

# *NEWMAN GROVE REPORTER*

## Shell Creek Watershed presentation given



Pictured above are Back Row (L-R): Ciera Afrank, Audrey Wondercheck, Jake Kaufman, Jon Dohmen, Greg Roberg and Mark O'Brien. Front Row (L-R): Mr. Mark Seier, Kendra Nelson, Joan O'Brien, Katie O'Brien, Olivia Wiese, Aubrey Strong, Alisha Dunlap, Lila Wondercheck, Mrs. Suzy Goedeken.

By Ralph Pieke

The Shell Creek Watershed Research Team gave their annual presentation to the Lower Platte North Natural Resource District on November 9, 2009. The LPNNRD traveled to Newman Grove to hear the report and to hold their November meeting in the Community Center in conjunction with the PrairieLand RC & D and the Shell Creek Watershed Improvement Group. Every year compliments are received from the NRD Board of Directors about the unique ability of the School Board, faculty, students, City Council, PrairieLand RC & D and the Shell Creek Watershed Improvement Group who work together to make this meeting successful.

# Study shows Platte forests not so greedy for groundwater

Forested areas along the Central Platte River in Nebraska use less water than indicated by previous research, according to a new study by the U.S. Geological Survey (USGS).

USGS scientists collected data at two sites along the central Platte River that were dominated by cottonwood trees, which generally are believed to be water-thirsty trees when groundwater is available. Results were counter to past research suggesting that cottonwoods deplete the groundwater supply, and could help managers better understand the role such forests have on water availability.

"Previous beliefs about the way cottonwood trees use water suggested that they will use as much as they can if water is available," said Dave

Rus, USGS hydrologist and an author of the study. "But our results showed that was not the case for these forests."

Rather than leaving less groundwater available for other uses like irrigation, the study indicates that these areas use roughly the same amount of water as irrigated corn, about half or less of what was previously believed.

The study further found that the trees' water-thirsty nature may have more to do with their setting than with the tree itself. For example, in arid settings such as the American Southwest, research shows that the trees can be big groundwater users. But in the Platte River valley, where temperatures are lower and rainfall is higher, groundwater supplies underneath the riverside forests were actually replenished during the study.

Such findings also shed light on how the water supply may or may not benefit if the forests were replaced by a different plant community.

"Those benefits are probably much less than originally expected and may actually become more costly if the new plant community is 'thirstier' than the forests," Rus said.

USGS scientists collected data at two sites along the central Platte River – Gothenberg and Odessa – both located in the "Big Bend" region of the river. In addition to measuring rainfall, soil moisture, and groundwater levels during the four-year study, scientists also erected 90-foot towers with instruments that measured the amount of water "exhaled" by the vegetation below. This was used to determine the balance

of water in the system and to estimate the amount of water the plants were using.

The average forest water use during the study was 22.2 inches per year compared to an estimated 39 inches per year – and up to 72 inches per year – cited in previous studies. Irrigated corn uses about 26 inches per year. Rainfall over the same time period averaged 24.3 inches per year. The full report can be viewed [online](#).

Differences in estimates of water use by near-river forests could be a result of methods of study improving through the years.

A follow-up study comparing water use between Platte River forests and Platte River riparian grassland is ongoing

# YMCA Camp Kitaki recognized as Groundwater Guardian Green Site

SOUTH BEND - YMCA Camp Kitaki, located near South Bend, was recently named a 2009 Groundwater Guardian Green Site by The Groundwater Foundation in recognition of the site's groundwater and environmental stewardship. Camp Kitaki earned this exclusive designation based on its current practices related to water use, pesticide and fertilizer management, and pollution prevention.

Groundwater Guardian Green Sites are essentially places with a lot of green space - like golf courses; ball fields; educational campuses; and residential, recreational, and office parks - that implement groundwater and surface water-friendly practices to maintain the site. To earn the exclusive Groundwater Guardian Green Site designation, site managers complete a simple application that uniformly evaluates and documents their site's groundwater-friendly practices. The Green Site program began in 2007 to recognize good stewards of groundwater by encouraging managers of highly-managed green spaces to implement, measure, and

document their groundwater-friendly practices.

