

Water use limits possible

The state says demand is close to outpacing supply across one-third of Nebraska's land.

By DAVID HENDEE
WORLD-HERALD STAFF WRITER

Omaha and a big chunk of Nebraska's Sand Hills may face tight restrictions for the first time on future water use.

The constraints could halt an Omaha's plan to build a pond on a suburban acreage, a developer's plan to build an ethanol plant on the edge of a Columbus cornfield or a rancher's plan to irrigate more alfalfa to feed cattle near Broken Bow.

The constraints won't affect current water uses for homes, industry, livestock, irrigation

Water restrictions

New restrictions on water development Already under water restrictions



SOURCE: Bureau of Reclamation, Department of Natural Resources

and recreation.

The potentially sweeping restrictions across a third of Nebraska's landscape loomed nearer after Monday's announcement by the Nebraska Department of Natural Resources that demand for water in the lower Platte River basin upstream from its confluence with the Missouri River is on the verge of outpacing supply.

In the agency's technical jargon, the basin is "fully appropriated." If that preliminary conclusion is upheld, it would fill in the last blank piece of the Platte map across Nebraska as either fully or over-appropriated. Fully appropriated means there is sufficient supply for current demand. Over appropriated means the demand exceeds the supply. See *Platte*: Page 2

Platte: Limits on water use possible over wide area

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demand for water exceeds the supply.

Reaction was wide-ranging. "I'm stunned," said Kirk Nelson, an assistant director of the Nebraska Game and Parks Commission. "Lower flows in the lower Platte have begun to adversely impact the habitats of terns, plovers, pallid sturgeon and other species."

John Miyoshi, manager of the Lower Platte North Natural Resources District at Wahoo, said he was surprised that the designation came this year.

"We assume the department used the best science to reach its decision. That doesn't mean we like it," he said. "It's disappointing to our district as we sit here the last two falls and winters and watch high water at North Bend flow through and past our district on the way to New Orleans."

Tom Wurtz, president of the Metropolitan Utilities District, which provides water to Omahas and others in the area, said the designation was expected and shouldn't have much impact

on MUD's ability to provide water to customers. Municipal water providers are allowed to drill replacement wells.

The lower Platte basin includes a huge area of Nebraska from Omaha west to an edge of the Panhandle outside Hyannis. It covers the Loup and Elkhorn River basins.

The long planning process triggered by the designation will give more Nebraskans an opportunity to think about water and how they want to use and preserve it, said Brian Dunnigan, director of the State Natural Resources Department.

Nearly a year ago, the department determined that the lower Platte wasn't fully appropriated.

Dunnigan said a new computer model illustrated a worrisome long-term impact that irrigation wells in the Elkhorn and Loup watersheds will have on water flows in the lower Platte in decades to come. That would mean less water for irrigators and fish and wildlife habitat.

Dunnigan's designation temporarily bans new groundwater

irrigation wells, halts new permits for diversions of river water for irrigation and stops farmers from expanding the number of irrigated acres in their operations. There are about 45,200 wells in the affected basin. Irrigation wells make up about 58 percent of the total. Public water supplies use 2.5 percent of the wells. Other wells include industrial, livestock and private wells.

Natural resources districts with significant area in the basin are the Lower Platte South, Lower Platte North, Upper Elkhorn, Lower Elkhorn, Upper Loup, Lower Loup and the Pappi-Missouri River.

Public hearings on the designation will be held during the next three months. Sites and dates have not been determined.

If the preliminary designation is upheld, the entire Platte River system across Nebraska to Wyoming and Colorado would be designated as fully appropriated. The designation would require state and local natural resources districts to jointly develop a plan for managing the river and

groundwater, including whether to allow new irrigation.

The temporary drilling moratoriums can be changed or lifted as necessary after a plan is developed to integrate management of underground water and water flowing in streams and rivers.

Ann Bleed of Lincoln, a former Department of Natural Resources director who now is a senior program manager for a Boulder, Colo., consulting firm, said the critical aspect of declaring a basin fully appropriated is developing a plan to determine how best to use available water.

"If you've got a checking account with \$10,000 to get you through the month, you probably don't worry too much about planning," she said. "But if you have only \$800 to last the month, you'll plan pretty carefully."

"This fully appropriated designation means we're not at the point of running out of water, but we're close to it."

