

 Arizona Daily Star

Increased usage of effluent called a path to water goals

Tony Davis Arizona Daily Star | Posted: Tuesday, June 15, 2010 12:00 am

Stepping up the use of treated sewage effluent is one path for the Tucson region to meet a 2025 deadline to stop overpumping its aquifer, a new state report says.

But Tucsonans need not drink treated sewage effluent for the region to meet that goal, a state official said Monday.

We can use effluent to at least temporarily reach "safe yield" by balancing the amount of water people pump from the ground with what is replenished, the Arizona Department of Water Resources report says.

Enough other uses exist for the effluent, such as putting it on golf courses and parks, and using it at power plants so the area doesn't have to resort to treating it for drinking - called "toilet to tap," said Laura Grignano, a water-resources specialist for the department.

Still, it may be difficult to put additional effluent to use because "everybody who owns it wants it for their own use," said John Mawhinney, chairman of the state Groundwater Users Advisory Council, which heard details of the report in Tucson Monday. "The feds own part of it, and they want it for Indian obligations. The city wants it. Marana wants it. The farmers want it."

Also, it may prove that treating effluent for drinking is a better value than building pipelines to extend treated sewage to more golf courses and parks, said Val Little, director of the Water Conservation Alliance of Southern Arizona.

Some details:

HOW WE'RE DOING: The Tucson area is making progress toward safe yield. The region's overdraft - the amount of pumping exceeding groundwater recharge - was 86,000 acre-feet in 1985, rose to 156,000 by 1995, but dropped to 50,000 by 2006 after the city of Tucson got renewable Central Arizona Project water. An acre-foot will serve three to four families for a year.

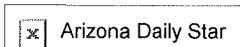
THE OUTLOOK: It's not good without another water source or more conservation. The overdraft will be about 112,900 acre-feet by 2025. It was nearly 23,000 acre-feet in 2006. The forecasts stem from three possible scenarios for regional water demand based on factors including population growth, the continuation of agriculture and the future of the area's copper mines.

IF CAP RUNS SHORT. If the water project has shortages during eight of the next 15 years, the groundwater overdraft would rise by 4 percent to 27 percent.

WITH MORE EFFLUENT. If the region can boost effluent use by 59 percent, the overdraft drops - to zero - by 2016 before rising slightly over the next few years. By 2025, it would be very small. This scenario does not consider the possibility of CAP shortages or the potential of using 28,000 acre-feet of effluent set aside for the Tohono O'odham Nation.

WHAT'S NEXT: Mawhinney said he will form a group to study the idea of using more effluent along with other solutions

Contact reporter Tony Davis at tdavis@azstarnet.com or 806-7746.



Our view: Preventing unplanned growth while using more effluent makes sense

New water policy a positive move for community

Posted: Wednesday, June 16, 2010 12:00 am

The Tucson City Council gave preliminary approval Tuesday to a new water policy spelling out where Tucson Water will provide service in the future.

The vote was, in the words of Mayor Bob Walkup a "historic event." It is at the very least an important step that should help the city and Tucson Water put a framework around under-planned, sprawling growth.

Under the Water Service Area map and the new policy, the city identifies areas where Tucson Water is "obligated" to provide service. Other areas on the map might receive service if they agreed to be annexed into the city or were willing on a case-by-case basis to be considered for annexation.

Finally, the map shows areas where private water companies or municipalities provide service, and tribal lands. The policy would allow negotiations with the other municipalities, tribes and private water companies to use existing Tucson Water infrastructure to deliver water, but not to provide it.

The policy was developed in the first two years of a five-year city-county water and wastewater study project.

In January, the group offered lengthy recommendations on long-term planning, restoring riparian areas and environmental water use.

We learned this week that the Arizona Department of Water Resources believes the Tucson region can get on track to meet the state's 2025 deadline to stop overpumping its aquifer by using more treated sewage effluent.