Groundwater Foundation President Jane Griffin points out that, "Groundwater is an extremely valuable resource in Nebraska that contributes to our health and well-being every day. Most Nebraskans rely on groundwater as a source of drinking water, but they also rely on groundwater as a necessary input for agriculture and business. Recognizing active groundwater stewards like Camp Kitaki is our way of motivating others to do the same."

YMCA Camp Kitaki is a resident summer camp but also a rental and conference facility that operates year-round on over 220 acres of land.

"We got involved in the Green Site program because we are looking to do more on the environmental front. We thought that camp should not only be a place that they can learn about taking care of the environment but also that we practice what we preach, take a look at all of our practices and see what we can do to improve those. We realize that we are very

much part of a different ecosystem here and everything that we do on our site impacts the Platte River and the other areas around us," said YMCA Camp Kitaki Executive Director Jason Smith.

Potential sites are encouraged to get involved in the Groundwater Guardian Green Site program by downloading the 2009 program application at [www.groundwater.org/gg/greensites.html](http://www.groundwater.org/gg/greensites.html), e-mailing [guardian@groundwater.org](mailto:guardian@groundwater.org) or calling 1-800-858-4844. The Groundwater Guardian Green Site program is supported by the Nebraska Environmental Trust, the Nebraska Department of Environmental Quality, and Cargill.

The Groundwater Foundation is a non-profit organization based in Lincoln, Nebraska with a mission to educate and motivate the public to care about and for groundwater. Since its inception in 1985, the Foundation has offered various educational programming for youth and adults. To learn more, visit [www.groundwater.org](http://www.groundwater.org).

# Ice takes toll on Platte

Officials brace for massive jams caused by a sudden thaw after below-zero temperatures.

BY ALGIS J. LAUKAITIS  
Lincoln Journal Star

While road crews struggle to clear snow from streets and highways, emergency management officials are keeping an eye

## Inside/B1

■ Climatologist says Lincoln could see above normal temps by mid-January

Three storms buried much of the Lower Platte River Basin in snow, and below-zero temperatures have frozen the Platte and

two of its tributaries, the Elkhorn and Loup rivers.

"The conditions probably look worse than they have for a number of years as far as the potential (for ice jams). We'll see what Mother Nature delivers," said Marlin Petermann of the Papio-Missouri River Natural Resources District based in Omaha.

Petermann and others are concerned a sudden thaw in late February or early March will melt the snow and the ensuing runoff will swell the river and

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**'If we get a long warm-up period and it would melt some of this snow off, we could be in good shape.'**

— Marlin Petermann of the Papio-Missouri River Natural Resources District based in Omaha

## Ice

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break up the ice too quickly, creating the potential for massive jams.

In the past, some jams stretched for miles, causing flooding in low areas. In 1993, for instance, a six-mile-long jam forced the river through Lincoln's well fields near Ashland, jeopardizing the city's drinking water supply.

Petermann and other

officials would prefer a gradual warming trend starting as soon as possible.

Warmer weather is in the forecast, beginning today with an expected high in the mid-20s.

"If we get a long warm-up period and it would melt some of this snow off, we could be in good shape," Petermann said. "The longer you get into March without the warming trend, the greater the possibility we will get a quick warm-up and a quick break-up."

Weekly monitoring of the Platte near Valley and Ashland will start this week to keep track of ice thickness, Petermann said.

Right now, they don't know how thick the ice is.

Reports will be sent to the Nebraska Emergency Management Agency and forwarded to the state Department of Natural

Resources, which maintains an ice data base.

A dynamiting company, which is on a retainer, has been notified that its services might be needed to break ice jams if conditions worsen, Petermann said.

Petermann said they would prefer not to use dynamite — first used on the Lower Platte in 1997 — because it costs at least \$50,000 per day.

"It's a last-resort measure, and we don't want to do that," he said.

Officials were prepared to dynamite the river last year near U.S. 6 in the Ashland area, but the ice broke up at the last minute and flowed downstream.

"We had them on high alert," Petermann said. "Hopefully, we can escape another year."

Before dynamite is used, agencies will try dusting problem areas

with coal ash, which can hasten melting. That technique has been used in the past with limited success. The state Emergency Management Agency is getting necessary environmental permits in anticipation of doing such work.

Ice on the Platte already has caused problems on the supply canal operated by the Central Nebraska Public Power and Irrigation District based in Holdrege.