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Nebraska water map illustrates state water issues

Surface water and groundwater, irrigation, precipitation, threatened and endangered species and other water-related issues are all colorfully addressed on a "Nebraska Water Map," available free from the University of Nebraska-Lincoln.

The 24-by-36-inch map depicts a wide range of basic but important information about Nebraska's water resources, including a great deal about one of the state's greatest unseen resources, groundwater.

"We produced the map with the idea of raising the level of interest in basic water issues and facts for all Nebraskans," said UNL Water Center assistant director Lorrie Benson, who led a coalition of cosponsors to publish the map.

"It combines a great deal of science-based information that has been published in other forms, making them more accessible to the public," she said.

The poster-size map is actually a collection of more than a dozen color graphics, each depicting different aspects of the state's water riches and challenges.

Its centerpiece is a large state map showing important water features such as rivers, major streams, lakes, canals and reservoirs. Counties, roadways, major

cities and towns, and prominent topographic features are also depicted, along with Nebraska's 23 Natural Resources Districts.

Surrounding this large map are smaller maps and graphics showing the High Plains groundwater aquifer, annual precipitation, how and where water is used in Nebraska, where registered irrigation wells are located, where groundwater nitrate and atrazine contamination can be found, how groundwater and surface water interact and other information.

"It's a wonderful educational tool and it also looks great when you hang it on your wall," Benson said. "With water being so very much on everyone's mind, the vastness of Nebraska's surface and groundwater resources and the challenges posed to both water quantity and quality, one of the biggest challenges was deciding what information we would have to leave off, since there wasn't room for everything."

An online version of the map, which is under construction, amplifies much of the information on the printed map, as well as presenting additional information not contained on it. It can be found at <http://water.unl.edu>.

"The map is just one basic Nebraska water information source available on that site,

which has content from and links to all things water at UNL," said Benson.

Print copies of the map are available first-come, first-served through the UNL School of Natural Resources Nebraska Maps and More store on the first floor of Hardin Hall, northeast corner North 33rd and Holdrege streets, UNL East Campus, Lincoln. Phone (402) 472-3471 or visit the store online at <http://nebraskamaps.unl.edu>. If requesting larger quantities for educational or programmatic use, contact Benson at the UNL Water Center at (402) 472-3305 or e-mail lbenson2@unl.edu.

Map cooperators are the university's Institute of Agriculture and Natural Resources, School of Natural Resources, Extension, Water Center and Conservation and Survey Division, the U.S. Geological Survey, Nebraska Department of Environmental Quality, Nebraska Department of Natural Resources, Central Nebraska Public Power and Irrigation District, Nebraska Game and Parks Commission, Tern and Plover Conservation Partnership, The Groundwater Foundation, Nebraska Public Power District and U.S. Bureau of Reclamation.



Photo by Lisa Brichack

DIRT WORK - Making the ceremonial first digs at the Wahoo site last Thursday were (from left) Lower Platte North NRD Board President Luanir Jedlicka, Mayor of Wahoo Daryl Reitmayer, Chief Civil Works Manager for U.S. Army Corps of Engineers - Omaha Division 988 Molligan and Saunders County Supervisor Chairwoman Doris Karloff.

Dam construction begins

By Lisa Brichack
lbrichack@universalnewspaper.com

WAHOO - Construction on the main embankment for Lake Wahoo has begun.

Dirt work on the dam that will contain the waters of Sand Creek north of Wahoo began on Oct. 27. Construction is scheduled to be completed by Aug. 31, 2010.

According to Lake Wahoo Coordinator Mike Murren, Commercial Contractors of Lincoln has gotten off to a good start.

"They've got a lot of dirt moved already," he said. Weather permitting, work is expected to continue through the winter months.

Once completed, the top of the dam will have an elevation of 1,227.5 feet. Design specifications call for 1.25 million yards of dirt in the embankment. Concrete will also be used to reinforce the dam and spillway structure. There is expected to be 17,630 cubic yards of roller

compacted concrete and 524 cubic yards of form concrete used.

While crews kept working last Thursday morning, local officials and area residents gathered on the site to celebrate tangible progress on the project that has seen its share of delays and adjustments.

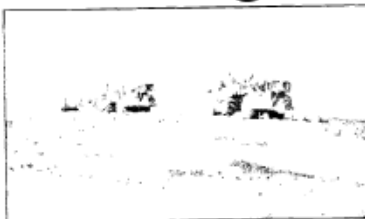
"It's a good day for all of us involved," Lower Platte North Natural Resources District Manager John Miyoshi told those assembled for a groundbreaking ceremony.