The Star's Tony Davis reported Tuesday that the study suggests using effluent more often on golf courses, in parks and in power plants - and using potable water less.

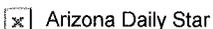
The state noted that Tucson has been getting closer to "safe yield" - the rate that water can be used without eventually depleting the aquifer.

Our region's overdraft - the amount of pumping that exceeded the amount returned to the aquifer - was 86,000 acre-feet in 1985 and 156,000 by 1995, but dropped to 50,000 by 2006, after Tucson got Central Arizona Project water.

Davis reported that if the region can increase the use of effluent by 59 percent, the overdraft would be very small by 2025.

Earlier this year, the Board of Supervisors instructed the county administrator to come up with a plan to meet goals suggested by the city-county study group. Increased access to and use of effluent should be among them.

Arizona Daily Star

The logo for the Arizona Daily Star, featuring a small square icon with a cross inside, followed by the text "Arizona Daily Star".

Water resources report shows we aren't on track for 'safe yield' yet

Val Little Special To The Arizona Daily Star | Posted: Saturday, July 3, 2010 12:00 am

The Arizona Department of Water Resources has issued its Demand & Supply Assessment and, as reported in this newspaper, we are not on track as a region to achieve the 2025 goal of "safe yield" - using no more groundwater than is naturally and artificially recharged - which is the objective of the 1980 Groundwater Management Code.

While we have made great progress toward the goal over the past 30 years, the assessment is an important tool, telling us where we are in 2010, and giving us likely scenarios for how far short of the goal we are likely to be over the next 15 years. But it is just a starting point. This region, meaning each of us individually and collectively, will need to decide if, and how, we want to reach and (maybe more importantly) sustain the safe-yield goal.

Let's assume there is community-wide consensus that we want to achieve the goal of safe yield, since I have not heard anyone willing to say publicly, 'heck no, who cares.'

So, how do we get there and stay there? I would encourage everyone interested in our sustainable water future, to consider how we can most equitably and economically make full use of the supplies we have at hand. Three areas are of great interest to me: full use of our effluent, additional conservation and natural recharge.

First, as is discussed in the assessment, is the importance of full utilization of our effluent. This is a constant and increasing water source that we must make full use of as a path to safe yield. How do we get this water source to places and use it in ways that mitigate the pumping of groundwater? The majority of this water supply is controlled by the City of Tucson and the Bureau of Reclamation so influencing their policy decisions seems a fitting effort.

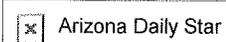
Second, there is still a huge amount of saving to be had through demand management efforts in all sectors (municipal, agricultural and industrial). In most cases it is still cheaper to save water than to use it. I encourage the scrutiny of additional conservation efforts to triple bottom line analysis and feel they will hold their own compared to many more costly, complicated solutions. Not using as much water saves us money three ways: on our water bill, our sewer bill and our energy bill. Hard to beat that trifecta!

Third, we have largely ignored a key item on the water balance sheet. That item is natural recharge. We have yet to make the connection between the passion this community has for rainwater harvesting and the ability to affect natural storm water recharge in this basin. Every single gesture to slow storm runoff, to allow for increased infiltration, has the potential to increase the static number used in the water models for natural recharge. Let's scale up our active and passive water harvesting efforts. We look to the environmental community to take this up as a winning strategy.

What change, effort or compromise are we willing to make to guarantee the economic, environmental, and social viability of our community? We've got a short 15 years to sink or swim. No life raft is likely to come from our regulatory agencies, or our state government or our elected officials. It will come from us - each of us - all of us.

Failure is not an economic, social or environmental option.

E-mail Val Little at vlittle@u.arizona.edu



Upgrade set at Ina sewage facility

Andrea Kelly Arizona Daily Star | Posted: Wednesday, July 7, 2010 12:00 am

A \$163 million construction project to upgrade and expand the Ina Road wastewater-treatment plant will begin in about a month.