In addition to clogging up the river, the ice is causing problems with measuring equipment and accumulating on canal-control structures.

Kevin Boyd, division manager based in Gothenburg, said Central's entire system, which includes hydroplants, is running at half capacity.

Boyd said jams have been reported along the Platte between Overton



Freemont Tribune file photo

Ice piles up along the Platte River bank in 2007. Officials say there is potential for the worst ice jam season in more than a decade this winter.

and Elm Creek but they should not affect the canal.

“This is normal winter-time operations that you have to deal with,” said Boyd, who has been with the district for more than 30 years. “We feel pretty fortunate right now.”

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# Nitrate plume no threat to Plattsmouth

**Patti Jo Peterson**  
Managing editor

The nitrate and ammonia plume originating in Sarpy County is no threat to Plattsmouth's water supply, according to groundwater quality experts.

Former Plattsmouth City Administrator and current Papio-Missouri River Natural Resources District general manager John Winkler released a story about the plume to Channel 3 on Sept. 11 and to The Journal Oct. 22. The contamination is located at the former Allied Chemical Plant site.

In his interviews, Winkler indicated the

plume could be moving south. The contamination stems from an eight-acre hazardous landfill on the site, which operated from 1952 to 1979. In 1973, there was a catastrophic spill of 2.8 million gallons of nitrate there.

In The Journal's story, Winkler said the plume, "is being moved south/southeast by the natural flow of the groundwater, which is directly impacted by the two rivers — the Platte and Missouri. When it gets here or will it get here, we don't know."

After The Journal's story was published, Plattsmouth City Administrator Erv Portis contacted Lower Platte South

Natural Resource District about the potential problem. "We are in the Lower Platte South NRD," Portis said. "The NRD and Nebraska Department of Environmental Quality (NDEQ) are with whom we would consult on ground water quality. Representatives from both entities were actually surprised by the story."

In an email dated Nov. 12, LPSNRD water resources specialist Dick Ehrman assured Portis that Plattsmouth's water supply was safe from the contamination, based on information provided by NDEQ representative Charlene Sundermann

"Probably most important  
**See PLUME, page A-2**

## PLUME: NDEQ monitoring wells at contamination site

tant for the folks at Plattsmouth, NDEQ's wellhead protection area information (including modeling done by UNL student Eva Kilinska in 1997) indicates that their water is being withdrawn entirely from the south side of the Platte/Missouri, and there is little to no chance that there is connection to the north site where the PCS (former Allied plant) plant is located," the email states.

NDEQ continues to monitor wells on the north side of the Platte.

Furthermore, Sundermann noted that NDEQ has a good idea of where the nitrate plume is, "and they're continuing to gather information to refine that knowledge."

"NDEQ is contracting for additional sampling of drinking water wells around the PCS (former Allied plant); they're still working on the contract but their timetable for this additional work is somewhere in the early spring 2010 for completion. Once that additional work is done, NDEQ plans to complete their

fact sheet, and put the results of this work as well as the Phase I investigation on the NDEQ's Web site."

Portis reiterated that Plattsmouth's water supply is not in jeopardy from the plume.

"It is not infiltrating the Platte River," Portis said.

"Our primary concern was whether it could potentially contaminate the Plattsmouth well field. People who are experts in groundwater management tell us there is little to no chance of

any contaminant from that site affecting our well field. We want people using our water system to know a couple of things," Portis added.

"First, experts in groundwater management and the NRD, with which we work with, tell us the rivers are natural barriers, so the likelihood of nitrates crossing the rivers and affecting our well field is highly improbable. Secondly, we do tests regularly on our wells for nitrates and nothing has been found," he said.

AFTER THE SNOW ... THE FLOOD?

# Rivers eyed for signs of rising threat

39° FEELS NICE, BUT LOOK OUT FOR ...

By NANCY GAARDER  
AND CHRISTOPHER BURBACH  
WORLD-HERALD STAFF WRITERS

In the coffee shop, at church and during local meetings, Valley Mayor Mary Caffey is starting to hear the question: What about the flood threat?

Record to near-record snowfall across the Midlands and the bitter cold have spawned more than the usual worry about ice jams and flooding.

Federal officials already are gearing up, gathering information and adjusting flows on the Missouri River.