The NRD, Saunders County and the City of Wahoo are the local sponsors for the dam, lake and recreation area to be located on about 1,600 acres in a 2 1/2 mile area directly north of Wahoo.

Miyoshi pointed out this was truly a cooperative effort.

"This is a community project," he said. "It's bigger than any one sponsor could do alone."

Saunders County Supervisor



MARCH OF THE DIRTMOVERS - Crews from Commercial Contractors bring dirt they just dug from the hill down into the Sand Creek valley for the embankment construction.

Chairwoman Doris Karloff echoed those thoughts. She said the project had benefit for Wahoo, Saunders County and the State of Nebraska.

The federal government saw benefit in the project as well. The Army Corps of Engineers has also signed on as a project

sponsor and is providing cost share funding.

Bill Molligan, Chief Civil Works Manager for the U.S. Army Corps of Engineers - Omaha Division, said the Corps is pleased to be a part of Lake Wahoo.

- See Embankment on Page 54



UNDER CONSTRUCTION - While groundbreaking participants watch, dirt movers from Commercial Contractors of Lincoln pull soil from the top of Bodley Hill down into the Sand Creek valley were the Lake Wahoo dam will sit.

Embankment

Continued from Page 1A
Wahoo, or more formally known as Sand Creek Watershed Environmental Restoration Project.

"This is a unique project for us," he said. "We're building not just a project with a dam, it's an ecosystem."

Restoring and preserving wetlands is not the only function of Lake Wahoo.

Nebraska Game and Parks Commission Fisheries Specialist Steve Sutra said his agency is very excited about the project. He said Lake Wahoo, because of its location to Omaha and Lincoln and the water quality it will have, should be a premier draw for outdoor enthusiasts.

"We feel this is going to be a very popular recreation area," Sutra added.

Murren said Lake Wahoo is a unique project in that it does have so many benefits that draws different sponsors to the table.

In the last 10 years, additional sponsors who signed on are Nebraska Department of Natural Resources, Nebraska Environmental Trust, Nebraska Depart-

ment of Roads, and Department of Environmental Quality.

The biggest smiles during last Thursday's groundbreaking, however, seemed to come from representatives of the three original sponsors.

"It's just unbelievable this project, with all its ups and downs, has finally come about," Wahoo Mayor Daryl Reitmayer said.

Wahoo Economic and Development Director Doug Watts said the three local entities showed perseverance and a commitment to a project that was in the area's best interest.

"It would have been so easy over the years to quit, but you didn't," he added.

The seed for Lake Wahoo was planted more than 40 years ago when severe flooding from Sand Creek caused significant damage to the area. Efforts to find solutions to the problem date to at least the mid-1960s.

In 1993, the City of Wahoo, Saunders County and the NRD joined together to seriously investigate the issue and the possibility of Lake Wahoo emerged.

Preliminary studies showed the idea had merit, and the project's partners commissioned a feasibility study in 1996. Based on the results of that study, the three local partners signed an interlocal agreement in 1998 to pursue the project.

In addition to its flood control benefits, Lake Wahoo will have various recreational activities, including fishing, no-wake boating, camping, and hunting. A wildlife management area is also in the plans.

The studies of the Sand Creek Watershed have shown an environmental restoration benefit as well. The project should help mitigate the loss of wetlands by creating a large wetland area. Additionally, native grasses, woodland and animals will be returned to the project area.

At its inception, estimated cost for the project was \$12 million.

In today's dollars, the project budget is set at \$28 million. Murren said that dollar amount includes seven dams upstream on Sand Creek that will be built by the NRD.

NEBRASKAland magazine features entertaining outdoor activities

The December issue of NEBRASKALAND Magazine has something for everyone, from ice climbing on the Niobrara National Scenic River to ice-fishing several of Nebraska's reservoirs, from a history of the state's goose hunting to Christmas at Buffalo Bill Ranch State Historical Park (SHP).

Nebraska isn't known as a dream destination among climbers of mountains or even big rocks, but there is a little-known seasonal opportunity for ice climbing on private land along the Niobrara River near Smith Falls State Park.

