$400,000.

The town's 259 residents are mostly elderly and on low, fixed incomes, she said. They're already paying almost \$25 a month for water, and cannot afford to pay more, she said.

"It could go to \$65 or \$70 a month," she said, if loans must be used to finance the hookup.

The towns face deadlines from the Illinois Environmental Protection Agency, which is requiring them to remove the radium from their water systems.

"The enforcement process is underway" for Kingston Mines, IEPA spokeswoman Maggie Carson said. The town received a violation notice, but has indicated the intent to find an alternative water source, she said.

Glasford has agreed to complete its project by January 2006, then has 18 months to demonstrate compliance, she said.

Sussex Sun

**Quarry blast anniversary: second of two parts
NO WATER, NO MONEY, NO WILL, NO WAY**

October 26, 2004

Town of Lisbon - There's more than one way to skin a cat, the old saying goes, and at least four ways to fix the water problems in the neighborhood bordering the Halquist Stone Co. quarry.

The trouble is, none of those solutions is likely to come about in the foreseeable future.

The problem came to a head when well disruptions led to a June lawsuit by 29 homeowners who blamed the problem on a pair of explosions from two Halquist quarry blasts Oct. 9 of last year.

Some of the homeowners found their water had turned turbid, chalky or muddy, with a substance that clogged their well pumps, putting some of them out of commission permanently, forcing them to buy new pumps.

Halquist did replace three of those pumps after last year's blasts.

Others found their water supplies contaminated with bacteria.

One drinking water expert, Chad Czarkowski of the Wisconsin Department of Natural Resources (DNR) office in Milwaukee, does not think the bacteria problem was "quarry related."

In a recent telephone interview, he said, "Bacterial problems are common to any area with shallow bedrock," which is where quarries often exist.

Mud and turbidity, however, are "natural rock powder dislodged during quarry blasts" and "can make wells unusable.

While the connection between those blasts and the wells' problems are in dispute - and in the courts - any long-term solution will require money, which some of the area's residents say they simply don't have, and political will, which they also claim is in short supply.

Residents, experts and Lisbon officials have come up with four possible solutions:

- Bringing Sussex municipal water and sewer services down Maple Avenue to those 50-plus homes.
- Drilling a community well to serve the whole area.
- Creating several "water trusts" to serve small groups of homes with shared wells.
- Letting the homeowners fend for themselves individually, creating and paying for their own solutions.

Most of the experts, including Czarkowski and Lisbon Town Engineer John Stigler, agree that the best long-term solution is for Lisbon and Sussex to come to an agreement that would supply the area with Sussex municipal water and sewer services.

Politically, however, that idea seems dead in the water. Despite several meetings and exchanges of letters between the two communities, Sussex and Lisbon are no closer to such a solution than they were a year ago.

That frustrates Emil Glodoski of Northview Drive, a frequent spokesman for those in his neighborhood who believe last year's quarry blasts damaged their well-water supply.

"I don't think either government cares about the people of this community," he said in a telephone interview Monday. "Each side blames the other" for the stalemate.

Sussex Village President Michael Knapp said he is waiting for Lisbon to put an offer on the table, and insists that any

deal must be an amendment to the border agreement between the two communities.

Lisbon officials are just as adamant that the border agreement not be touched. Town Supervisor Ronald Evert pointed out in a telephone interview that the recent shared compost site agreement was reached without amending the border deal.

Lisbon Town Clerk Jeffrey Musche said, "I honestly don't know what Sussex wants" in return for an agreement.

Opinion is divided on the issue among the area's residents, though four of the six homeowners interviewed for this article supported the Sussex municipal water and sewer solution.

One of those who doesn't is Judith Duquaine of Maple Avenue. "There's no way I can afford to have Sussex water come in," she said, "not at the price they're talking about."

Stigler estimated the cost of bringing in both sewer and water services from Sussex at \$1.7 million, or \$34,000 per household, including the lateral lines required to hook up each household.