The construction is part of a massive plan to upgrade that sewage-treatment plant and to build a new facility to replace the Roger Road treatment plant, near Interstate 10, to meet federal guidelines for the amount of nitrogen and ammonia in the treated water.

The Pima County Board of Supervisors on Tuesday unanimously approved a contract with MWH Constructors Inc., an international company based Colorado. The company has a Tucson office.

This contract is one of the largest county projects ever approved, said Michael Gritzuk, director of Pima County's regional wastewater-reclamation district.

Preparation work has been under way at the treatment facility, and the \$163 million for construction is part of the total \$720 million upgrade for the wastewater facilities.

Gritzuk said this is the "lion's share" of the Ina construction.

When the project is complete, the Ina facility will be able to process 50 million gallons of wastewater each day and meet federal standards. Once built, the new Roger Road treatment plant will process about 32 million gallons of wastewater per day, down from the 41 million it handles now. The Ina treatment facility can handle about 37 million gallons of wastewater each day before the expansion.

Most of the cost will be paid with sewer-obligation bonds the supervisors approved in March. Those bonds will be paid off with increased wastewater revenue that comes from a 40 percent increase in residential wastewater customer monthly bills by 2013.

Pima County will use other bond funding on the project as well, Gritzuk said.

The supervisors are likely to consider the contract for the Roger portion of the project late this year, Gritzuk said. Two firms are separately designing the new treatment plant there, each planning it with a maximum cost of \$240 million for the design and construction. One company will be selected for the construction.

The supervisors unanimously approved the contract along with another to pay for health care for uninsured residents and inmates at the juvenile and adult detention centers, and with a contract to allow the Regional Transportation Authority to continue to provide paratransit services for the county.

Supervisor Richard Elias questioned why the county is allowing the RTA to run its paratransit services, and whether the move would save the county any money. Paratransit provides flexible transportation to the disabled, the elderly and others needing special assistance.

While it won't save money this year, the county could save money in the long run if the RTA takes over other local transit services and reduces overhead costs, Supervisor Ramón Valadez said. So far, the RTA has been unable to come to an agreement with Tucson for operating the metro Sun Tran bus system.

Contact reporter Andrea Kelly at akelly@azstarnet.com or 807-7790.

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July 10, 2010

Arid Australia Sips Seawater, but at a Cost

By NORIMITSU ONISHI

BRISBANE, Australia — In Australia, the world's driest inhabited continent, early British explorers searching for a source of drinking water scoured the bone-dry interior for a fabled inland sea. One overeager believer even carted a whaleboat hundreds of miles from the coast, but found mostly desert inside. Today, Australians are turning in the opposite direction: the sea.

In one of the country's biggest infrastructure projects in its history, Australia's five largest cities are spending \$13.2 billion on desalination plants capable of sucking millions of gallons of seawater from the surrounding oceans every day, removing the salt and yielding potable water. In two years, when the last plant is scheduled to be up and running, Australia's major cities will draw up to 30 percent of their water from the sea.

The country is still recovering from its worst drought ever, a decade-long parching that the government says was deepened by climate change. With water shortages looming, other countries, including the United States and China, are also looking to the sea.

"We consider ourselves the canary in the coal mine for climate change-induced changes to water supply systems," said Ross Young, executive director of the Water Services Association of Australia, an umbrella group of the country's urban water utilities. He described the \$13.2 billion as "the cost of adapting to climate change."

But desalination is also drawing fierce criticism and civic protests. Many homeowners, angry

about rising water bills, and environmentalists, wary of the plants' effect on the climate, call the projects energy-hungry white elephants. Stricter conservation measures, like mandating more efficient washing machines, would easily wring more water from existing supplies, critics say.

Desalination has also helped dampen the enthusiasm for a "big Australia," the previous, immigration-friendly government's projection that the country's population will rise to 36 million in 2050, from 22 million now.