In "Three Days on Ice" Michael Forsberg describes his experiences during the first-annual Niobrara Ice Jam in January of 2008 and describes how other climbers may participate in the 2009 event.

When Associate Editor Jeff Kurrus' mother-in-law visited from Philadelphia last winter, the first thing he did was take her on a tour of Eugene T. Mahoney State Park near Ashland.

After seeing the park's Peter Kiewit Lodge, the modern cabins, the wide variety of recreational opportunities, the many species of wildlife that live in the park and surrounding area, and climbing the observation tower overlooking the Platte River, she proclaimed the park "really grand" and returned to the park the following summer to enjoy it with her grandkids.

Nebraska's Canada goose hunting success fluctuated during the first half of the 20th century,

although the North Platte River Valley remained the state's premier goose hunting location.

Senior Editor Jon Farrar tells us why in "Nebraska Goose Hunting – The Early Years."

If you have ash trees on your property or are just interested in trees, you should make it a point to read the article "EAB: The Green Plague", by Regional Editor Rocky Hoffman.

The emerald ash borer is a highly invasive insect that has killed thousands of ash trees in the upper Midwest and is now heading closer to Nebraska.

In "A Cody Christmas" Hoffmann describes how Buffalo Bill Cody's home at Buffalo Bill Ranch SHP in North Platte is decorated each year for the holiday season. This year Scout's Ranch will be open to the public December 19-22.

Brothers Scott and Monte Mares have been fishing together their entire lives and their dad has been with them every step of the way. In the story "The Next Hole", you will learn how deep-seated family traditions can be.

There are some recipes for Swedish potato sausage; an article about the growing acceptance among deer hunters of the necessity of shooting does; a quick glimpse at Maskentine Lake near Norfolk; this month's portraits from the past, outdoor news and information from across the state and readers comments.

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Future of the Platte

Some observers have claimed to be shocked that the Nebraska Department of Natural Resources preliminarily declared the lower Platte River basin "fully appropriated."

That means no extra water is available for new or expanded uses.

The handwriting has been evident on that particular wall for years. If this finding from the state natural resources agency is confirmed, and there is every likelihood that it will be, the future of water use in a sizable portion of Nebraska will be — and should be — changed forever.

Local Natural Resources Districts and the DNR will have to think out how water is to be used and managed. How it can be used to benefit the most people. And which restrictions would be necessary and fair but not excessive and punitive.

Current water uses wouldn't be cut. The preliminary designation affects the lower Platte basin from its mouth at the Missouri River to the edge of the Panhandle. The designation would add the extensive Elkhorn and Loup watersheds to the restricted area. New groundwater wells in those tributaries apparently were what tipped the Platte into full appropriation.

The entire Platte system in Nebraska would be fully appropriated if the preliminary finding stands. Areas along two of the state's major rivers, the Republican and the Niobrara, already have been put under restrictions because the amount of water being used is equal to or greater than what is in the stream beds.

What the DNR's latest action does immediately is put a temporary drilling moratorium into effect in the watersheds. That means farmers and ranchers can't add wells until further notice. In addition, they can't expand the number of acres they irrigate or divert more surface water to grow crops.

Some 42,500 wells, about 58 percent of them devoted to irrigation, exist in the Platte basin now.

The new water management plans, to be devised after public hearings and much study, would take into account the interrelationships between groundwater and surface-water wells, both of which affect the amount of flow in the Platte system.

The plans will say whether irrigators could drill new groundwater wells, among other things. The plans also would have a lot of influence on rural and urban expansion — wheth-

**Pressures
are building
on river;
long-range
planning is
imperative.**

er an ethanol plant could be built here or a water-dependent manufacturing facility expanded there, for instance.

Water utilities in Omaha and Lincoln

won't be severely affected immediately, as they would be permitted to replace existing wells, though not open new ones, at their Platte River facilities.

The shutdown of new water uses on the lower Platte has been inevitable for years. The matter came to a head about a year ago when a draft "biological opinion," commissioned for the State Game and Parks Commission, said the waterway was fully appropriated.

The commission was concerned because three endangered species depend on some lower Platte reaches — and certain water levels at certain times of the year — to reproduce. Any less water in the river could mean the species' disappearance from the habitat.