Amortized over 20 years at an extremely low interest rate from the state's federally-financed revolving loan fund, each homeowner would pay about \$1,700 a year.

That's still too much for Duquaine, who relies solely on bottled drinking water.

"I'm not drinking my well water," she said. "That's how I'm solving it."

She blames last year's Halquist quarry blasts for her "dirty, smelly water" and "rusted sinks."

"I've lived here 30 years and never had any problems 'til last year's blasts," she said. She didn't join the lawsuit against Halquist, however.

"I couldn't afford to," she said.

Another area resident who didn't join the lawsuit, Robert Zimdars of Parkview Drive, does want Sussex sewer and water.

Though he didn't experience any problems himself from last year's Oct. 9 quarry blasts, he thinks Halquist should "contribute a bit" to bringing Sussex services to the area.

"It would help mend some fences," he said.

Zimdars doesn't think the company should have to foot the entire bill.

"It's not appropriate," he said, "and it will never happen."

Like Glodoski, the four-year resident can't understand why officials from the two municipalities "are totally unwilling to work with each other."

"It's an indictment of the local governments," he said, "and I don't know who's at fault."

The community well solution, originally suggested by Evert, would cost about \$1.5 million, \$200,000 less than Sussex sewer and water, and would only supply water services. That amounts to about \$1,500 per year.

Czarkowski believes that aging and failing residential septic systems are one of the sources of bacteria in some homes' water supplies. Because of the high bedrock in the area around quarries, he said, "even rainwater can carry bacteria into well water" because "it doesn't get filtered."



The area's 50-plus households also raise the stakes.

"Fifty is the magic number," Czarkowski said, because the DNR requires a community well that serves at least that number of households to add either a second well or a two-day reservoir in order to back up the main well.

Community wells often have to be drilled deeper than 500 feet, Czarkowski added, increasing the risk of radium contamination.

Blending the water from both a deep and a shallow well could meet both needs, he said.

He also suggested a third solution: several water trusts that would serve no more than six households each, thereby avoiding the costs of complying with state regulations.

One such arrangement already exists in the area, with a 715-foot-deep well on the property of Robert Johanning of Northview Court, which serves three other households, as well.

The well cost the group about \$28,000 in 1991, Johanning recalled in a telephone interview yesterday. That was a better deal than about \$90,000 for four individual wells, he said.

Evert thinks the cost of an individual well is much less than that. At \$18 a foot plus lateral pipes and a pump, he thinks a 240-foot well should cost about \$7,000 to \$8,000.

Like Glodoski, Johanning is one of the homeowners suing Halquist over its quarry blasts, not only for their alleged effects on the neighborhood's water supply, but for the rocks and dust the plaintiffs claim damage their houses.

Halquist Stone Co. President Tom Halquist has said he will not comment on any of these matters because of the lawsuit. He did not return a recent phone call by press time.

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Milwaukee Journal Sentinel

Working together on water

Posted: Oct. 23, 2004

**Patrick
McIlheran**

Milwaukee's mayor does lunch out west, Milwaukee County decides regional water planning might not hurt and business bigwigs are talking up teamwork.

We can all drink to that.

This outbreak of amity in metro Milwaukee most obviously benefits those people living west of the edge of the Lake Michigan basin. Their water table is dropping now: Even if they halted all growth, they'd still need to find a new supply. And while their problems are sometimes portrayed as the wages of waste, radium in groundwater is as much the problem as dry wells. Low-flow showerheads aren't curing that.

The alternative to coming up with a usable supply of water would be either a halt to growth in the western suburbs or the actual abandonment of what's there.

As much has been suggested: At least one speaker at a September forum in West Allis suggested getting people to move to Milwaukee County.

This is folly. Stagnant or falling populations are a hallmark of troubled communities. Declaring that wa policy should impose such a fate on one-third of our metropolitan area amounts to self-mutilation. It satisfies spite but doesn't fuel growth. It reflects the view that Milwaukee itself can grow only by taking people and industry from its own suburbs.