"Big waste of money," said Helen Meyer, 65, a retired midwife in Tugun, the town where the northeastern state of Queensland opened a \$1 billion desalination plant last year. "It cost a lot of money to build, and it uses a lot of power. Australia is a dry country. I think we just have enough water for 22 million people. What are we going to do when we're up to 36 million?"

The plant, sprawling across 15 acres next to an airport and near residential neighborhoods, provides water to Brisbane, the capital of Queensland, and other areas of southeastern Queensland, the nation's fastest-growing region. Despite technical problems that temporarily shut down the plant recently, it has been supplying 6 percent of the region's water needs and has the capacity to deliver 20 percent, said Barry Dennien, chief executive of the SEQ Water Grid Manager, the utility that oversees this region's water supply.

The drought in this region lasted from 2000 to 2009, as the reservoir behind the largest dam, Wivenhoe, dropped to only 16 percent of capacity at one point. (On a recent visit, it was at 98 percent.) While it took the state authorities until 2005 to grasp the magnitude of the crisis, Mr. Dennien said, they moved quickly after that.

Besides restricting water use and subsidizing the purchase of home water tanks to capture rainwater, the state spent nearly \$8 billion to create the country's most sophisticated water supply network. It fashioned dams and a web of pipelines to connect 18 independent water utilities in a single grid. To "drought proof" the region, it built facilities for manufacturing water, by recycling wastewater, to use for industrial purposes, and by desalinating seawater. Production of desalinated water can be adjusted according to rain levels.

"When the last of the assets were coming online, it rained, as it always does," Mr. Dennien said, adding that the region now has enough water for the next 20 years.

“We’ve got a method of operating the grid that the next time any sign of drought occurs, we can just,” he snapped his fingers, “build something else or turn something else on, and we’ve got enough water supply.”

Other cities are making the same bet. Perth, which opened the nation’s first desalination plant in 2006, is building a second one. Sydney’s plant started operating early this year, and plants near Melbourne and Adelaide are under construction.

Until a few years ago, most of the world’s large-scale desalination plants were in the Middle East, particularly in Saudi Arabia, though water scarcity is changing that. In the United States, where only one major plant is running, in Tampa Bay, officials are moving forward on proposed facilities in California and Texas, said Tom Pankratz, a director of the International Desalination Association, based in Topsfield, Mass. China, which recently opened its biggest desalination plant, in Tianjin, could eventually overtake Saudi Arabia as the world leader, he said.

Many environmentalists and economists oppose any further expansion of desalination because of its price and contribution to global warming. The power needed to remove the salt from seawater accounts for up to 50 percent of the cost of desalination, and Australia relies on coal, a major emitter of greenhouse gases, to generate most of its electricity.

Critics say desalination will add to the very climate change that is aggravating the country’s water shortage. To make desalination politically palatable, Australia’s plants are using power from newly built wind farms or higher-priced energy classified as clean. For households in cities with the new plants, water bills are expected to double over the next four years, according to the Water Services Association.

But critics say there are cheaper alternatives. They advocate conservation measures, as well as better management of groundwater reserves and water catchments. “Almost every city which has implemented a desalination plant has nowhere near maxed out or used up their conservation potential,” said Stuart White, director of the Institute for Sustainable Futures at the University of Technology, Sydney. Even without restrictions, cities could easily save 20 percent of their water, Mr. White said.

He said cities should practice “desalination readiness” by drawing plans to build a plant, but should carry them out only as a last resort in the event of a severe drought.

Mr. Young of the Water Services Association said desalination in Australia costs \$1.75 to \$2 per cubic meter, including the costs of construction, clean energy and production. The prices are probably the world’s highest, said Mr. Pankratz of the International Desalination Association, adding that desalination was cheaper in countries with less strict environmental standards. He said the cost at a typical new plant in the world today would be about \$1 per cubic meter.