Nebraska has faced many water challenges in recent years: Drought. Flood. Overuse of the Republican River and portions of the Niobrara. Legal battles over the irrigation drawdown of North Platte River water and the subsequent dry-up of Pumpkin Creek, plus legal skirmishing over the amount of North Platte water flowing into Nebraska from Wyoming as well as the amount of Niobrara water in the same regard.

Water is a limited resource, but it is as precious as gold to many Nebraskans. All drink it. Some have jobs that depend on it. Some own manufacturing plants or recreational businesses or other commercial operations that live or die on its availability, level and quality. The state's continued prosperity rests in large part on the sufficient and continuing supply of usable water.

Brian Dunnigan, director of the state Natural Resources Department, has said that the agency's Platte River action and the long planning process it triggers will give Nebraskans from Omaha to the Panhandle the opportunity to look at the state's water position and decide how they want to use and preserve the resource.

But this designation also places on Nebraskans the responsibility to inform themselves and to consider how water use will affect the future of their state and their communities. It means hard decisions lie ahead about how Nebraskans want their water used and how it can be preserved for the future.



Water watchers surprised by decision

BY ART HOVEY
Lincoln Journal Star

Following the twists and turns of water development in Nebraska typically doesn't attract as big a Cornhusker audience as Jordan Larson's jump serve or Joe Ganz's latest pass to Nate Swift.

That doesn't mean that there aren't people surprised, even shocked, by water resources events that evolve from underground water tables and surface flow meters in obscure rural settings.

Monday's decision by the Nebraska Department of Natural Resources to restrict future water development in the Lower Platte River Basin caught a long list of veteran water watchers by surprise.

Count Mike Jess of the University of Nebraska-Lincoln, veteran

Lincoln water attorney Don Blankenau and Kirk Nelson of the Nebraska Game and Parks Commission among them.

Dennis Schueth, based in O'Neill as general manager of the Upper Elkhorn Natural Resources District, chose stronger language for an outcome that also applies to the Platte's Loup and Elkhorn tributaries.

"It did come as a shock to us," Schueth said, citing circumstances that immediately prohibit new irrigation wells and new irrigated acres in about 95 percent of his district.

Less, of the Water Center at the University of Nebraska-Lincoln, said it's not easy for people to grasp why DNR Director Brian

Area newly designated as fully appropriated

The Nebraska Department of Natural Resources has designated the easternmost stretch of the Platte River as "fully appropriated," temporarily blocking irrigators from diverting more water from the river, drilling more wells or expanding the number of acres under irrigation. A final determination will be made after 90 days.



Source: Nebraska Department of Natural Resources

SHEILA STORY/Lincoln Journal Star

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Water

Continued from Page 1B

Dunnigan chose restriction ahead of a Jan. 1 deadline when his department passed up the same option a year ago.

"I wondered that, too," said Jess, the former director of what was then known as the Department of Water Resources. "It got a little wetter this year."

The legal term for a designation others think is likely to affect future industrial development in Lincoln and Omaha is "fully appropriated."

It means that areas close to rivers and streams have been placed off limits to more ground-water development because that development would create an unacceptable imbalance, deplete surface flows and intrude on the rights of surface water users.

Dunnigan said he operates according to the latest hydrology facts and not just by what's in the rain gauge. Among the most recent additions to fact are groundwater research results funded in part by the NRDs and known as EJM, as in the Elkhorn-Loup Model.

"Every year, we do an annual report," he said. "It evaluates hydrologically connected ground water and surface water."

"And last year, the report indicated this basin was fairly close to being fully appropriated," he added. "This year, with our methodology

and data, it would indicate that it is."

It is possible to give some visual dimension to a situation that is not easy to see.

Think of the pallid sturgeon, a long-snouted and endangered fish that depends on adequate flows in the lower reaches of the Platte for its survival. Think of those twin, 13-foot wide pipes that poke down to bedrock along the river near Ashland to provide Lincoln with its drinking water.

Nelson, Nebraska Game and Parks official and stalwart defender of the pallid sturgeon, is happy to hear about a step toward water conservation. The message from state government is as simple as this, according to Nelson:

"I'm sorry, the days of free water are over. That's basically what the DNR is telling you."

That's not to say he saw this coming.

"We were told that if it wasn't found fully appropriated last year, the chance was even more remote that it would be found fully appropriated this year, because a wet year replaced a dry year in the formula."

Steve Huggenberger, a member of the governor's Water Policy Task Force and an attorney with the city of Lincoln, said restrictive action by the state was bound to happen eventually.