What failure of imagination.

How heartening, in contrast, to see the Metropolitan Milwaukee Association of Commerce try to promote th whole region, as it said it would do earlier this month. This bypasses the whole city-vs.-suburb squabble.

Nothing would so silence parochialism as expanding the region's economy by a half-million people or so, th kind of 30% growth the Twin Cities have seen just since 1980.

Even people leery about piping water west see the lake's value. State Rep. Jeff Stone, a Republican who represents southwestern Milwaukee County, notes that lake water can be a tool to encourage cooperation.

He says he'd as soon see more development east of the watershed, but he recognizes there are reasons peopl move where they do.

"We need to get beyond these borders," he said, and do what's best for the region.

One of the region's chief assets is proximity to the lake. But if that proximity counts for only some of us, its value is less.

There's no reason that, used carefully, it can't serve all our metro area.

As it was put by Mayor Ted Wysocki of New Berlin, where the high points are within eyeshot of the lake, "there is a legitimacy to it being used by those cities that can literally see it."

You can see other things in New Berlin, too. You can see new houses, some of which shelter the talent that makes Third Ward high-tech startups competitive. You can see new land-intensive factories, some of which employ reverse-commuting city residents.

These are signs of how connected we are, the suburbs and the city that I live in. The connection makes Milwaukee's western suburbs different than distant, thirsty places, like Dallas or Denver, that we fear will siphon away our lakes.

For one thing, Waukesha County's nearness means it can send the water back. The return of diverted, treated wastewater, demanded in the governors' Great Lakes agreement, is a reasonable prerequisite for the suburbs. It's costly to pump it back over the hill, but worth it if the alternative is thirst, and civil engineers say the expense constitutes a practical economic barrier against more distant claimants.

More important than engineering, though, is our economic connectedness. It can make the region a stronger package. The region has a beautiful lake, plentiful water, city amenities and plentiful land, if you need that. We have lofts, and we have two-acre lots. If we really mean to welcome new talent and new ideas, we shouldn't begin by prescribing lifestyles for newcomers.

It is by working with each other that we make ourselves welcoming to newcomers. We need newcomers. Our metropolitan area's half-century slide down the ranks of American cities could easily turn us into another Buffalo.

Our lake needs newcomers, too. Better they move to Brookfield and use the water than have it piped to Austin.

And by putting more people, wealth and power here, we reduce the risk that, being a weak backwater, the Milwaukee region will see its interests shoved aside by a politically powerful Sunbelt desperate for water.

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Drinking-water decree looms

Towns must meet U.S. radium limit

By Douglas Holt
Tribune Staff Reporter

Faced with a looming crack-down on federal rules to sharply limit radium in drinking water, more than 100 water systems in Illinois are scrambling to dig new wells, install

expensive treatment systems or buy water from neighboring towns.

Deep wells in northeast Illinois tap a geological hot spot for radium, a naturally occurring radioactive element that federal authorities say is linked to cancer and poses a greater risk to children than adults.

In Illinois, which reports more yearly radium violations than any other state, some local officials have con-

sidered the federal safety standards too stringent and ignored or loosely enforced them. But even staunch opponents of the regulations, facing the prospect of fines up to \$50,000 plus \$10,000 per day, are giving up the fight as a Dec. 8 compliance deadline approaches.

"The City Council is really skeptical about the standard," said Bill McGrath, city administrator in Batavia, which

joined a federal lawsuit that unsuccessfully sought to block enforcement of the radium rules. "But it's a mandate, and we'll comply with it."

Radium laces drinking water in mobile home parks, such cities as Joliet and upscale subdivisions such as the gated community of Royal Melbourne near Long Grove. Batavia, Elburn, Oswego

PLEASE SEE RADIUM, PAGE 4

RADIUM: Towns say compliance will be costly

CONTINUED FROM PAGE 1

and West Chicago, among others, routinely post radium levels at three to five times the legal limit, state records show.