Opponents of desalination say that a cheaper and environmentally friendlier alternative is recycling wastewater, though persuading people to drink it remains difficult and politically delicate. The SEQ Water Grid Manager, for instance, retreated from its initial plan to introduce recycled wastewater into its drinking reservoirs after it began raining.

“There’s a stigma against recycled water,” said David Mason, 40, a resident of Tugun.

“But since there’s only so much water in the world, and it’s been through somebody’s body or some other place over the past 250 million years, maybe it’s not that bad. At least, it might be better than desalination.”

Climate shift poses threat to water supply

by Shaun McKinnon - Jul. 21, 2010 12:00 AM
The Arizona Republic

Higher temperatures caused by global warming could create water shortages across wide areas of the country by 2050, including most of Arizona, a new study predicted Tuesday.

All but two of Arizona's 15 counties could face high or extreme risks of shortages if temperatures rise as projected, the study said. The only areas with similarly widespread threats are Texas and Southern California

The high risks in Arizona are based on a confluence of factors, such as dwindling water supplies, growing water demand, overuse of groundwater and the state's frequent droughts. The addition of warmer weather could exacerbate those conditions.

The study, released by the Natural Resources Defense Council, an environmental-advocacy group, used long-range climate-change forecasts and other water-use data to assess risks down to the county level. The group said the findings point to a need to prepare now to avoid shortages that could force homes, businesses and farmers to reduce water use.

In one worst-case situation, researchers said the available precipitation - the rain and snow that falls minus what evaporates - could drop to as little as 2 inches a year in Maricopa County. That's about what Yuma

receives in a year but less than one-fourth of what falls in Phoenix.

"Planning for future water resources without taking climate change into account really does not make sense at this point," said Dan Lashof, director of the council's climate center. "When you start talking about water being in short supply and the real possibility of rationing, it brings the whole issue of climate change into sharp relief."

The study adds to a range of reports by universities and other research groups that suggest water supplies in the Southwest are especially vulnerable to climate change. Some scientists say the effects are already visible in the highest elevations of western mountains, where river levels and the timing of winter snowmelt have fluctuated more often in recent years.

Many large water providers in Arizona and along the Colorado River now routinely include climate change as a variable in water-supply projections. Salt River Project, which delivers water to metro Phoenix, and the Central Arizona Project, which delivers Colorado River water to Phoenix and Tucson, have both studied the issue

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The NRDC study was conducted by Tetra Tech Inc., a Pasadena, Calif., engineering firm. Researchers used a set of 16 climate change models and added publicly available data about projected precipitation, evaporation and water demand to compute the risk of water shortages.

In all, 70 percent of counties in the 48 contiguous states face at least some risk, and 32 percent face high to extreme risks. In Arizona, only Gila and Greenlee counties do not fall in the highest-risk categories. A high-risk level means a higher probability that shortages could occur.

One factor that researchers studied was what they called the available precipitation, or the rain and snow that falls minus what evaporates. Rising temperatures in Arizona could reduce rain and snow and increase evaporation. That would result in less water for rivers and reservoirs, which could suffer further losses if the higher temperatures affect the winter-snowmelt cycle, as some scientists predict.

Lashof said states and counties could avoid the worst effects of water shortages, such as rationing, by including climate change in long-term water-resource plans.

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Report: Native fish return to Santa Cruz

Tony Davis Arizona Daily Star | Posted: Sunday, August 1, 2010 12:00 am

Cleaner water brought native fish back to the Santa Cruz River between Tucson and Nogales.

So says a new report on the Upper Santa Cruz from the conservationist Sonoran Institute. The report analyzed river and fish surveys taken last September, three months after completion of the federally financed, \$59 million upgrade of the Nogales International Wastewater Treatment Plant about 10 miles north of the U.S.-Mexican border.

The upgraded plant removed large quantities of pollutants from the sewage effluent. That's made the water clearer, except during the summer when monsoons clog the river with mud.