From a city vantage point, "I don't think we're that concerned about fully appropriated status as regards our existing water rights. It

may be a different question for future water rights."

But Dean Edson, executive director of the Nebraska Association of Resources Districts, umbrella organization for the state's 23 NRDs, said the weight of Dunnigan's decision might actually fall more heavily on places other than irrigated agriculture.

"I think there will be more impact on future municipal uses and manufacturing uses," Edson said. "When those come in, offset water has to be provided. You can't have any more new use of water."

Complicating matters further, as Edson sees it, is the relative absence of irrigation in the immediate Lincoln area. Buying irrigation rights might be the most obvious strategy for cities that must meet offset requirements to accommodate growth.

"You've got to try to find some water to offset that new use," he said. "That's going to be tough to find down in this end of the state."

State law gives Dunnigan's department some latitude in handling new uses. For example, there's not a hard and fast rule about a new industry needing an offset unless it uses more than 25 million gallons of water a year.

That's likely to apply to an editorial plant but not an industrial setting where water is not such a fundamental part of the production.

Back in NRD ranks, the Lower Loup at Ord had already acted on

its own to ban new irrigation wells.

"It's been hanging over our heads for about three years now," said General Manager Butch Koehlmoos, "and we were one of the districts designated that had kind of gone ahead and taken the proactive approach in putting a moratorium on well drilling and irrigated acres."

He's disappointed that local control has now been superseded. But he described his board of directors as "willing and able" to begin a round of public review that will determine whether the designation becomes permanent.

Stan Staab, his counterpart with the Lower Elkhorn at Norfolk, didn't sound quite as accommodating. He wanted more modeling work first.

"I think Mr. Dunnigan made a decision here based on science that's not complete," Staab said. "In my opinion, this is continued erosion of local control for NRDs."

Water attorney Blankenau of Lincoln said the most recent Platte designation means that restriction on groundwater use along its banks now extends all the way from Nebraska's western border to its eastern border.

"I think we've actually been in a new era for some time now," Blankenau said. "It's just that it's now hit the more populated area of the state."

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A secure supply

Omahans can thank their lucky stars — and leaders of the Metropolitan Utilities District — for a future of continued growth, economic development and clean water.

Little more than two months ago, MUD opened its new Platte River West water filtration plant, a \$352 million effort to expand and secure the availability of water in the entire metropolitan area for decades to come. The plant and its wells sunk into the Platte complement the utility's Platte South and Missouri River plants.

The luck, and the foresight that ensured that luck, was evident earlier this month: The Nebraska Department of Natural Resources issued a preliminary ruling that all of the water in the Platte and its tributaries has been claimed by municipalities, irrigators, industries and other water users.

That ruling means that a moratorium falls on the river. Until final plans and decisions are made, no more wells can be dug, no more acres irrigated, no additional water uses approved. The DNR and natural resources districts along the river must come up with management plans on how the water should be fairly divided and used to benefit the most people.

Tom Wurtz, executive director of MUD, said that if the proper permits for the new water plant hadn't been obtained and plans finalized before the moratorium, the utility and, by extension, Omaha could have faced problems.

Municipal water users likely will rank high on the list when the DNR and NRDs consider additional water uses. Not only does a safe, clean and readily available water supply benefit residents, but it also promotes economic development and growth.

In addition, municipal users are a small corner of the water-use picture in Nebraska. According to U.S. Geological Survey figures, some 93

MUD decisions enable Omaha to have stable water supply for long term.

percent of water used across the state goes to irrigation. Just 3.5 percent is consumed by municipal utilities. The remaining small uses include mining, livestock and independent home and industrial water wells.

Nevertheless, the planning displayed by MUD's managers and board of directors, who began work on the Platte West plant in the mid-1990s, is remarkable.

Platte West is designed to supply the Omaha metropolitan area with sufficient water for its use and growth for 50 or 60 years, Wurtz said. When the next generation of MUD executives and board members begins thinking about a new plant in 30 or 40 years, he said, they'll probably have to look at the Missouri River for water supply. The quality isn't as good, he said, but the quantity is certainly there and will continue to be.

The utility has the authority — and now the water — to follow growth. Estimates indicate that Douglas County will be "built out," that is, fully developed, by around 2040. Sarpy County, also within MUD's jurisdiction, will continue to grow.