Chicago and other communities that use Lake Michigan water have no problem with radium. Neither do most homes drawing from shallow wells.

Under a U.S. EPA regulation issued in 2000, water systems nationwide, including more than 100 in Illinois serving 450,000 people, were given until December to reduce excessive radium levels. The order, along with a federal appeals court ruling, gave teeth to a legal standard put on the books in 1976.

About 50 systems in the state are expected to blow the deadline but will be allowed to negotiate timetables, officials said.

Compliance can be pricey. Batavia officials expect water rates to at least double as the city prepares to build a treatment plant, new wells and water mains to reduce radium. Joliet approved a plan last month to spend \$38 million for a dozen filtration plants to pull radium from 21 wells that serve water to

Local water systems exceed federal radiation levels

Water systems nationwide have until Dec. 8 to comply with federal rules regarding radiation levels in tap water. Dozens of systems in northeastern Illinois currently violate these standards. Water systems are allowed a maximum level of 5 picocuries per liter for radium, which has been linked to cancer.

WATER SYSTEMS EXCEEDING FEDERAL RADIATION LEVELS

By largest population served

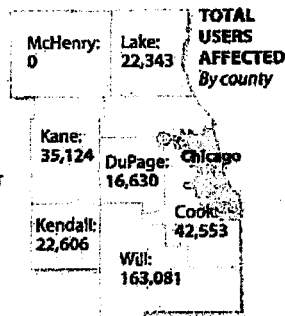
WATER SYSTEM	POPULATION	RADIUM LEVEL*	AMOUNT OVER LIMIT
Joliet	06,221	19.1	14.1
Bartlett	36,800	8.4	3.4
Romeoville	33,331	9.5	4.5
Batavia	23,200	21	16
Lake Zurich	17,591	6.8	1.8
West Chicago	16,630	15.6	10.6
Oswego	16,320	17.8	12.8
Plainfield	11,500	9.5	4.5
Yorkville	6,189	14.9	9.9
Channahon	5,094	7.5	2.5
Sugar Grove	4,901	7.9	2.9
Statesville	2,850	11.7	6.7
Correctional Center			
Prospect Heights	2,400	7.4	2.4
Elburn	2,236	24.5	19.5

*Level in picocuries per liter. A picocurie represents the radioactivity in one trillionth of a gram of radium.

Note: Readings as of July 14. Only water systems with more than 2,000 users listed.

Source: Illinois Environmental Protection Agency

Chicago Tribune



By the end of 2004, West Chicago plans to put on line a \$30 million treatment system. In the five-year span ending next year, the project will have tripled water rates, officials said. At the 125-home Royal Melbourne subdivision, Lake County homeowners must buy \$1,600 water-softening units to remove radium.

Communities that pump water from wells 800 to 1,500 feet deep draw from high-radium sources in northeastern Illinois such as the Mt. Simon and Cambrian-Ordovician aquifers. There, uranium and other radioactive elements decay into radium that leaches into the water.

Although local officials have downplayed the risk posed by radium, critics say the crack-down is long overdue. They argue that federal and state environmental officials have failed to protect consumers.

A child under age 5 exposed to radium-containing water has 10 times the lifetime risk of developing cancer as someone exposed to the same amount of radium at age 25, according to an April 21, 2000, U.S. EPA document.

"Illinois officials have known for more than a quarter of a century that they have serious radium problems," said Erik Olson, who heads a safe-drinking water program at the Natural Resources Defense Council in Washington. "The losers in this process have been the children and others exposed to radium for so many years."

The additional lifetime risk of

cancer associated with drinking water that contains the maximum allowed amount of radium is one in 5,000, according to EPA calculations. When ingested, radium behaves like calcium and lodges in bones, especially the growing bones of children, according to U.S. EPA documents.

Over a lifetime, the radium lodged in bone tissue decays into other elements that bombard cells with gamma or alpha particles that can cause cancer, the documents say. Radium exposure has been linked to bone and sinus cancer, among other ailments.