Local officials are measured in their assessment while moving forward with their usual preparations.

"We certainly have the ingredients sizing up to bring pretty good (flood) potential," said Martin Petermann, assistant general manager of the Papio-Missouri River Natural Resources District in Omaha.

Petermann said NRD staff will bore into the ice on the flood-prone lower Platte River to get the first measurement of the

# Flooding: Officials in Nebraska and western Iowa say risk is high

developing risk.

For now, the Platte and Missouri Rivers are in reasonably good shape, officials say.

"It's too early to make any predictions about what might happen in the spring," Caffey said Tuesday.

Rich Tesar, a longtime Papio-NRD board member who lives along the Platte near Valley, said the river appears to be flowing well. "We've got slivers of open water throughout the entire length of the lower Platte," he said.

On Tuesday, the Missouri River was about 25 percent ice-covered at Sioux City, Iowa. Last week, it was 50 percent to 75 percent ice-covered as far south as Jefferson City, Mo.

That caused the Army Corps of Engineers to increase releases of water from upstream reservoirs to shove the ice downstream.

The corps now has returned to normal winter releases of water, said Paul Johnston, corps spokesman.

The National Weather Service has directed its regional offices to gather information on flood risks across various river basins.

In western Iowa, emergency management officials are keeping a close eye on snow mounds, rivers and creeks and weather forecasts.

"It's a huge concern for us," said Jeffrey Theulen, Pottawattamie County Emergency Management Agency coordinator. "We've got 36 inches of snow. The ground's frozen under it."

He said western Iowa doesn't have the same ice-jam concerns in its rivers as eastern Nebraska does. But there's a lot of snow along chronic flooders, including the Nishnabotna and Boyer Rivers, he said.

"A couple things are worrying us: A, if we get too warm too fast; and B, if we get rain next week, it's going to be bad," Theulen said.

"If you're talking to Jeff Theulen, Iowa guy, I'd like it to be 70 degrees every day for the rest of winter. But as an emergency management guy, I'd rather see 34 degrees every day, and below freezing at night."

Theulen said rivers and creeks in his area look normal now, but that could change quickly.

David L. Miller, administrator of the Iowa Homeland Security and Emergency Management Division, said part of the concern stems from 2008's flooding, which resulted in some levee failures in Iowa.

He said some local emergency management leaders are beginning to consider whether they should stockpile sandbags and other resources. It's not an easy decision, he said, because snow removal costs have drained many budgets.

Even without flooding, Miller said, there's worry that secondary roads could be undermined by water from the snow melt.

Harry Hillaker, Iowa's state climatologist, said all the snow "doesn't guarantee (flooding), despite what we've got out

there, but it certainly tilts it in that direction. It's worrisome."

Jeff Reese, hydrologist with the weather service office in Valley, said a key will be what happens with the weather in the coming weeks. Gradual warming would be ideal, and the forecast for the next week or so appears to be just that, he said.

But there's a lot of winter left, and no one can say what will happen. The worst would be a rapid warm-up and major rainfall, he said.

"I don't want to make it sound like we absolutely are going to have flooding," Reese said. "Anytime you have a lot of snow on the ground like this, it should be a heads-up for people."

Nebraska's state climatologist, Al Dutcher, describes the flood risk in one word: high.

"There's no other way to say it," Dutcher said this week. "We will see flooding issues; the extent has yet to be determined."

The impact of all the region's snowfall and what happens when it melts is something "none of us has a very good feel for," Dutcher said.

"It's the equivalent of having 2 to 3 inches of water over an area that is two times the size of Nebraska."

**World-Herald staff writer David Hen-dee contributed to this report.**

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## POTHoles

As snow plowing winds down, pothole-patching crews are gearing up. Find out the worst stretches and how to report these tire-busting tyrants. **Midlands, Page 1B**



## ICE FOG

Morning road conditions could be slick because moisture in the air and low temperatures combine to create a freezing fog. Drive carefully, but enjoy the beauty of this winter phenomenon as it gives a face-covered effect to tree branches and shrubs.



## HOME DAMAGE

Where snow and ice have built up near windows and other openings, including the roof, some leaking may occur. Experts advise removing snow where melting could cause water to enter the home and then keeping an eye on ceiling, walls and foundation.