Because the water is cleaner, it seeps more quickly into the aquifer, and doesn't run as far north as it used to. But that's not necessarily bad, ecologists say.

To explain the changes, here's a Q&A with the Sonoran Institute's Claire Zugmeyer, an ecologist and the report's lead author, and fish biologist Sherry Sass, president of Friends of the Santa Cruz, who takes annual fish samples from the river:

Q. What brought the fish back?

Zugmeyer: The new plant decreased ammonia levels and increased dissolved oxygen in the water. When ammonia breaks down in water, the organisms that break it down use the oxygen, leaving less for fish. Ammonia at high enough levels also can kill fish.

Q. The dace are so small that most people wouldn't try to catch them. Why does it matter that they're back?

Zugmeyer: The native fish's health are good indicators of ecological health because they live several years and differ from one another in how tolerant they are of pollution.

Statewide, out of 35 native fish species, one is extinct, and almost 75 percent are federally listed, candidates for listing or listed by the state as a species of special concern, the Arizona Game and Fish Department says.

Q. Mosquitofish are non-native, so is it bad that they're in the river in large numbers?

Sass: It's not good news, but they are so ubiquitous I don't know how you would eliminate them.

Q. How far north does the river go this year compared to last year?

Zugmeyer: When I was there in June before the monsoon started, it was flowing within Tumacácori National Historical Park. In June 2009, it was flowing just north of Chavez Siding Road in Tubac, several miles north.

Q. What happened?

Zugmeyer: In the past, nutrients in the ammonia and phosphorus had created a clogging layer, an algae mat that blocked water from seeping into the aquifer.

Q. Now?

Sass: I think this is a much more natural pattern, that water is filling up holes in the aquifer and depressed groundwater tables. That is probably as it should be.

Zugmeyer: We had research showing that the cottonwood trees may not have been getting the water they needed, because the algae layer was preventing infiltration. That was one of the factors that perhaps was leading to a die off of cottonwoods.

Q. Why are the cadmium and E. coli levels still high?

Zugmeyer: The Arizona Department of Environmental Quality is looking into the cadmium, and some researchers at the UA are looking at the potential sources of E. coli. They're trying to determine if it's from septic systems, cattle, other animals or wildlife.

Q. Could the river get cleaner still?

Zugmeyer: There's definitely possibilities. After the sources of E. coli and cadmium are identified, a watershed plan can be made to mitigate it. All the water-quality issues haven't been solved, but there are huge signs of improvement.

DID YOU KNOW

Less than 4 inches long, the longfin dace is a silvery minnow with a dark back and white on the belly.

In Pima County, the dace live in the perennial stretches of Cienega Creek, Buehman Canyon near the San Pedro River and the upper reach of the Cañada del Oro. Historically, they lived in the Santa Cruz River from Santa Cruz County to the Pinal County line, but disappeared from the river near Tucson by 1950.

The U.S. Fish and Wildlife Service calls the dace a species of special concern.

Source: Pima County Sonoran Desert Conservation Plan report.

BY THE NUMBERS

The Santa Cruz River between Tucson and Nogales:

Fish: More than 140 native longfin dace and more than 150 non-native Western mosquitofish were captured in a fall 2009 fish survey, compared with two dace and no mosquitofish in 2008.

Ammonia: Eight of 14 samples from 2009 met state water-quality standards, compared with none of seven in 2008.

Phosphorus: Nine of 14 samples from 2009 met the standards, compared with two of eight in 2008.

Dissolved oxygen: All 31 samples from 2009 met the standards and contained higher oxygen levels than did the 2008 samples, which also met the standards.

E. coli: Fifty-two of 86 samples from 2009 met the standards, compared with 32 of 100 in 2008. But in 2009, E. coli levels still exceeded the standard during the summer. E. coli's presence indicates potential health risks to fishers and swimmers who get into the river.