Bryce Pinnow, 48, of Oswego, stopped drinking the local water long ago.

Both his parents, lifelong Oswego residents, died of bone cancer. Although science cannot determine what caused the cancers, Pinnow said he suspects the water because neither parent smoked or had family histories of cancer.

"My dad would drink literally a gallon a day," said Pinnow, a construction worker.

State officials say federal radium regulations were loosely enforced because a relaxation of standards to allow eight times as much radium in drinking water had been discussed since the 1980s.

That relaxed standard was never adopted by the federal government, but in 1985 it became a key benchmark for the Illinois Pollution Control Board. Only systems with radium above the relaxed standard were blocked from adding new

customers or building new water lines.

The board ruled that its standard would cause "minimal risk" to health. Forcing communities to adhere to tougher radium standards, it said, would put them at a "competitive disadvantage in attracting new development."

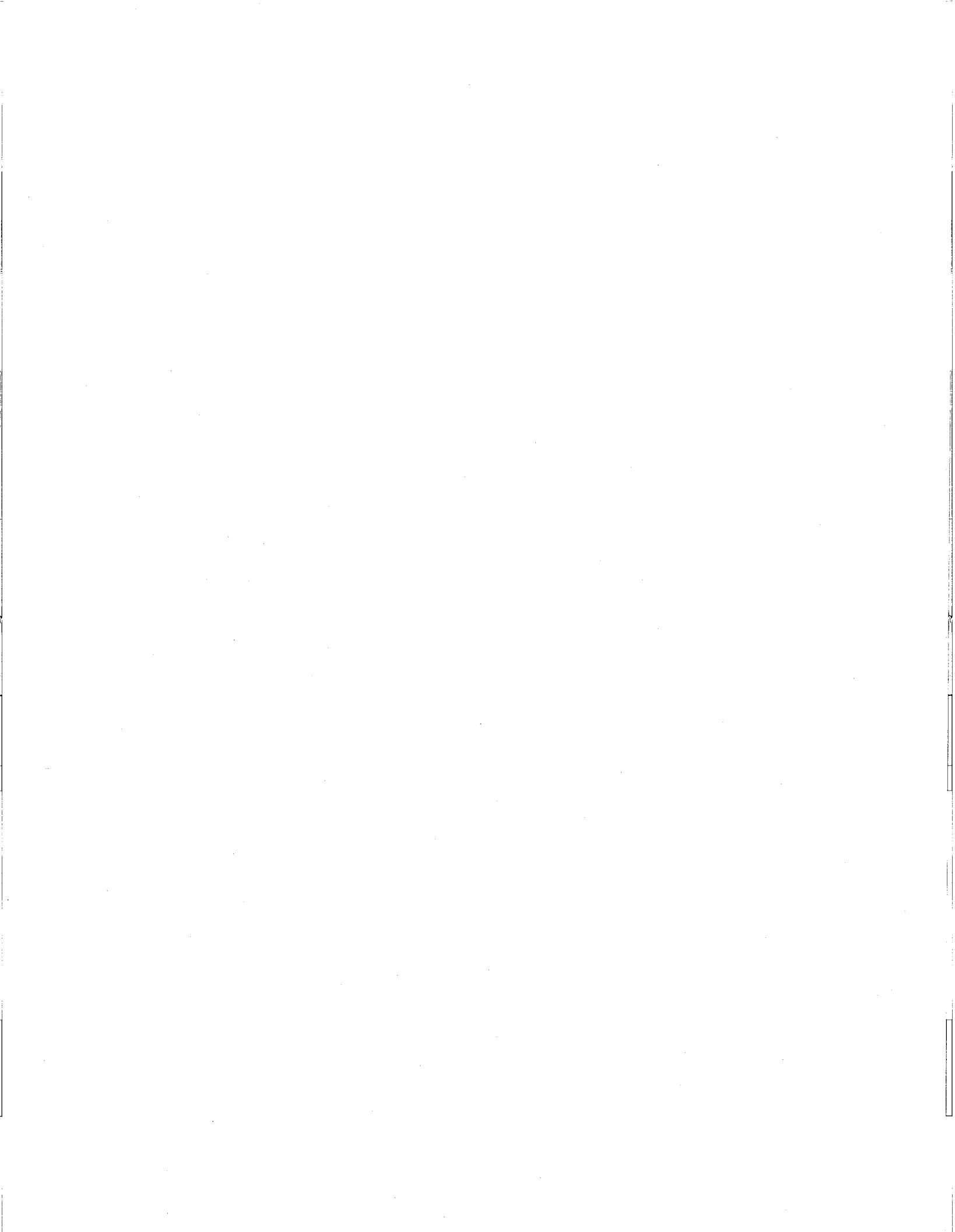
In 1991, U.S. EPA officials formally announced they were considering easing radium rules on the theory that it might save more lives to focus on radon, a still unregulated source of radiation in air and water.