# The threat is spreading

**T**wo species of Asian carp, one of them already plaguing some Midlands waterways, are near to invading Lake Michigan. The situation poses major economic and ecological threats.

If the fish make it to the Great Lakes and are able to establish themselves — and they have had no trouble doing so elsewhere — they could wreck the lakes' \$7-billion-a-year sport and commercial fishing industries. The species, silver and bighead carp, have been detected in the Chicago Sanitary and Ship Canal within a few miles of the lake.

The 100-year-old facility, the largest public works project of its time, reversed the flow of the Chicago River and opened a transportation link between the Mississippi River and the Great Lakes. Some 18,500 barges use the canal system every year to haul more than 14.6 million tons of commodities such as iron, steel and gravel.

Calls have arisen demanding that the canal be closed, for as long as it takes, until a solution to the carp problem is found.

It is the silver carp that has bedeviled Missouri River boaters and fishers, leaping out of the water when boats pass and threatening water-skiers as well as the multi-million dollar sports fishing industries in Iowa and Nebraska. It has settled near the mouth of the Platte River and on the lee sides of wings that slow the river current.

Both carp have voracious appetites, sucking down some 40 percent to 50 percent of their body weight in phytoplankton and zooplankton every day. That is also the food needed to sustain many other, more desirable, species; native larval fish need the plankton to survive, according to a Nebraska Game and Parks

Commission biologist.

The carp can grow huge, 4 feet long and up to 100 pounds, though those in the Platte seem to remain somewhat smaller. Female carp can carry 3 million eggs.

The fish entered the United States 35 years ago from China, imported by catfish farmers in the Deep South. They escaped pens when rivers flooded in the 1990s and can now be found throughout the Mississippi River ecosystem.

The fish threaten the Platte River and its tributaries; silver carp have already been caught in the Elkhorn River near Gretna. The Platte upstream to Columbus and the Loup are potential targets.

A \$9 million electric barrier built to keep the carp out of Lake Michigan was easily breached; so were nine locks on the Illinois River. The only thing keeping the carp contained is another lock and dam on Chicago's southern flank. Authorities have shut down that facility for a few days and are poisoning the canal water (after removing desirable fish), but apparently haven't killed many carp yet.

Michigan announced it will sue the U.S. Army Corps of Engineers to force it to stop the fish.

How the fish would fare in the Great Lakes is uncertain — Superior, for instance, is almost certainly too cold for the species. And plankton is scarcer in all the lakes. But, given the carp's potential impact, no one wants to take any chances.

As the battle goes on, here's something for everyone to think about: Izaak Walton described the white-fleshed carp in "The Compleat Angler" as great on the plate, the "Queen of Rivers, a stately, a good and a very subtle fish." Americans could just eat the things.

# Platte River ice observers go with the flow, for now

BY NANCY GAARDER

WORLD-HERALD STAFF WRITER

Ice along the Platte River has tested thick enough to warrant watching but not to cause immediate alarm, officials said Thursday.

Record snow cover and near-record cold have raised concerns about flooding that could occur if a major rain or rapid snowmelt were to churn up ice-choked rivers.

The thicker the ice, the more likely it is that a damaging jam can occur.

The ice was tested this week at two trouble spots on the lower Platte.

Along Union Dike, about 1.2 miles upstream of Nebraska Highway 64, the ice averaged 16.6 inches thick, said Amanda Grint, water resources engineer for the Papio-Missouri River Natural Resources District.

About a quarter-mile upstream of U.S. Highway 6, it averaged 13.2 inches, she said.

Officials begin to pay attention

once the depth averages about 15 inches, said Marlin Petermann, assistant general manager at the NRD. The district will measure ice on the Platte weekly, as long as doing so is safe and conditions indicate a need, he said.

"Based on our past history, once we get past 15 inches, we experience a little problem with the river moving out," Petermann said. "That doesn't mean we'll get an ice jam or a flood, but we have gotten near-misses and minor lowland flooding" at this level.

Longtime NRD board member Rich Tesar said he's relieved by the results because he doesn't consider the ice significantly thicker than last year. Last year, the ice along the Union Dike averaged about 14.4 inches in late January, he said.

"I'm actually seeing more viable channels than I did last year," said Tesar, who said that the Platte is in good shape "considering how cold it's been."

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