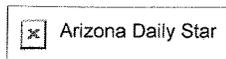
Heavy metals: Eighteen of 24 samples met standards for arsenic, lead and other metals. Five samples didn't meet the standard for cadmium. In 2008, five of six samples met all the metals standards.

Vegetation: Nearly 2,500 acres, or 36 percent of the Upper Santa Cruz's 100-year floodplain, were dominated by cottonwoods and mesquites in 2009.

Source: Sonoran Institute report.

Contact reporter Tony Davis at tdavis@azstarnet.com or 806-7746.

US approves new 8-mile line giving Rosemont CAP access



US approves new 8-mile line giving Rosemont CAP access

Tony Davis Arizona Daily Star | Posted: Monday, August 2, 2010 12:00 am

The federal government has approved an eight-mile pipeline to bring Central Arizona Project water to the Green Valley area, to give the proposed Rosemont Mine an alternative to pumping groundwater.

But although the pipeline was once promoted as a boon for water-thirsty Green Valley, the mining company may be the main - if not only - user of the water for up to 20 years.

That's partly because an agreement between the private water company that has proposed the line and Rosemont Copper gives the mining company priority use of the water belonging to the Community Water Co. of Green Valley, unless the water company needs it. The water company won't be ready to use the CAP - mainly for economic reasons - for 15 to 20 years, about the time that the mine is slated to cease operations, according to the water company's board chairman. The water company's efforts to bring other water companies and water users into the pipeline deal also haven't succeeded so far.

Rosemont has pledged to pay for the pipeline and will buy the water company's CAP supply like a typical customer. If only Rosemont used the pipeline, it would keep the Green Valley area's chronic groundwater overdraft from getting worse. But it wouldn't lessen the overdraft caused by existing pumping by farms, other mines and other water companies serving homes and businesses.

The U.S. Bureau of Reclamation decided last month to give the pipeline clearance by concluding it won't have a significant environmental impact.

"We started out from the position that any water you can put into the regional aquifer that would not otherwise be recharged is benefiting the regional aquifer," said Sandra Eto, a Phoenix-area environmental-protection specialist for the bureau. "I am not advocating this project, but when you look at this project, any recharge to . . . that area would be considered a beneficial impact."

But a critic says the pipeline is now mostly a water grab for Rosemont at the expense of residents.

"It's kind of a smoke-and-mirrors situation," said Green Valley resident Tom Purdon, a board member of Save the Santa Ritas, a Rosemont opponent. "They'll be using the CAP allocation that belongs to the Community Water Co. There is no net gain of water coming into the Green Valley area."

Purdon's "smoke-and-mirrors" comment ignores the fact that the 20,000 residents living within the water company's boundaries would face 50 percent to 100 percent increases in their water bills if CAP came to the area now, countered Virgil Davis, Community Water's board president.

After 20 more years of growth, there will be more homeowners to shoulder CAP's cost, he said, particularly because owners of all homes built since 1996 must pay a fee to cover the costs of recharging CAP water.

Rosemont and the water firm proposed the pipeline three years ago to respond to criticism of the copper mine's getting a state permit to pump up to 6,000 acre-feet yearly for the mine. The company already has been buying thousands of acre-feet of CAP water annually and recharging it in Marana.

But because Marana lies downriver of where Rosemont would pump, critics said, that recharge wouldn't benefit the Green Valley aquifer. The pipeline would allow Rosemont to start recharging water near its wells in the Sahuarita area.

Two years ago, the Community Water Co. was trying to bring other area water users into the pipeline deal to relieve a regional overdraft of at least 30,000 acre-feet a year that drops the water table drops by about 2 feet annually.

But so far, those efforts haven't succeeded, although Community Water President and CEO Arturo Gabaldon said Friday that he was still optimistic about them.

Although the pipeline and recharge basins need other approvals before construction can begin, the bureau's approval is a big boost to the plan. It means a much more detailed and time-consuming full-fledged environmental impact-statement isn't needed.