But in 2000, the EPA reversed itself and said its earlier radium analysis underestimated health risks. Out of 333 federal radium violations recorded from 1992 to 1999, Illinois accounted for nearly half, more violations than the next five states combined, according to the U.S. EPA.

Water systems that failed to meet safety standards were required to notify consumers. Such notices caused little public outcry except in De Kalb.

There, a citizens group held meetings, pored over technical documents, interviewed experts and filed suit in federal court in 1996 seeking to enforce the radium rule. Within a year, the city settled and agreed to spend more than \$12 million to meet the standard.

"You can line up an equal number of scientists that will say radium isn't a problem as those who say it is," said Dennis Duffield, director of public works and utilities in Joliet. But "we've lost that debate. The regulations are in."



The Beacon

October 22, 2003

Oswego will pay \$2.8 million to remove radium from water

By Ed Panselow
STAFF WRITER

OSWEGO – The process of removing radium from the village's water supply should begin this winter, after contract negotiations were completed this week with the company that will do the work.

Village Board members this week approved a \$2.8 million contract with Colorado-based Water Remediation Technology Inc. to rid the water of radium, a naturally occurring yet potentially harmful element.

In 2000, the Illinois Environmental Protection Agency found that Oswego was one of 130 Illinois communities with higher-than-normal levels of radium in their water, and mandated that they either correct the problem or have a plan in place to do so by this December.

"It's the most environmentally sound and most cost-effective way to do what we need to do."

—Village Administrator Carrie Hansen

Village officials originally estimated that it would cost more than \$5 million to complete the task through filtering or softening, but later discovered that a process called ion exchange would do the job more efficiently and for almost half the price.

"It's the most environmentally sound and most cost-effective way to do what we need to do," Village Administrator Carrie Hansen said.

On average, the village's five water wells contain about 6.5 units of radium per liter, 1.5 units higher than the EPA allows. Once the removal process begins, however, levels should be almost undetectable, officials say.

Studies have shown that water with high levels of radium can cause bone cancer if consumed in

mass quantities and over a long period of time.

Oswego board members agreed to give the job to WRT last May, but recurring disputes over the wording of the contract stalled the process until this week.

"... WRT's \$2.8 million price tag ... was far lower than any other offer the village received."

Mayor Craig Weber

But Mayor Craig Weber said the wait was well worth it.

He said WRT's \$2.8 million price tag – about a third of which will be paid with federal grant money – was far lower than any other offer the village received.

Still, trustees are considering a "slight" increase to the village water rates to help defray the cost, Weber said.

"This was something that we simply needed to do," he said. "It's going to provide us with safe drinking water and (contracting with WRT) is going to save us more than \$2 million in the process. I think we're all pleased with this agreement and ready to get the process started."

Other local communities, including Elburn and Sycamore, also have used the WRT technology with good results, officials from those communities said.

In January, officials in Yorkville approved a \$10 million contract with another company to remove radium using a method called "cat ion exchange."

Batavia and Geneva are among other Fox Valley cities where radium-removal procedures are also under way.