MUD also can sell water to municipalities outside the two-county area. The utility supplies Fort Calhoun in Washington County, for instance. As development continues in the area's small communities and as federal clean-water restrictions tighten, it seems likely that more will want to tie into the MUD system.

The Omaha area is an attractive place for businesses and industries, in part because of its exceedingly reasonable water, gas and electric rates. Wurtz said that several large industries already have talked to the utility about building in the area.

The fates of rural and urban Nebraska are tied together, and water is one of the ropes. It's good to know that as the concerns and debates over water continue, Omaha's supply is secure.

Annual report relating to evaluation of river basins, sub-basins, or reaches

The Department of Natural Resources has issued its annual report pursuant to Neb. Rev. Stat. § 46-713 (Reissue 2004) which requires the Department, by January 1 of each year beginning in 2006, to complete an evaluation of each of the state's river basins that is not involved in the integrated management planning process, and to issue a report describing the results of the evaluation. The report includes a preliminary conclusion for each river basin evaluated as to whether the basin is currently fully appropriated without the initiation of additional uses and delineates the geographic areas within which the Department considers surface and ground water to be hydrologically connected.

Based on the information in this report, the following areas have been designated as fully appropriated:

The Platte River Basin upstream of the confluence with the Missouri River including all tributary drainages.

Copies of the report can be found on the Department's website at <http://www.dnr.ne.gov> or by requesting a copy from the Department of Natural Resources, 301 Centennial Mall South, P.O. Box 94676, Lincoln, NE 68509-4676.



Natural Resources

Work on lake begins

By DON McCABE

ONE of Nebraska's largest watershed lakes — nearly 640 surface acres — will be ready for filling when a dam north of Wahoo is completed in the summer of 2010.

The Lake Wanhoo/Sand Creek Project will encompass 1,600 acres, including the lake and surrounding lands, says Mike Murren, project coordinator for the Lower Platte North Natural Resources District. Lake Wanhoo takes its name from Wanhoo Park, a popular recreation area near Wahoo until the mid-1960s.

The dam is just north of town on the west side of Highway 109 and, when finished, will serve as part of the Highway 77 bypass, which will skirt the west and north sides of Wahoo.

"The project idea began in the early 1990s as an effort to control severe flood problems on Sand and Wahoo Creeks," says Murren. "Little progress was made until 1993 when Wahoo, Saunders County and the Lower Platte NRD began seriously investigating the possibility" of the dam.

Lake Wanhoo, when filled, will be open to fishing and the surrounding area to hunting, camping and picnicking. No wake boating will be allowed.

"The lake, which will be about one-third the size of Branched Oak Lake

At a glance

- It's expected that the Lake Wanhoo dam will be finished by summer of 2010.
- It will be a 640-surface-acre lake as part of a 1,600-acre project.
- Purposes are environmental restoration, recreation and flood control.

near Lincoln, will be very positive for this part of the state," Murren adds. "Two-thirds of Nebraska's population is within 50 miles."

The Sand and Duck creeks merge at the tailwaters of the lake and the total watershed is 87 square miles.

Several benefits

While flood control and recreation were the original purposes, the project is officially called the Sand Creek Environmental Restoration Project because of a large wetland at the north end of the lake and several other wetlands around seven sediment ponds upstream. The project, according to Murren, will create new wildlife habitat, restore native grassland and improve water quality in the watershed.

Of the two original purposes, flood control is a big benefit. Murren says the project is expected to reduce flood damages in the Wahoo Creek Watershed by at least 23% and help protect



HEAVY-DUTY WORK: Construction on the dam that will form Lake Wanhoo began this fall just north of Wahoo.

Wahoo, Ashland and Ithaca.

Already constructed is a breakwater structure that will be 4 feet above the permanent pool to serve as a trail and fishing site. "It will also help break wave action to protect the banks," he says.

The Lower Platte NRD has for several years worked with upstream landowners in the watershed to apply land treatment practices on 75% of the highly erodible land in order to limit sediment runoff.

The U.S. Corps of Engineers is a federal sponsor of the \$30 million project. Locally, sponsors are the NRD, Saunders County and Wahoo.

At the state level, the Nebraska Department of Resources provided funding through its Resources Development Fund. Other partners are the Nebraska Game and Parks Commission, which will manage the area, the Nebraska Environmental Trust and the Nebraska Department of Roads.