"I think that's fantastic," Davis said of the bureau's approval. "It provides assurance to all of our community members and people in the surrounding communities that we will not be having a negative impact on the environment and, in fact, in the long-term a very positive impact."

Rosemont Vice President Jamie Sturgess said the mining company was pleased with the decision. The company continues to support making the pipeline big enough to serve regional water users. Rosemont Copper has financed the pipeline's engineering, hydrological and environmental studies, he said.

"Rosemont has not altered its support for regional solutions to regional challenges," Sturgess said.

But Pima County Supervisor Ray Carroll, a Rosemont opponent, said he bets that Rosemont officials can't believe how good a deal they're getting, if nobody else can use the pipeline's water for 20 years.

"Unfortunately, you've got a water company that was out-negotiated by a mining company," said Carroll, whose district includes the proposed Rosemont site and Green Valley.

Billions needed to replace outdated water - wastewater facilities

Source: [GLOBE-Net](#)
Aug. 5, 2010

U.S. and Canadian cities and towns will spend over US\$80 billion to upgrade and expand municipal wastewater treatment facilities over the next 5 years.

This will represent 15 percent of the global spending for this segment. Some of these expenditures are just replacement of outdated facilities. Others are to meet water pollution discharge limits or reduction of odors. Some of the expenditures, particularly in California, Florida and other areas with population growth, are to accommodate increased population.

These projects are tracked on a biweekly basis in the McIlvaine online North American Municipal Wastewater Treatment Facilities & People report. Here is a sampling of current projects:

- Pima County, Arizona has a US\$720 million program to upgrade its wastewater facilities. This includes a US\$270 million upgrade at the Ina Road Wastewater plant. MWH is one of the main contractors.
- Fort Worth, Texas is debating among three locations and will soon pick one for a new wastewater treatment plant. The Mary's Creek Water Recycling Center would be a state-of-the-art facility, and it would produce treated water suitable for uses such as irrigation and cooling.
- The City and County of Honolulu is close to reaching a settlement over a lawsuit which will force US\$1.2 billion worth of upgrades at two wastewater treatment plants on Oahu. The agreement, which still faces some minor hurdles, requires the city to bring the Honouliuli and Sand Island wastewater treatment plants to full secondary treatment. The city would be given until at least 2020 to complete the costly upgrades.
- The aging San Jose/Santa Clara Water Pollution Control Plant in Milpitas, California needs a retrofit to prevent odor transmissions by enclosing the treatment areas, installing new digesters and other needed improvements at a cost close to US\$1 billion.
- Vacaville, California will spend an estimated US\$150 million in improvements to the Elmira-area facility in order to comply with a National Pollutant Discharge Elimination System (NPDES) permit.
- Bayview District of San Francisco will spend US\$600-US\$900 million to replace outdated digesters.
- The cape towns of Massachusetts are facing either regional solutions at about US\$3 billion or town by town wastewater treatment expansions and upgrades costing US\$8 billion.
- In British Columbia, Canada the Capital Regional District (CRD) has opted to build a single regional treatment plant at McLoughlin Point in Esquimalt and to pipe waste solids to a digester plant at Hartland Landfill. The regional sewage treatment will cost about US\$782 million to build and US\$14.5 million per year to operate.
- Sioux City, Iowa is rebuilding and expanding its Wastewater Treatment Plant at an estimated cost of US\$71 million.
- Wilsonville, Oregon is moving forward to modernize its Wastewater Treatment Plant at an estimated US\$60 million.

Some cities, unfortunately, are upgrading plants which were recently expanded or upgraded but do not meet the emission limits. Salisbury, MD has a US\$54 million plan with a five-year timeline to fix the negative results of an US\$80 million upgrade to the wastewater treatment plant.

The goal of the initial upgrade was to decrease nitrogen levels flowing from the plant into the Wicomico River. But the plant is not meeting the nutrient removal limit set by the state -- 6 milligrams of nitrogen per liter of wastewater.